

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
ANTRACITO	SC	CAPIVARI DE BAIXO	FTC	SC	1,93747%
ANTRACITO	SC	CRICIUMA	FTC	SC	12,72324%
ANTRACITO	SC	FORQUILHINHA	FTC	SC	0,06617%
ANTRACITO	SC	ICARA	FTC	SC	17,88212%
ANTRACITO	SC	JAGUARUNA	FTC	SC	22,74425%
ANTRACITO	SC	MORRO DA FUMACA	FTC	SC	4,49590%
ANTRACITO	SC	SANGAO	FTC	SC	14,06204%
ANTRACITO	SC	SIDEROPOLIS	FTC	SC	7,84419%
ANTRACITO	SC	TUBARAO	FTC	SC	14,70180%
ANTRACITO	SC	URUSSANGA	FTC	SC	3,54282%
AREIA	CE	CARIRE	FTL	CE, MA, PI	3,60122%
AREIA	CE	CAUCAIA	FTL	CE, MA, PI	5,71650%
AREIA	CE	CRATEUS	FTL	CE, MA, PI	8,84162%
AREIA	CE	FORTALEZA	FTL	CE, MA, PI	0,22136%
AREIA	CE	GROAIRAS	FTL	CE, MA, PI	0,08001%
AREIA	CE	IPU	FTL	CE, MA, PI	2,65284%
AREIA	CE	IPUEIRAS	FTL	CE, MA, PI	3,40965%
AREIA	CE	ITAIPOCA	FTL	CE, MA, PI	6,16914%
AREIA	CE	MARACANAU	FTL	CE, MA, PI	1,03126%
AREIA	CE	MIRAIMA	FTL	CE, MA, PI	4,07072%
AREIA	CE	NOVA RUSSAS	FTL	CE, MA, PI	3,73413%
AREIA	CE	PIRES FERREIRA	FTL	CE, MA, PI	1,79119%
AREIA	CE	RERIUTABA	FTL	CE, MA, PI	2,69399%
AREIA	CE	SANTANA DO ACARAU	FTL	CE, MA, PI	2,04429%
AREIA	CE	SAO GONCALO DO AMARANTE	FTL	CE, MA, PI	4,92031%
AREIA	CE	SAO LUIS DO CURU	FTL	CE, MA, PI	0,86456%
AREIA	CE	SOBRAL	FTL	CE, MA, PI	6,50926%
AREIA	CE	TAMBORIL	FTL	CE, MA, PI	2,46163%
AREIA	CE	TURURU	FTL	CE, MA, PI	1,78441%
AREIA	CE	UMIRIM	FTL	CE, MA, PI	1,84906%
AREIA	DF	BRASILIA	FCA, MRS	DF, GO, MG, RJ, SP	1,33209%
AREIA	GO	LUZIANIA	FCA, MRS	DF, GO, MG, RJ, SP	3,97484%
AREIA	GO	ORIZONA	FCA, MRS	DF, GO, MG, RJ, SP	1,60590%
AREIA	GO	PIRES DO RIO	FCA, MRS	DF, GO, MG, RJ, SP	0,27301%
AREIA	GO	VALPARAISO DE GOIAS	FCA, MRS	DF, GO, MG, RJ, SP	0,39387%
AREIA	MA	BACABEIRA	FTL	CE, MA, PI	0,73266%
AREIA	MA	CANTANHEDE	FTL	CE, MA, PI	0,66309%
AREIA	MA	CAXIAS	FTL	CE, MA, PI	2,82006%
AREIA	MA	CODO	FTL	CE, MA, PI	2,12063%
AREIA	MA	COROATA	FTL	CE, MA, PI	1,62648%
AREIA	MA	ITAPECURU MIRIM	FTL	CE, MA, PI	0,60669%
AREIA	MA	MIRANDA DO NORTE	FTL	CE, MA, PI	0,23518%
AREIA	MA	PIRAPEMAS	FTL	CE, MA, PI	0,70507%
AREIA	MA	ROSARIO	FTL	CE, MA, PI	0,24377%
AREIA	MA	SANTA RITA	FTL	CE, MA, PI	0,54749%
AREIA	MA	SAO LUIS	FTL	CE, MA, PI	0,59827%
AREIA	MA	TIMBIRAS	FTL	CE, MA, PI	0,47006%
AREIA	MA	TIMON	FTL	CE, MA, PI	1,11163%
AREIA	MG	ANDRELANDIA	FCA, MRS	DF, GO, MG, RJ, SP	0,94720%
AREIA	MG	ARANTINA	FCA, MRS	DF, GO, MG, RJ, SP	0,08800%
AREIA	MG	BOM JARDIM DE MINAS	FCA, MRS	DF, GO, MG, RJ, SP	0,30902%
AREIA	MG	CONCEICAO DA BARRA DE MINAS	FCA, MRS	DF, GO, MG, RJ, SP	0,12315%
AREIA	MG	CONGONHAS	FCA, MRS	DF, GO, MG, RJ, SP	0,44413%
AREIA	MG	CORONEL XAVIER CHAVES	FCA, MRS	DF, GO, MG, RJ, SP	0,20233%
AREIA	MG	ENTRE RIOS DE MINAS	FCA, MRS	DF, GO, MG, RJ, SP	0,48105%
AREIA	MG	JECEABA	FCA, MRS	DF, GO, MG, RJ, SP	0,16778%
AREIA	MG	LAGOA DOURADA	FCA, MRS	DF, GO, MG, RJ, SP	0,49968%
AREIA	MG	MADRE DE DEUS DE MINAS	FCA, MRS	DF, GO, MG, RJ, SP	0,57257%
AREIA	MG	NAZARENO	FCA, MRS	DF, GO, MG, RJ, SP	0,10738%
AREIA	MG	OURO PRETO	FCA, MRS	DF, GO, MG, RJ, SP	0,10560%
AREIA	MG	PASSA-VINTE	FCA, MRS	DF, GO, MG, RJ, SP	0,56888%
AREIA	MG	RESENDE COSTA	FCA, MRS	DF, GO, MG, RJ, SP	0,21048%
AREIA	MG	RITAPOLIS	FCA, MRS	DF, GO, MG, RJ, SP	0,06693%
AREIA	MG	SANTA LUZIA	FCA, MRS	DF, GO, MG, RJ, SP	1,07274%
AREIA	MG	SANTA RITA DE JACUTINGA	FCA, MRS	DF, GO, MG, RJ, SP	0,38244%
AREIA	MG	SAO BRAS DO SUACUI	FCA, MRS	DF, GO, MG, RJ, SP	0,22137%
AREIA	MG	SAO JOAO DEL REI	FCA, MRS	DF, GO, MG, RJ, SP	1,46234%
AREIA	MG	SAO VICENTE DE MINAS	FCA, MRS	DF, GO, MG, RJ, SP	0,10113%
AREIA	PI	ALTO LONGA	FTL	CE, MA, PI	1,85771%
AREIA	PI	ALTOS	FTL	CE, MA, PI	2,90055%
AREIA	PI	BURITI DOS MONTES	FTL	CE, MA, PI	5,26278%
AREIA	PI	CAMPO MAIOR	FTL	CE, MA, PI	0,51086%
AREIA	PI	CASTELO DO PIAUI	FTL	CE, MA, PI	5,81715%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
AREIA	PI	COIVARAS	FTL	CE, MA, PI	2,07448%
AREIA	PI	NOVO SANTO ANTONIO	FTL	CE, MA, PI	2,33854%
AREIA	PI	TERESINA	FTL	CE, MA, PI	2,30973%
AREIA	RJ	BARRA DO PIRAI	FCA, MRS	DF, GO, MG, RJ, SP	0,48365%
AREIA	RJ	BARRA MANSÁ	FCA, MRS	DF, GO, MG, RJ, SP	0,57818%
AREIA	RJ	ENGENHEIRO PAULO DE FRONTIN	FCA, MRS	DF, GO, MG, RJ, SP	0,19106%
AREIA	RJ	ITAGUAI	FCA, MRS	DF, GO, MG, RJ, SP	0,28707%
AREIA	RJ	ITATIAIA	FCA, MRS	DF, GO, MG, RJ, SP	0,08006%
AREIA	RJ	MANGARATIBA	FCA, MRS	DF, GO, MG, RJ, SP	0,41928%
AREIA	RJ	MENDES	FCA, MRS	DF, GO, MG, RJ, SP	0,21206%
AREIA	RJ	PARACAMBI	FCA, MRS	DF, GO, MG, RJ, SP	0,30475%
AREIA	RJ	PINHEIRAL	FCA, MRS	DF, GO, MG, RJ, SP	0,23464%
AREIA	RJ	PORTO REAL	FCA, MRS	DF, GO, MG, RJ, SP	0,04148%
AREIA	RJ	QUATIS	FCA, MRS	DF, GO, MG, RJ, SP	0,61798%
AREIA	RJ	RESENDE	FCA, MRS	DF, GO, MG, RJ, SP	0,51976%
AREIA	RJ	SEROPEDICA	FCA, MRS	DF, GO, MG, RJ, SP	0,46525%
AREIA	RJ	VOLTA REDONDA	FCA, MRS	DF, GO, MG, RJ, SP	0,27948%
AREIA	SP	APARECIDA	FCA, MRS	DF, GO, MG, RJ, SP	1,64582%
AREIA	SP	CACAPAVA	FCA, MRS	DF, GO, MG, RJ, SP	5,57839%
AREIA	SP	CACHOEIRA PAULISTA	FCA, MRS	DF, GO, MG, RJ, SP	1,62077%
AREIA	SP	CANAS	FCA, MRS	DF, GO, MG, RJ, SP	1,24992%
AREIA	SP	CRUZEIRO	FCA, MRS	DF, GO, MG, RJ, SP	1,68835%
AREIA	SP	GUARAREMA	FCA, MRS	DF, GO, MG, RJ, SP	3,71008%
AREIA	SP	GUARATINGUETA	FCA, MRS	DF, GO, MG, RJ, SP	2,17610%
AREIA	SP	ITAQUAQUECETUBA	FCA, MRS	DF, GO, MG, RJ, SP	4,59169%
AREIA	SP	JACAREI	FCA, MRS	DF, GO, MG, RJ, SP	7,20202%
AREIA	SP	LAVRINHAS	FCA, MRS	DF, GO, MG, RJ, SP	0,05765%
AREIA	SP	LORENA	FCA, MRS	DF, GO, MG, RJ, SP	2,08588%
AREIA	SP	MOGI DAS CRUZES	FCA, MRS	DF, GO, MG, RJ, SP	8,52634%
AREIA	SP	PINDAMONHANGABA	FCA, MRS	DF, GO, MG, RJ, SP	7,37235%
AREIA	SP	QUELUZ	FCA, MRS	DF, GO, MG, RJ, SP	0,09914%
AREIA	SP	ROSEIRA	FCA, MRS	DF, GO, MG, RJ, SP	2,22838%
AREIA	SP	SANTO ANDRE	FCA, MRS	DF, GO, MG, RJ, SP	0,10406%
AREIA	SP	SAO CAETANO DO SUL	FCA, MRS	DF, GO, MG, RJ, SP	0,08647%
AREIA	SP	SAO JOSE DOS CAMPOS	FCA, MRS	DF, GO, MG, RJ, SP	9,65151%
AREIA	SP	SAO PAULO	FCA, MRS	DF, GO, MG, RJ, SP	13,12879%
AREIA	SP	TAUBATE	FCA, MRS	DF, GO, MG, RJ, SP	5,16945%
AREIA	SP	TREMEMBE	FCA, MRS	DF, GO, MG, RJ, SP	1,59822%
CALCÁRIO DOLOMÍTICO	ES	BAIXO GUANDU	EFVM, FCA, MRS	ES, MG, RJ	0,98292%
CALCÁRIO DOLOMÍTICO	ES	CARIACICA	EFVM, FCA, MRS	ES, MG, RJ	0,08631%
CALCÁRIO DOLOMÍTICO	ES	COLATINA	EFVM, FCA, MRS	ES, MG, RJ	2,25650%
CALCÁRIO DOLOMÍTICO	ES	FUNDAO	EFVM, FCA, MRS	ES, MG, RJ	0,53009%
CALCÁRIO DOLOMÍTICO	ES	IBIRACU	EFVM, FCA, MRS	ES, MG, RJ	0,68260%
CALCÁRIO DOLOMÍTICO	ES	JOAO NEIVA	EFVM, FCA, MRS	ES, MG, RJ	0,78166%
CALCÁRIO DOLOMÍTICO	ES	SANTA LEOPOLDINA	EFVM, FCA, MRS	ES, MG, RJ	0,36235%
CALCÁRIO DOLOMÍTICO	ES	SERRA	EFVM, FCA, MRS	ES, MG, RJ	1,02113%
CALCÁRIO DOLOMÍTICO	MG	AIMORES	EFVM, FCA, MRS	ES, MG, RJ	0,56560%
CALCÁRIO DOLOMÍTICO	MG	ANDRELANDIA	EFVM, FCA, MRS	ES, MG, RJ	5,66610%
CALCÁRIO DOLOMÍTICO	MG	ANTONIO DIAS	EFVM, FCA, MRS	ES, MG, RJ	3,38216%
CALCÁRIO DOLOMÍTICO	MG	ARANTINA	EFVM, FCA, MRS	ES, MG, RJ	1,85618%
CALCÁRIO DOLOMÍTICO	MG	ARCOS	EFVM, FCA, MRS	ES, MG, RJ	1,47601%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	EFVM, FCA, MRS	ES, MG, RJ	1,96943%
CALCÁRIO DOLOMÍTICO	MG	BELA VISTA DE MINAS	EFVM, FCA, MRS	ES, MG, RJ	0,38885%
CALCÁRIO DOLOMÍTICO	MG	BELO HORIZONTE	EFVM, FCA, MRS	ES, MG, RJ	0,53371%
CALCÁRIO DOLOMÍTICO	MG	BELO ORIENTE	EFVM, FCA, MRS	ES, MG, RJ	0,71066%
CALCÁRIO DOLOMÍTICO	MG	BOM JARDIM DE MINAS	EFVM, FCA, MRS	ES, MG, RJ	0,77807%
CALCÁRIO DOLOMÍTICO	MG	BUGRE	EFVM, FCA, MRS	ES, MG, RJ	0,03817%
CALCÁRIO DOLOMÍTICO	MG	CAETE	EFVM, FCA, MRS	ES, MG, RJ	1,44565%
CALCÁRIO DOLOMÍTICO	MG	CAMPO BELO	EFVM, FCA, MRS	ES, MG, RJ	3,26782%
CALCÁRIO DOLOMÍTICO	MG	CANA VERDE	EFVM, FCA, MRS	ES, MG, RJ	1,51361%
CALCÁRIO DOLOMÍTICO	MG	CANDEIAS	EFVM, FCA, MRS	ES, MG, RJ	5,46797%
CALCÁRIO DOLOMÍTICO	MG	CARRANCAS	EFVM, FCA, MRS	ES, MG, RJ	1,89145%
CALCÁRIO DOLOMÍTICO	MG	CATAS ALTAS	EFVM, FCA, MRS	ES, MG, RJ	0,00986%
CALCÁRIO DOLOMÍTICO	MG	CONSELHEIRO PENA	EFVM, FCA, MRS	ES, MG, RJ	1,13043%
CALCÁRIO DOLOMÍTICO	MG	CORONEL FABRICIANO	EFVM, FCA, MRS	ES, MG, RJ	0,51118%
CALCÁRIO DOLOMÍTICO	MG	CRUZILIA	EFVM, FCA, MRS	ES, MG, RJ	0,72435%
CALCÁRIO DOLOMÍTICO	MG	FORMIGA	EFVM, FCA, MRS	ES, MG, RJ	4,24904%
CALCÁRIO DOLOMÍTICO	MG	GOVERNADOR VALADARES	EFVM, FCA, MRS	ES, MG, RJ	3,51191%
CALCÁRIO DOLOMÍTICO	MG	INGAI	EFVM, FCA, MRS	ES, MG, RJ	2,76003%
CALCÁRIO DOLOMÍTICO	MG	IPATINGA	EFVM, FCA, MRS	ES, MG, RJ	0,56302%
CALCÁRIO DOLOMÍTICO	MG	ITUETA	EFVM, FCA, MRS	ES, MG, RJ	0,53162%
CALCÁRIO DOLOMÍTICO	MG	ITUMIRIM	EFVM, FCA, MRS	ES, MG, RJ	1,32297%
CALCÁRIO DOLOMÍTICO	MG	JOAO MONLEVADE	EFVM, FCA, MRS	ES, MG, RJ	0,98930%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
CALCÁRIO DOLOMÍTICO	MG	LAVRAS	EFVM, FCA, MRS	ES, MG, RJ	4,95700%
CALCÁRIO DOLOMÍTICO	MG	LIBERDADE	EFVM, FCA, MRS	ES, MG, RJ	2,88668%
CALCÁRIO DOLOMÍTICO	MG	LUMINARIAS	EFVM, FCA, MRS	ES, MG, RJ	1,44830%
CALCÁRIO DOLOMÍTICO	MG	MADRE DE DEUS DE MINAS	EFVM, FCA, MRS	ES, MG, RJ	0,41138%
CALCÁRIO DOLOMÍTICO	MG	MATOZINHOS	EFVM, FCA, MRS	ES, MG, RJ	0,17486%
CALCÁRIO DOLOMÍTICO	MG	MINDURI	EFVM, FCA, MRS	ES, MG, RJ	2,32415%
CALCÁRIO DOLOMÍTICO	MG	NAQUE	EFVM, FCA, MRS	ES, MG, RJ	0,43237%
CALCÁRIO DOLOMÍTICO	MG	NAZARENO	EFVM, FCA, MRS	ES, MG, RJ	0,02618%
CALCÁRIO DOLOMÍTICO	MG	NOVA ERA	EFVM, FCA, MRS	ES, MG, RJ	1,66021%
CALCÁRIO DOLOMÍTICO	MG	PASSA-VINTE	EFVM, FCA, MRS	ES, MG, RJ	4,36150%
CALCÁRIO DOLOMÍTICO	MG	PEDRO LEOPOLDO	EFVM, FCA, MRS	ES, MG, RJ	0,43022%
CALCÁRIO DOLOMÍTICO	MG	PERDOES	EFVM, FCA, MRS	ES, MG, RJ	2,35535%
CALCÁRIO DOLOMÍTICO	MG	PERIQUITO	EFVM, FCA, MRS	ES, MG, RJ	0,96929%
CALCÁRIO DOLOMÍTICO	MG	RESPLENDOR	EFVM, FCA, MRS	ES, MG, RJ	0,98067%
CALCÁRIO DOLOMÍTICO	MG	RIBEIRAO VERMELHO	EFVM, FCA, MRS	ES, MG, RJ	1,56226%
CALCÁRIO DOLOMÍTICO	MG	RIO PIRACICABA	EFVM, FCA, MRS	ES, MG, RJ	1,03936%
CALCÁRIO DOLOMÍTICO	MG	SABARA	EFVM, FCA, MRS	ES, MG, RJ	1,27136%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	EFVM, FCA, MRS	ES, MG, RJ	2,35031%
CALCÁRIO DOLOMÍTICO	MG	SANTA LUZIA	EFVM, FCA, MRS	ES, MG, RJ	1,33700%
CALCÁRIO DOLOMÍTICO	MG	SANTA RITA DE JACUTINGA	EFVM, FCA, MRS	ES, MG, RJ	0,27478%
CALCÁRIO DOLOMÍTICO	MG	SANTANA DO PARAISO	EFVM, FCA, MRS	ES, MG, RJ	0,85881%
CALCÁRIO DOLOMÍTICO	MG	SAO GONCALO DO RIO ABAIXO	EFVM, FCA, MRS	ES, MG, RJ	0,37876%
CALCÁRIO DOLOMÍTICO	MG	SAO JOAO DEL REI	EFVM, FCA, MRS	ES, MG, RJ	0,39436%
CALCÁRIO DOLOMÍTICO	MG	SAO JOSE DA LAPA	EFVM, FCA, MRS	ES, MG, RJ	0,36444%
CALCÁRIO DOLOMÍTICO	MG	SAO VICENTE DE MINAS	EFVM, FCA, MRS	ES, MG, RJ	3,67258%
CALCÁRIO DOLOMÍTICO	MG	TIMOTEO	EFVM, FCA, MRS	ES, MG, RJ	0,46090%
CALCÁRIO DOLOMÍTICO	MG	TUMIRITINGA	EFVM, FCA, MRS	ES, MG, RJ	1,20678%
CALCÁRIO DOLOMÍTICO	MG	VESPASIANO	EFVM, FCA, MRS	ES, MG, RJ	0,56484%
CALCÁRIO DOLOMÍTICO	PR	ALMIRANTE TAMANDARE	RMS	PR	2,60388%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	PR	5,09235%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	PR	4,40813%
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	PR	4,46848%
CALCÁRIO DOLOMÍTICO	PR	CALIFORNIA	RMS	PR	2,08874%
CALCÁRIO DOLOMÍTICO	PR	CAMBIRA	RMS	PR	0,92991%
CALCÁRIO DOLOMÍTICO	PR	CONTENDA	RMS	PR	0,15524%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	PR	7,14758%
CALCÁRIO DOLOMÍTICO	PR	FAXINAL	RMS	PR	3,96925%
CALCÁRIO DOLOMÍTICO	PR	IMBAU	RMS	PR	0,52351%
CALCÁRIO DOLOMÍTICO	PR	IPIRANGA	RMS	PR	8,88909%
CALCÁRIO DOLOMÍTICO	PR	IVAI	RMS	PR	0,32467%
CALCÁRIO DOLOMÍTICO	PR	JANDAIA DO SUL	RMS	PR	1,08788%
CALCÁRIO DOLOMÍTICO	PR	LAPA	RMS	PR	0,36844%
CALCÁRIO DOLOMÍTICO	PR	MANDAGUARI	RMS	PR	2,06088%
CALCÁRIO DOLOMÍTICO	PR	MARIALVA	RMS	PR	2,91983%
CALCÁRIO DOLOMÍTICO	PR	MARILANDIA DO SUL	RMS	PR	4,70391%
CALCÁRIO DOLOMÍTICO	PR	MARINGA	RMS	PR	2,09473%
CALCÁRIO DOLOMÍTICO	PR	MAUA DA SERRA	RMS	PR	1,35084%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	PR	9,73453%
CALCÁRIO DOLOMÍTICO	PR	PALMEIRA	RMS	PR	3,47702%
CALCÁRIO DOLOMÍTICO	PR	PINHAIS	RMS	PR	0,17302%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	PR	14,59795%
CALCÁRIO DOLOMÍTICO	PR	PORTO AMAZONAS	RMS	PR	2,55754%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	PR	9,09716%
CALCÁRIO DOLOMÍTICO	PR	SARANDI	RMS	PR	0,83895%
CALCÁRIO DOLOMÍTICO	PR	TIBAGI	RMS	PR	4,33649%
CALCÁRIO DOLOMÍTICO	RJ	BARRA MANSA	EFVM, FCA, MRS	ES, MG, RJ	2,08563%
CALCÁRIO DOLOMÍTICO	RJ	QUATIS	EFVM, FCA, MRS	ES, MG, RJ	4,20839%
CALCÁRIO DOLOMÍTICO	RJ	RESENDE	EFVM, FCA, MRS	ES, MG, RJ	0,50878%
CALCÁRIO DOLOMÍTICO	RJ	VOLTA REDONDA	EFVM, FCA, MRS	ES, MG, RJ	0,08377%
DOLOMITO	MG	ANDRELANDIA	FCA	MG, RJ	8,48096%
DOLOMITO	MG	ARANTINA	FCA	MG, RJ	3,05001%
DOLOMITO	MG	ARCOS	FCA	MG, RJ	2,51085%
DOLOMITO	MG	BOM JARDIM DE MINAS	FCA	MG, RJ	0,94590%
DOLOMITO	MG	CAMPO BELO	FCA	MG, RJ	5,55892%
DOLOMITO	MG	CANA VERDE	FCA	MG, RJ	2,57481%
DOLOMITO	MG	CANDEIAS	FCA	MG, RJ	9,30160%
DOLOMITO	MG	CARRANCAS	FCA	MG, RJ	3,21755%
DOLOMITO	MG	CRUZILIA	FCA	MG, RJ	1,23219%
DOLOMITO	MG	FORMIGA	FCA	MG, RJ	7,22808%
DOLOMITO	MG	INGAI	FCA	MG, RJ	4,69511%
DOLOMITO	MG	ITUMIRIM	FCA	MG, RJ	2,25051%
DOLOMITO	MG	LAVRAS	FCA	MG, RJ	8,43239%
DOLOMITO	MG	LIBERDADE	FCA	MG, RJ	4,91055%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
DOLOMITO	MG	LUMINARIAS	FCA	MG, RJ	2,46371%
DOLOMITO	MG	MINDURI	FCA	MG, RJ	3,95363%
DOLOMITO	MG	PASSA-VINTE	FCA	MG, RJ	6,72410%
DOLOMITO	MG	PERDOES	FCA	MG, RJ	4,00671%
DOLOMITO	MG	RIBEIRAO VERMELHO	FCA	MG, RJ	2,65757%
DOLOMITO	MG	SAO VICENTE DE MINAS	FCA	MG, RJ	6,12385%
DOLOMITO	RJ	BARRA MANSA	FCA	MG, RJ	2,90135%
DOLOMITO	RJ	QUATIS	FCA	MG, RJ	6,40362%
DOLOMITO	RJ	RESENDE	FCA	MG, RJ	0,37602%
FOSFATO	GO	CATALAO	FCA	GO, MG, SP	3,76124%
FOSFATO	GO	CUMARI	FCA	GO, MG, SP	8,17063%
FOSFATO	GO	GOIANDIRA	FCA	GO, MG, SP	8,14634%
FOSFATO	MG	ARAGUARI	FCA	GO, MG, SP	19,11402%
FOSFATO	MG	UBERABA	FCA	GO, MG, SP	38,67104%
FOSFATO	MG	UBERLANDIA	FCA	GO, MG, SP	20,87732%
FOSFATO	SP	AGUAI	FCA	GO, MG, SP	0,04055%
FOSFATO	SP	ALUMINIO	FCA	GO, MG, SP	0,00088%
FOSFATO	SP	ARAMINA	FCA	GO, MG, SP	0,02595%
FOSFATO	SP	CAMPINAS	FCA	GO, MG, SP	0,05036%
FOSFATO	SP	CASA BRANCA	FCA	GO, MG, SP	0,09935%
FOSFATO	SP	COTIA	FCA	GO, MG, SP	0,04043%
FOSFATO	SP	CRAVINHOS	FCA	GO, MG, SP	0,02542%
FOSFATO	SP	CUBATAO	FCA	GO, MG, SP	0,02862%
FOSFATO	SP	EMBU-GUACU	FCA	GO, MG, SP	0,02878%
FOSFATO	SP	ESTIVA GERBI	FCA	GO, MG, SP	0,02323%
FOSFATO	SP	GUARA	FCA	GO, MG, SP	0,01496%
FOSFATO	SP	GUARACAI	FCA	GO, MG, SP	0,01298%
FOSFATO	SP	IGARAPAVA	FCA	GO, MG, SP	0,00268%
FOSFATO	SP	INDAIATUBA	FCA	GO, MG, SP	0,03620%
FOSFATO	SP	ITAPECERICA DA SERRA	FCA	GO, MG, SP	0,02252%
FOSFATO	SP	ITU	FCA	GO, MG, SP	0,05524%
FOSFATO	SP	ITUVERAVA	FCA	GO, MG, SP	0,04779%
FOSFATO	SP	JAGUARIUNA	FCA	GO, MG, SP	0,03595%
FOSFATO	SP	JARDINOPOLIS	FCA	GO, MG, SP	0,04684%
FOSFATO	SP	MAIRINQUE	FCA	GO, MG, SP	0,04996%
FOSFATO	SP	MOGI GUACU	FCA	GO, MG, SP	0,03220%
FOSFATO	SP	MOJI MIRIM	FCA	GO, MG, SP	0,03779%
FOSFATO	SP	ORLANDIA	FCA	GO, MG, SP	0,03849%
FOSFATO	SP	PAULINIA	FCA	GO, MG, SP	0,01815%
FOSFATO	SP	PRAIA GRANDE	FCA	GO, MG, SP	0,00950%
FOSFATO	SP	RIBEIRAO PRETO	FCA	GO, MG, SP	0,04891%
FOSFATO	SP	SALES OLIVEIRA	FCA	GO, MG, SP	0,02416%
FOSFATO	SP	SALTO	FCA	GO, MG, SP	0,01519%
FOSFATO	SP	SANTA RITA DO PASSA QUATRO	FCA	GO, MG, SP	0,00761%
FOSFATO	SP	SANTA ROSA DE VITERBO	FCA	GO, MG, SP	0,01391%
FOSFATO	SP	SANTO ANTONIO DE POSSE	FCA	GO, MG, SP	0,01917%
FOSFATO	SP	SANTOS	FCA	GO, MG, SP	0,00127%
FOSFATO	SP	SAO JOAQUIM DA BARRA	FCA	GO, MG, SP	0,03157%
FOSFATO	SP	SAO LOURENCO DA SERRA	FCA	GO, MG, SP	0,00220%
FOSFATO	SP	SAO PAULO	FCA	GO, MG, SP	0,04616%
FOSFATO	SP	SAO ROQUE	FCA	GO, MG, SP	0,03163%
FOSFATO	SP	SAO SIMAO	FCA	GO, MG, SP	0,06198%
FOSFATO	SP	SAO VICENTE	FCA	GO, MG, SP	0,08066%
FOSFATO	SP	SERRANA	FCA	GO, MG, SP	0,01017%
FOSFATO	SP	TAMBAU	FCA	GO, MG, SP	0,04002%
MAGNESITA	BA	ARACATU	FCA	BA, MG	0,43359%
MAGNESITA	BA	BARRA DA ESTIVA	FCA	BA, MG	0,54471%
MAGNESITA	BA	BRUMADO	FCA	BA, MG	1,81118%
MAGNESITA	BA	CABACEIRAS DO PARAGUACU	FCA	BA, MG	0,18217%
MAGNESITA	BA	CACHOEIRA	FCA	BA, MG	0,33375%
MAGNESITA	BA	CACULE	FCA	BA, MG	2,88376%
MAGNESITA	BA	CANDEIAS	FCA	BA, MG	0,65952%
MAGNESITA	BA	CASTRO ALVES	FCA	BA, MG	1,82543%
MAGNESITA	BA	CONCEICAO DA FEIRA	FCA	BA, MG	0,65533%
MAGNESITA	BA	CONTENDAS DO SINCORA	FCA	BA, MG	2,01245%
MAGNESITA	BA	CRUZ DAS ALMAS	FCA	BA, MG	0,62334%
MAGNESITA	BA	IACU	FCA	BA, MG	3,28813%
MAGNESITA	BA	IRAMAIA	FCA	BA, MG	2,11354%
MAGNESITA	BA	ITATIM	FCA	BA, MG	0,76564%
MAGNESITA	BA	ITUACU	FCA	BA, MG	0,05031%
MAGNESITA	BA	JACARACI	FCA	BA, MG	0,06453%
MAGNESITA	BA	LICINIO DE ALMEIDA	FCA	BA, MG	2,75439%
MAGNESITA	BA	MALHADA DE PEDRAS	FCA	BA, MG	1,88568%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MAGNESITA	BA	MARÇONILIO SOUZA	FCA	BA, MG	2,48292%
MAGNESITA	BA	MURITIBA	FCA	BA, MG	0,79596%
MAGNESITA	BA	RIO DO ANTONIO	FCA	BA, MG	2,75667%
MAGNESITA	BA	SANTA TERESINHA	FCA	BA, MG	0,70345%
MAGNESITA	BA	SANTA TEREZINHA	FCA	BA, MG	0,65041%
MAGNESITA	BA	SANTO AMARO	FCA	BA, MG	1,01621%
MAGNESITA	BA	SAO FELIX	FCA	BA, MG	0,17307%
MAGNESITA	BA	SAO GONCALO DOS CAMPOS	FCA	BA, MG	0,49582%
MAGNESITA	BA	SAO SEBASTIAO DO PASSE	FCA	BA, MG	0,59431%
MAGNESITA	BA	SAPEACU	FCA	BA, MG	0,04337%
MAGNESITA	BA	TANHACU	FCA	BA, MG	1,18930%
MAGNESITA	BA	URANDI	FCA	BA, MG	3,66180%
MAGNESITA	MG	ARACAI	FCA	BA, MG	1,72378%
MAGNESITA	MG	AUGUSTO DE LIMA	FCA	BA, MG	2,90151%
MAGNESITA	MG	BELO HORIZONTE	FCA	BA, MG	2,08217%
MAGNESITA	MG	BOCAIUVA	FCA	BA, MG	5,66931%
MAGNESITA	MG	BUENOPOLIS	FCA	BA, MG	1,59258%
MAGNESITA	MG	CAPITAO ENEAS	FCA	BA, MG	4,25166%
MAGNESITA	MG	CATUTI	FCA	BA, MG	0,32876%
MAGNESITA	MG	CONTAGEM	FCA	BA, MG	0,14872%
MAGNESITA	MG	CORDISBURGO	FCA	BA, MG	1,50207%
MAGNESITA	MG	CORINTO	FCA	BA, MG	3,59072%
MAGNESITA	MG	CURVELO	FCA	BA, MG	5,74451%
MAGNESITA	MG	ENGENHEIRO NAVARRO	FCA	BA, MG	1,89955%
MAGNESITA	MG	ESPINOSA	FCA	BA, MG	2,02099%
MAGNESITA	MG	FRANCISCO SA	FCA	BA, MG	1,93269%
MAGNESITA	MG	GLAUCILANDIA	FCA	BA, MG	0,02187%
MAGNESITA	MG	JANAUBA	FCA	BA, MG	3,16139%
MAGNESITA	MG	JOAQUIM FELICIO	FCA	BA, MG	3,78401%
MAGNESITA	MG	MATO VERDE	FCA	BA, MG	0,50673%
MAGNESITA	MG	MATOZINHOS	FCA	BA, MG	0,73774%
MAGNESITA	MG	MONTE AZUL	FCA	BA, MG	3,37045%
MAGNESITA	MG	MONTES CLAROS	FCA	BA, MG	4,10728%
MAGNESITA	MG	NOVA PORTEIRINHA	FCA	BA, MG	1,00295%
MAGNESITA	MG	PAI PEDRO	FCA	BA, MG	2,00217%
MAGNESITA	MG	PEDRO LEOPOLDO	FCA	BA, MG	0,87016%
MAGNESITA	MG	PORTEIRINHA	FCA	BA, MG	1,45910%
MAGNESITA	MG	PRUDENTE DE MORAIS	FCA	BA, MG	0,58125%
MAGNESITA	MG	SABARA	FCA	BA, MG	0,63953%
MAGNESITA	MG	SANTA LUZIA	FCA	BA, MG	1,35914%
MAGNESITA	MG	SAO JOSE DA LAPA	FCA	BA, MG	0,67176%
MAGNESITA	MG	SETE LAGOAS	FCA	BA, MG	2,31013%
MAGNESITA	MG	VESPASIANO	FCA	BA, MG	0,57462%
MINÉRIO DE ALUMÍNIO	DF	BRASILIA	FCA, MRS	DF, GO, MG, RJ, SP	2,72954%
MINÉRIO DE ALUMÍNIO	GO	CATALAO	FCA, MRS	DF, GO, MG, RJ, SP	0,21620%
MINÉRIO DE ALUMÍNIO	GO	CUMARI	FCA, MRS	DF, GO, MG, RJ, SP	1,57571%
MINÉRIO DE ALUMÍNIO	GO	GOIANDIRA	FCA, MRS	DF, GO, MG, RJ, SP	1,97368%
MINÉRIO DE ALUMÍNIO	GO	IPAMERI	FCA, MRS	DF, GO, MG, RJ, SP	2,86631%
MINÉRIO DE ALUMÍNIO	GO	LUZIANIA	FCA, MRS	DF, GO, MG, RJ, SP	8,14470%
MINÉRIO DE ALUMÍNIO	GO	ORIZONA	FCA, MRS	DF, GO, MG, RJ, SP	3,29060%
MINÉRIO DE ALUMÍNIO	GO	PIRES DO RIO	FCA, MRS	DF, GO, MG, RJ, SP	0,64004%
MINÉRIO DE ALUMÍNIO	GO	URUTAI	FCA, MRS	DF, GO, MG, RJ, SP	1,69014%
MINÉRIO DE ALUMÍNIO	GO	VALPARAISO DE GOIAS	FCA, MRS	DF, GO, MG, RJ, SP	0,80707%
MINÉRIO DE ALUMÍNIO	MG	ARAGUARI	FCA, MRS	DF, GO, MG, RJ, SP	3,68616%
MINÉRIO DE ALUMÍNIO	MG	POCOS DE CALDAS	FCA, MRS	DF, GO, MG, RJ, SP	0,10666%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA, MRS	DF, GO, MG, RJ, SP	7,97748%
MINÉRIO DE ALUMÍNIO	MG	UBERLANDIA	FCA, MRS	DF, GO, MG, RJ, SP	4,02621%
MINÉRIO DE ALUMÍNIO	RJ	BARRA DO PIRAI	FCA, MRS	DF, GO, MG, RJ, SP	0,71696%
MINÉRIO DE ALUMÍNIO	RJ	BARRA MANSÁ	FCA, MRS	DF, GO, MG, RJ, SP	0,75165%
MINÉRIO DE ALUMÍNIO	RJ	ITATIAIA	FCA, MRS	DF, GO, MG, RJ, SP	0,47874%
MINÉRIO DE ALUMÍNIO	RJ	PARAIBA DO SUL	FCA, MRS	DF, GO, MG, RJ, SP	0,63639%
MINÉRIO DE ALUMÍNIO	RJ	PINHEIRAL	FCA, MRS	DF, GO, MG, RJ, SP	0,40198%
MINÉRIO DE ALUMÍNIO	RJ	PORTO REAL	FCA, MRS	DF, GO, MG, RJ, SP	0,24803%
MINÉRIO DE ALUMÍNIO	RJ	RESENDE	FCA, MRS	DF, GO, MG, RJ, SP	0,71327%
MINÉRIO DE ALUMÍNIO	RJ	RIO DAS FLORES	FCA, MRS	DF, GO, MG, RJ, SP	0,01914%
MINÉRIO DE ALUMÍNIO	RJ	VALENCA	FCA, MRS	DF, GO, MG, RJ, SP	0,18014%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	FCA, MRS	DF, GO, MG, RJ, SP	1,80716%
MINÉRIO DE ALUMÍNIO	RJ	VOLTA REDONDA	FCA, MRS	DF, GO, MG, RJ, SP	0,47878%
MINÉRIO DE ALUMÍNIO	SP	AGUAI	FCA, MRS	DF, GO, MG, RJ, SP	1,80524%
MINÉRIO DE ALUMÍNIO	SP	AGUAS DA PRATA	FCA, MRS	DF, GO, MG, RJ, SP	0,38940%
MINÉRIO DE ALUMÍNIO	SP	ALUMINIO	FCA, MRS	DF, GO, MG, RJ, SP	0,48755%
MINÉRIO DE ALUMÍNIO	SP	APARECIDA	FCA, MRS	DF, GO, MG, RJ, SP	0,26267%
MINÉRIO DE ALUMÍNIO	SP	ARAMINA	FCA, MRS	DF, GO, MG, RJ, SP	0,88023%



Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE ALUMÍNIO	SP	CACAPAVA	FCA, MRS	DF, GO, MG, RJ, SP	0,49820%
MINÉRIO DE ALUMÍNIO	SP	CACHOEIRA PAULISTA	FCA, MRS	DF, GO, MG, RJ, SP	0,25867%
MINÉRIO DE ALUMÍNIO	SP	CAEIRAS	FCA, MRS	DF, GO, MG, RJ, SP	0,13620%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	FCA, MRS	DF, GO, MG, RJ, SP	3,50228%
MINÉRIO DE ALUMÍNIO	SP	CAMPO LIMPO PAULISTA	FCA, MRS	DF, GO, MG, RJ, SP	0,31240%
MINÉRIO DE ALUMÍNIO	SP	CANAS	FCA, MRS	DF, GO, MG, RJ, SP	0,19948%
MINÉRIO DE ALUMÍNIO	SP	CASA BRANCA	FCA, MRS	DF, GO, MG, RJ, SP	3,37003%
MINÉRIO DE ALUMÍNIO	SP	CRAVINHOS	FCA, MRS	DF, GO, MG, RJ, SP	0,86219%
MINÉRIO DE ALUMÍNIO	SP	CRUZEIRO	FCA, MRS	DF, GO, MG, RJ, SP	0,41939%
MINÉRIO DE ALUMÍNIO	SP	ESTIVA GERBI	FCA, MRS	DF, GO, MG, RJ, SP	1,03927%
MINÉRIO DE ALUMÍNIO	SP	FRANCISCO MORATO	FCA, MRS	DF, GO, MG, RJ, SP	0,22503%
MINÉRIO DE ALUMÍNIO	SP	FRANCO DA ROCHA	FCA, MRS	DF, GO, MG, RJ, SP	0,23492%
MINÉRIO DE ALUMÍNIO	SP	GUARA	FCA, MRS	DF, GO, MG, RJ, SP	0,50733%
MINÉRIO DE ALUMÍNIO	SP	GUARACAI	FCA, MRS	DF, GO, MG, RJ, SP	0,44030%
MINÉRIO DE ALUMÍNIO	SP	GUARAREMA	FCA, MRS	DF, GO, MG, RJ, SP	0,33134%
MINÉRIO DE ALUMÍNIO	SP	GUARATINGUETA	FCA, MRS	DF, GO, MG, RJ, SP	0,34730%
MINÉRIO DE ALUMÍNIO	SP	IGARAPAVA	FCA, MRS	DF, GO, MG, RJ, SP	0,09082%
MINÉRIO DE ALUMÍNIO	SP	INDAIATUBA	FCA, MRS	DF, GO, MG, RJ, SP	2,27689%
MINÉRIO DE ALUMÍNIO	SP	ITAQUAQUECETUBA	FCA, MRS	DF, GO, MG, RJ, SP	0,41008%
MINÉRIO DE ALUMÍNIO	SP	ITU	FCA, MRS	DF, GO, MG, RJ, SP	3,47400%
MINÉRIO DE ALUMÍNIO	SP	ITUVERAVA	FCA, MRS	DF, GO, MG, RJ, SP	1,62116%
MINÉRIO DE ALUMÍNIO	SP	JACAREI	FCA, MRS	DF, GO, MG, RJ, SP	0,64320%
MINÉRIO DE ALUMÍNIO	SP	JAGUARIUNA	FCA, MRS	DF, GO, MG, RJ, SP	1,60814%
MINÉRIO DE ALUMÍNIO	SP	JARDINOPOLIS	FCA, MRS	DF, GO, MG, RJ, SP	1,58881%
MINÉRIO DE ALUMÍNIO	SP	JUNDAI	FCA, MRS	DF, GO, MG, RJ, SP	0,56230%
MINÉRIO DE ALUMÍNIO	SP	LAVRINHAS	FCA, MRS	DF, GO, MG, RJ, SP	0,34476%
MINÉRIO DE ALUMÍNIO	SP	LORENA	FCA, MRS	DF, GO, MG, RJ, SP	0,33290%
MINÉRIO DE ALUMÍNIO	SP	LOUVEIRA	FCA, MRS	DF, GO, MG, RJ, SP	0,15127%
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	FCA, MRS	DF, GO, MG, RJ, SP	2,00724%
MINÉRIO DE ALUMÍNIO	SP	MOGI DAS CRUZES	FCA, MRS	DF, GO, MG, RJ, SP	0,76147%
MINÉRIO DE ALUMÍNIO	SP	MOGI GUACU	FCA, MRS	DF, GO, MG, RJ, SP	1,44047%
MINÉRIO DE ALUMÍNIO	SP	MOJI MIRIM	FCA, MRS	DF, GO, MG, RJ, SP	1,69043%
MINÉRIO DE ALUMÍNIO	SP	ORLANDIA	FCA, MRS	DF, GO, MG, RJ, SP	1,30553%
MINÉRIO DE ALUMÍNIO	SP	PAULINIA	FCA, MRS	DF, GO, MG, RJ, SP	0,81175%
MINÉRIO DE ALUMÍNIO	SP	PINDAMONHANGABA	FCA, MRS	DF, GO, MG, RJ, SP	0,65841%
MINÉRIO DE ALUMÍNIO	SP	QUELUZ	FCA, MRS	DF, GO, MG, RJ, SP	0,59282%
MINÉRIO DE ALUMÍNIO	SP	RIBEIRAO PRETO	FCA, MRS	DF, GO, MG, RJ, SP	1,65907%
MINÉRIO DE ALUMÍNIO	SP	ROSEIRA	FCA, MRS	DF, GO, MG, RJ, SP	0,26778%
MINÉRIO DE ALUMÍNIO	SP	SALES OLIVEIRA	FCA, MRS	DF, GO, MG, RJ, SP	0,81966%
MINÉRIO DE ALUMÍNIO	SP	SALTO	FCA, MRS	DF, GO, MG, RJ, SP	0,95551%
MINÉRIO DE ALUMÍNIO	SP	SANTA RITA DO PASSA QUATRO	FCA, MRS	DF, GO, MG, RJ, SP	0,25803%
MINÉRIO DE ALUMÍNIO	SP	SANTA ROSA DE VITERBO	FCA, MRS	DF, GO, MG, RJ, SP	0,47170%
MINÉRIO DE ALUMÍNIO	SP	SANTO ANTONIO DE POSSE	FCA, MRS	DF, GO, MG, RJ, SP	0,85757%
MINÉRIO DE ALUMÍNIO	SP	SAO JOAO DA BOA VISTA	FCA, MRS	DF, GO, MG, RJ, SP	0,60183%
MINÉRIO DE ALUMÍNIO	SP	SAO JOAQUIM DA BARRA	FCA, MRS	DF, GO, MG, RJ, SP	1,07079%
MINÉRIO DE ALUMÍNIO	SP	SAO JOSE DOS CAMPOS	FCA, MRS	DF, GO, MG, RJ, SP	0,86196%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	FCA, MRS	DF, GO, MG, RJ, SP	1,93445%
MINÉRIO DE ALUMÍNIO	SP	SAO SIMAO	FCA, MRS	DF, GO, MG, RJ, SP	2,10228%
MINÉRIO DE ALUMÍNIO	SP	SERRANA	FCA, MRS	DF, GO, MG, RJ, SP	0,34499%
MINÉRIO DE ALUMÍNIO	SP	TAMBAU	FCA, MRS	DF, GO, MG, RJ, SP	1,35762%
MINÉRIO DE ALUMÍNIO	SP	TAUBATE	FCA, MRS	DF, GO, MG, RJ, SP	0,46168%
MINÉRIO DE ALUMÍNIO	SP	TREMEMBE	FCA, MRS	DF, GO, MG, RJ, SP	0,14273%
MINÉRIO DE ALUMÍNIO	SP	VALINHOS	FCA, MRS	DF, GO, MG, RJ, SP	0,31217%
MINÉRIO DE ALUMÍNIO	SP	VARZEA PAULISTA	FCA, MRS	DF, GO, MG, RJ, SP	0,18434%
MINÉRIO DE ALUMÍNIO	SP	VINHEDO	FCA, MRS	DF, GO, MG, RJ, SP	0,29123%
MINÉRIO DE COBRE	MA	ACAILANDIA	EFC	MA, PA	13,12309%
MINÉRIO DE COBRE	MA	ALTO ALEGRE DO PINDARE	EFC	MA, PA	9,85661%
MINÉRIO DE COBRE	MA	ANAJATUBA	EFC	MA, PA	2,36361%
MINÉRIO DE COBRE	MA	ARARI	EFC	MA, PA	3,06788%
MINÉRIO DE COBRE	MA	BACABEIRA	EFC	MA, PA	4,61464%
MINÉRIO DE COBRE	MA	BOM JARDIM	EFC	MA, PA	0,67390%
MINÉRIO DE COBRE	MA	BOM JESUS DAS SELVAS	EFC	MA, PA	5,65586%
MINÉRIO DE COBRE	MA	BURITICUPU	EFC	MA, PA	3,26142%
MINÉRIO DE COBRE	MA	CIDELANDIA	EFC	MA, PA	5,39112%
MINÉRIO DE COBRE	MA	IGARAPE DO MEIO	EFC	MA, PA	3,00900%
MINÉRIO DE COBRE	MA	ITAPECURU MIRIM	EFC	MA, PA	1,51295%
MINÉRIO DE COBRE	MA	ITINGA DO MARANHAO	EFC	MA, PA	0,87205%
MINÉRIO DE COBRE	MA	MIRANDA DO NORTE	EFC	MA, PA	0,95704%
MINÉRIO DE COBRE	MA	MONCAO	EFC	MA, PA	1,48524%
MINÉRIO DE COBRE	MA	PINDARE-MIRIM	EFC	MA, PA	1,46143%
MINÉRIO DE COBRE	MA	SANTA INES	EFC	MA, PA	1,28847%
MINÉRIO DE COBRE	MA	SANTA LUZIA	EFC	MA, PA	0,49335%
MINÉRIO DE COBRE	MA	SANTA RITA	EFC	MA, PA	1,70834%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE COBRE	MA	SAO FRANCISCO DO BREJAO	EFC	MA, PA	0,57983%
MINÉRIO DE COBRE	MA	SAO LUIS	EFC	MA, PA	3,36055%
MINÉRIO DE COBRE	MA	SAO PEDRO DA AGUA BRANCA	EFC	MA, PA	5,56857%
MINÉRIO DE COBRE	MA	TUFILANDIA	EFC	MA, PA	1,65785%
MINÉRIO DE COBRE	MA	VILA NOVA DOS MARTIRIOS	EFC	MA, PA	4,02008%
MINÉRIO DE COBRE	MA	VITORIA DO MEARIM	EFC	MA, PA	2,47010%
MINÉRIO DE COBRE	PA	BOM JESUS DO TO	EFC	MA, PA	4,93802%
MINÉRIO DE COBRE	PA	CURIONOPOLIS	EFC	MA, PA	0,61479%
MINÉRIO DE COBRE	PA	MARABA	EFC	MA, PA	14,11348%
MINÉRIO DE COBRE	PA	PARAUAPEBAS	EFC	MA, PA	1,88072%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	BA	13,66247%
MINÉRIO DE CROMO	BA	ALAGOINHAS	FCA	BA	7,45539%
MINÉRIO DE CROMO	BA	ANTONIO GONCALVES	FCA	BA	0,93769%
MINÉRIO DE CROMO	BA	ARACI	FCA	BA	0,02107%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	BA	8,53641%
MINÉRIO DE CROMO	BA	BARROCAS	FCA	BA	4,77264%
MINÉRIO DE CROMO	BA	CAMPO FORMOSO	FCA	BA	0,07198%
MINÉRIO DE CROMO	BA	CATU	FCA	BA	6,67352%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	BA	7,65110%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	BA	13,10197%
MINÉRIO DE CROMO	BA	LAMARAO	FCA	BA	3,17090%
MINÉRIO DE CROMO	BA	OURICANGAS	FCA	BA	0,17815%
MINÉRIO DE CROMO	BA	POJUCA	FCA	BA	1,37602%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	BA	8,18618%
MINÉRIO DE CROMO	BA	SANTALUZ	FCA	BA	13,50954%
MINÉRIO DE CROMO	BA	SENHOR DO BONFIM	FCA	BA	2,17296%
MINÉRIO DE CROMO	BA	SERRINHA	FCA	BA	8,52204%
MINÉRIO DE FERRO	BA	ARACATU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00521%
MINÉRIO DE FERRO	BA	BARRA DA ESTIVA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00655%
MINÉRIO DE FERRO	BA	BRUMADO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01932%
MINÉRIO DE FERRO	BA	CACULE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01613%
MINÉRIO DE FERRO	BA	CASTRO ALVES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00459%
MINÉRIO DE FERRO	BA	CONTENDAS DO SINCORA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,02419%
MINÉRIO DE FERRO	BA	FCA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01812%
MINÉRIO DE FERRO	BA	IACU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,03953%
MINÉRIO DE FERRO	BA	IRAMAIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,02541%
MINÉRIO DE FERRO	BA	ITATIM	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00703%
MINÉRIO DE FERRO	BA	ITUACU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00060%
MINÉRIO DE FERRO	BA	JACARACI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00036%
MINÉRIO DE FERRO	BA	LICINIO DE ALMEIDA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00869%
MINÉRIO DE FERRO	BA	MALHADA DE PEDRAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01055%
MINÉRIO DE FERRO	BA	MARCIONILIO SOUZA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,02985%
MINÉRIO DE FERRO	BA	RIO DO ANTONIO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01542%
MINÉRIO DE FERRO	BA	SANTA TERESINHA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00846%
MINÉRIO DE FERRO	BA	TANHACU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01430%
MINÉRIO DE FERRO	BA	URANDI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00092%
MINÉRIO DE FERRO	ES	BAIXO GUANDU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,87649%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,16582%
MINÉRIO DE FERRO	ES	COLATINA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	4,30788%
MINÉRIO DE FERRO	ES	FUNDAO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,01070%
MINÉRIO DE FERRO	ES	IBIRACU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,30148%
MINÉRIO DE FERRO	ES	JOAO NEIVA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,49212%
MINÉRIO DE FERRO	ES	SANTA LEOPOLDINA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,69092%
MINÉRIO DE FERRO	ES	SERRA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,94779%
MINÉRIO DE FERRO	MA	ACAILANDIA	EFC	MA, PA	12,36680%
MINÉRIO DE FERRO	MA	ALTO ALEGRE DO PINDARE	EFC	MA, PA	9,27874%
MINÉRIO DE FERRO	MA	ANAJATUBA	EFC	MA, PA	2,22504%
MINÉRIO DE FERRO	MA	ARARI	EFC	MA, PA	2,88801%
MINÉRIO DE FERRO	MA	BACABEIRA	EFC	MA, PA	4,34409%
MINÉRIO DE FERRO	MA	BOM JARDIM	EFC	MA, PA	0,63440%
MINÉRIO DE FERRO	MA	BOM JESUS DAS SELVAS	EFC	MA, PA	5,32427%
MINÉRIO DE FERRO	MA	BURITICUPU	EFC	MA, PA	3,07021%
MINÉRIO DE FERRO	MA	CIDELANDIA	EFC	MA, PA	5,10414%
MINÉRIO DE FERRO	MA	IGARAPE DO MEIO	EFC	MA, PA	2,83259%
MINÉRIO DE FERRO	MA	ITAPECURU MIRIM	EFC	MA, PA	1,42425%
MINÉRIO DE FERRO	MA	ITINGA DO MARANHAO	EFC	MA, PA	0,82092%
MINÉRIO DE FERRO	MA	MIRANDA DO NORTE	EFC	MA, PA	0,90093%
MINÉRIO DE FERRO	MA	MONCAO	EFC	MA, PA	1,39816%
MINÉRIO DE FERRO	MA	PINDARE-MIRIM	EFC	MA, PA	1,37575%
MINÉRIO DE FERRO	MA	SANTA INES	EFC	MA, PA	1,21293%
MINÉRIO DE FERRO	MA	SANTA LUZIA	EFC	MA, PA	0,46443%
MINÉRIO DE FERRO	MA	SANTA RITA	EFC	MA, PA	1,60818%
MINÉRIO DE FERRO	MA	SAO FRANCISCO DO BREJAO	EFC	MA, PA	0,54897%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE FERRO	MA	SAO LUIS	EFC	MA, PA	2,01783%
MINÉRIO DE FERRO	MA	SAO PEDRO DA AGUA BRANCA	EFC	MA, PA	5,27214%
MINÉRIO DE FERRO	MA	TUFILANDIA	EFC	MA, PA	1,56066%
MINÉRIO DE FERRO	MA	VILA NOVA DOS MARTIRIOS	EFC	MA, PA	3,80608%
MINÉRIO DE FERRO	MA	VITORIA DO MEARIM	EFC	MA, PA	2,32529%
MINÉRIO DE FERRO	MG	AIMORES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,07977%
MINÉRIO DE FERRO	MG	ALFREDO VASCONCELOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00459%
MINÉRIO DE FERRO	MG	ANDRELANDIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	4,05116%
MINÉRIO DE FERRO	MG	ANTONIO CARLOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00412%
MINÉRIO DE FERRO	MG	ANTONIO DIAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	3,25788%
MINÉRIO DE FERRO	MG	ARACAI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00043%
MINÉRIO DE FERRO	MG	ARANTINA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,37639%
MINÉRIO DE FERRO	MG	ARAXA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,28933%
MINÉRIO DE FERRO	MG	AUGUSTO DE LIMA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00073%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,08300%
MINÉRIO DE FERRO	MG	BARBACENA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00418%
MINÉRIO DE FERRO	MG	BELA VISTA DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,23984%
MINÉRIO DE FERRO	MG	BELMIRO BRAGA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00043%
MINÉRIO DE FERRO	MG	BELO HORIZONTE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,07575%
MINÉRIO DE FERRO	MG	BELO ORIENTE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,35672%
MINÉRIO DE FERRO	MG	BELO VALE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,04387%
MINÉRIO DE FERRO	MG	BETIM	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,04990%
MINÉRIO DE FERRO	MG	BOCAIUVA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00142%
MINÉRIO DE FERRO	MG	BOM JARDIM DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,32166%
MINÉRIO DE FERRO	MG	BRUMADINHO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,29901%
MINÉRIO DE FERRO	MG	BUENOPOLIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00040%
MINÉRIO DE FERRO	MG	BUGRE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,07288%
MINÉRIO DE FERRO	MG	CAETE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,04197%
MINÉRIO DE FERRO	MG	CAPITAO ENEAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00107%
MINÉRIO DE FERRO	MG	CARANAIBA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00076%
MINÉRIO DE FERRO	MG	CARANDAI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00635%
MINÉRIO DE FERRO	MG	CARMO DO CAJURU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00042%
MINÉRIO DE FERRO	MG	CATAS ALTAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,59703%
MINÉRIO DE FERRO	MG	CATUTI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00008%
MINÉRIO DE FERRO	MG	CONCEICAO DA BARRA DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,52316%
MINÉRIO DE FERRO	MG	CONGONHAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,23218%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01082%
MINÉRIO DE FERRO	MG	CONSELHEIRO PENNA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,15809%
MINÉRIO DE FERRO	MG	CONTAGEM	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01139%
MINÉRIO DE FERRO	MG	CORDISBURGO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00038%
MINÉRIO DE FERRO	MG	CORINTO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00090%
MINÉRIO DE FERRO	MG	CORONEL FABRICIANO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,49923%
MINÉRIO DE FERRO	MG	CORONEL XAVIER CHAVES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,86083%
MINÉRIO DE FERRO	MG	CRISTIANO OTONI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00248%
MINÉRIO DE FERRO	MG	CURVELO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00144%
MINÉRIO DE FERRO	MG	DIVINOPOLIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00059%
MINÉRIO DE FERRO	MG	ENGENHEIRO NAVARRO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00048%
MINÉRIO DE FERRO	MG	ENTRE RIOS DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,04648%
MINÉRIO DE FERRO	MG	ESMERALDAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00424%
MINÉRIO DE FERRO	MG	ESPINOSA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00051%
MINÉRIO DE FERRO	MG	EWBANK DA CAMARA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00245%
MINÉRIO DE FERRO	MG	FRANCISCO SA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00048%
MINÉRIO DE FERRO	MG	GLAUCILANDIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00001%
MINÉRIO DE FERRO	MG	GOVERNADOR VALADARES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	6,70457%
MINÉRIO DE FERRO	MG	IBIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,33466%
MINÉRIO DE FERRO	MG	IBIRITE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,05474%
MINÉRIO DE FERRO	MG	IPATINGA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,78531%
MINÉRIO DE FERRO	MG	ITABIRA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,68695%
MINÉRIO DE FERRO	MG	ITABIRITO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,71752%
MINÉRIO DE FERRO	MG	ITAUNA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00278%
MINÉRIO DE FERRO	MG	ITUETA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,01491%
MINÉRIO DE FERRO	MG	JANAUBA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00079%
MINÉRIO DE FERRO	MG	JECEABA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,99197%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,61020%
MINÉRIO DE FERRO	MG	JOAQUIM FELICIO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00095%
MINÉRIO DE FERRO	MG	JUATUBA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01205%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00410%
MINÉRIO DE FERRO	MG	LAGOA DOURADA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,12571%
MINÉRIO DE FERRO	MG	MADRE DE DEUS DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,44887%
MINÉRIO DE FERRO	MG	MARIANA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,19199%
MINÉRIO DE FERRO	MG	MARIO CAMPOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,18379%
MINÉRIO DE FERRO	MG	MATEUS LEME	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,02427%
MINÉRIO DE FERRO	MG	MATIAS BARBOSA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00061%



Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE FERRO	MG	MATO VERDE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00013%
MINÉRIO DE FERRO	MG	MOEDA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,15354%
MINÉRIO DE FERRO	MG	MONTE AZUL	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00085%
MINÉRIO DE FERRO	MG	MONTES CLAROS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00103%
MINÉRIO DE FERRO	MG	NAQUE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,82543%
MINÉRIO DE FERRO	MG	NAZARENO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,45719%
MINÉRIO DE FERRO	MG	NOVA ERA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,66781%
MINÉRIO DE FERRO	MG	NOVA PORTEIRINHA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00025%
MINÉRIO DE FERRO	MG	OURO BRANCO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00008%
MINÉRIO DE FERRO	MG	OURO PRETO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,58813%
MINÉRIO DE FERRO	MG	PAI PEDRO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00050%
MINÉRIO DE FERRO	MG	PASSA-VINTE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,43309%
MINÉRIO DE FERRO	MG	PATROCINIO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,05427%
MINÉRIO DE FERRO	MG	PERIQUITO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,85047%
MINÉRIO DE FERRO	MG	PORTEIRINHA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00037%
MINÉRIO DE FERRO	MG	PRUDENTE DE MORAIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00002%
MINÉRIO DE FERRO	MG	RESENDE COSTA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,89542%
MINÉRIO DE FERRO	MG	RESPLENDOR	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,87219%
MINÉRIO DE FERRO	MG	RESSAQUINHA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00170%
MINÉRIO DE FERRO	MG	RIO ACIMA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00947%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,64107%
MINÉRIO DE FERRO	MG	RITAPOLIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,28474%
MINÉRIO DE FERRO	MG	SABARA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,04353%
MINÉRIO DE FERRO	MG	SANTA BARBARA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,17183%
MINÉRIO DE FERRO	MG	SANTA LUZIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00077%
MINÉRIO DE FERRO	MG	SANTA RITA DE JACUTINGA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,63570%
MINÉRIO DE FERRO	MG	SANTANA DO DESERTO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00020%
MINÉRIO DE FERRO	MG	SANTANA DO PARAISO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,63956%
MINÉRIO DE FERRO	MG	SANTOS DUMONT	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00854%
MINÉRIO DE FERRO	MG	SAO BRAS DO SUACUI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,92061%
MINÉRIO DE FERRO	MG	SAO GONCALO DO RIO ABAIXO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,10818%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	6,23149%
MINÉRIO DE FERRO	MG	SAO JOAQUIM DE BICAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,05185%
MINÉRIO DE FERRO	MG	SAO SEBASTIAO DO OESTE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00003%
MINÉRIO DE FERRO	MG	SAO VICENTE DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,43254%
MINÉRIO DE FERRO	MG	SARZEDO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,12118%
MINÉRIO DE FERRO	MG	SENHORA DOS REMEDIOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00150%
MINÉRIO DE FERRO	MG	SERRA DO SALITRE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,21704%
MINÉRIO DE FERRO	MG	SETE LAGOAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00058%
MINÉRIO DE FERRO	MG	SIMAO PEREIRA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00086%
MINÉRIO DE FERRO	MG	TIMOTEO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,45120%
MINÉRIO DE FERRO	MG	TUMIRITINGA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,30385%
MINÉRIO DE FERRO	MS	CORUMBA	RMO	MS	100,00000%
MINÉRIO DE FERRO	PA	BOM JESUS DO TO	EFC	MA, PA	4,67516%
MINÉRIO DE FERRO	PA	CANAL DOS CARAJAS	EFC	MA, PA	2,66674%
MINÉRIO DE FERRO	PA	CURIONOPOLIS	EFC	MA, PA	0,56497%
MINÉRIO DE FERRO	PA	MARABA	EFC	MA, PA	13,33945%
MINÉRIO DE FERRO	PA	PARAUPEBAS	EFC	MA, PA	5,94888%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,56782%
MINÉRIO DE FERRO	RJ	BARRA MANSA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,26782%
MINÉRIO DE FERRO	RJ	COMENDADOR LEVY GASPARIAN	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00048%
MINÉRIO DE FERRO	RJ	ENGENHEIRO PAULO DE FRONTIN	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,01430%
MINÉRIO DE FERRO	RJ	ITAGUAI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,25368%
MINÉRIO DE FERRO	RJ	ITATIAIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00341%
MINÉRIO DE FERRO	RJ	MANGARATIBA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,79793%
MINÉRIO DE FERRO	RJ	MENDES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,12580%
MINÉRIO DE FERRO	RJ	PARACAMBI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,61789%
MINÉRIO DE FERRO	RJ	PARAIBA DO SUL	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00089%
MINÉRIO DE FERRO	RJ	PINHEIRAL	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,24563%
MINÉRIO DE FERRO	RJ	PORTO REAL	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00177%
MINÉRIO DE FERRO	RJ	QUATIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,64310%
MINÉRIO DE FERRO	RJ	RESENDE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,71792%
MINÉRIO DE FERRO	RJ	RIO DAS FLORES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00003%
MINÉRIO DE FERRO	RJ	RIO DE JANEIRO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,06951%
MINÉRIO DE FERRO	RJ	SEROPEDICA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,46998%
MINÉRIO DE FERRO	RJ	TRES RIOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00058%
MINÉRIO DE FERRO	RJ	VALENCA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00025%
MINÉRIO DE FERRO	RJ	VASSOURAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00250%
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,50229%
MINÉRIO DE FERRO	SP	APARECIDA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00187%
MINÉRIO DE FERRO	SP	CACAPAVA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00324%
MINÉRIO DE FERRO	SP	CACHOEIRA PAULISTA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00184%
MINÉRIO DE FERRO	SP	CANAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00142%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE FERRO	SP	CRUZEIRO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00299%
MINÉRIO DE FERRO	SP	GUARAREMA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00216%
MINÉRIO DE FERRO	SP	GUARATINGUETA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00247%
MINÉRIO DE FERRO	SP	ITAQUAQUECETUBA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00325%
MINÉRIO DE FERRO	SP	JACAREI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00419%
MINÉRIO DE FERRO	SP	LAVRINHAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00245%
MINÉRIO DE FERRO	SP	LORENA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00237%
MINÉRIO DE FERRO	SP	MOGI DAS CRUZES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00496%
MINÉRIO DE FERRO	SP	PINDAMONHANGABA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00443%
MINÉRIO DE FERRO	SP	POA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00057%
MINÉRIO DE FERRO	SP	QUELUZ	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00422%
MINÉRIO DE FERRO	SP	ROSEIRA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00191%
MINÉRIO DE FERRO	SP	SAO JOSE DOS CAMPOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00561%
MINÉRIO DE FERRO	SP	SUZANO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00138%
MINÉRIO DE FERRO	SP	TAUBATE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00301%
MINÉRIO DE FERRO	SP	TREMEMBE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00093%
MINÉRIO DE MANGANÊS	MA	ACAILANDIA	EFC	MA, PA	15,23510%
MINÉRIO DE MANGANÊS	MA	ALTO ALEGRE DO PINDARE	EFC	MA, PA	11,44291%
MINÉRIO DE MANGANÊS	MA	ANAJATUBA	EFC	MA, PA	2,74401%
MINÉRIO DE MANGANÊS	MA	ARARI	EFC	MA, PA	3,56162%
MINÉRIO DE MANGANÊS	MA	BACABEIRA	EFC	MA, PA	5,35731%
MINÉRIO DE MANGANÊS	MA	BOM JARDIM	EFC	MA, PA	0,78236%
MINÉRIO DE MANGANÊS	MA	BOM JESUS DAS SELVAS	EFC	MA, PA	6,56610%
MINÉRIO DE MANGANÊS	MA	BURITICUPU	EFC	MA, PA	3,78631%
MINÉRIO DE MANGANÊS	MA	CIDELANDIA	EFC	MA, PA	6,25876%
MINÉRIO DE MANGANÊS	MA	IGARAPE DO MEIO	EFC	MA, PA	3,49326%
MINÉRIO DE MANGANÊS	MA	ITAPECURU MIRIM	EFC	MA, PA	1,75644%
MINÉRIO DE MANGANÊS	MA	ITINGA DO MARANHÃO	EFC	MA, PA	1,01240%
MINÉRIO DE MANGANÊS	MA	MIRANDA DO NORTE	EFC	MA, PA	1,11106%
MINÉRIO DE MANGANÊS	MA	MONCAO	EFC	MA, PA	1,72427%
MINÉRIO DE MANGANÊS	MA	PINDARE-MIRIM	EFC	MA, PA	1,69663%
MINÉRIO DE MANGANÊS	MA	SANTA INES	EFC	MA, PA	1,49583%
MINÉRIO DE MANGANÊS	MA	SANTA LUZIA	EFC	MA, PA	0,57275%
MINÉRIO DE MANGANÊS	MA	SANTA RITA	EFC	MA, PA	1,98327%
MINÉRIO DE MANGANÊS	MA	SAO FRANCISCO DO BREJAO	EFC	MA, PA	0,67315%
MINÉRIO DE MANGANÊS	MA	SAO LUIS	EFC	MA, PA	4,13530%
MINÉRIO DE MANGANÊS	MA	SAO PEDRO DA AGUA BRANCA	EFC	MA, PA	6,46477%
MINÉRIO DE MANGANÊS	MA	TUFILANDIA	EFC	MA, PA	1,92466%
MINÉRIO DE MANGANÊS	MA	VILA NOVA DOS MARTIRIOS	EFC	MA, PA	4,66707%
MINÉRIO DE MANGANÊS	MA	VITORIA DO MEARIM	EFC	MA, PA	2,86764%
MINÉRIO DE MANGANÊS	PA	BOM JESUS DO TO	EFC	MA, PA	5,73274%
MINÉRIO DE MANGANÊS	PA	MARABA	EFC	MA, PA	2,95428%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
ANTRACITO	SC	CAPIVARI DE BAIXO	FTC	1	SC	FTC	MTB-MCP	1.520.086	1,384	2.103.799	182.584.077	1,15224%
ANTRACITO	SC	CAPIVARI DE BAIXO	FTC	1	SC	FTC	MTB-MCP	28.550	1,384	39.513	182.584.077	0,02164%
ANTRACITO	SC	CAPIVARI DE BAIXO	FTC	1	SC	FTC	MTB-MCP	635.799	1,384	879.946	182.584.077	0,48194%
ANTRACITO	SC	CAPIVARI DE BAIXO	FTC	1	SC	FTC	MTB-MCP	371.568	1,384	514.250	182.584.077	0,28165%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MRF-MPF	1.520.086	8,001	12.162.208	182.584.077	6,66115%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MPF-MCT	1.520.086	3,708	5.636.479	182.584.077	3,08706%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MCT-MNH	1.520.086	1,404	2.134.201	182.584.077	1,16889%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MNH-MIC	1.520.086	1,567	2.381.975	182.584.077	1,30459%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MSA-MPF	28.550	5,002	142.807	182.584.077	0,07821%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MPF-MCT	28.550	3,708	105.863	182.584.077	0,05798%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MCT-MNH	28.550	1,404	40.084	182.584.077	0,02195%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MNH-MIC	28.550	1,567	44.738	182.584.077	0,02450%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MNH-MIC	371.568	1,567	582.247	182.584.077	0,31889%
ANTRACITO	SC	FORQUILHINHA	FTC	1	SC	FTC	MSA-MPF	28.550	4,232	120.824	182.584.077	0,06617%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MNH-MIC	1.520.086	3,262	4.958.521	182.584.077	2,71575%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MIC-MEX	1.520.086	12,312	18.715.299	182.584.077	10,25024%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MEX-MMG	1.520.086	0,687	1.044.299	182.584.077	0,57196%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MNH-MIC	28.550	3,262	93.130	182.584.077	0,05101%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MIC-MEX	28.550	12,312	351.508	182.584.077	0,19252%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MEX-MMG	28.550	0,687	19.614	182.584.077	0,01074%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MUR-MEX	635.799	1,555	988.667	182.584.077	0,54149%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MEX-MMG	635.799	0,687	436.794	182.584.077	0,23923%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MNH-MIC	371.568	3,262	1.212.055	182.584.077	0,66383%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MIC-MEX	371.568	12,312	4.574.745	182.584.077	2,50556%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MEX-MMG	371.568	0,687	255.267	182.584.077	0,13981%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MMG-MDR	1.520.086	2,931	4.455.372	182.584.077	2,44018%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MDR-MJA	1.520.086	4,434	6.740.061	182.584.077	3,69148%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MJA-MK3	1.520.086	8,882	13.501.404	182.584.077	7,39462%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MMG-MDR	28.550	2,931	83.680	182.584.077	0,04583%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MDR-MJA	28.550	4,434	126.591	182.584.077	0,06933%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MJA-MK3	28.550	8,882	253.581	182.584.077	0,13888%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MMG-MDR	635.799	2,931	1.863.527	182.584.077	1,02064%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MDR-MJA	635.799	4,434	2.819.133	182.584.077	1,54402%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MJA-MK3	635.799	8,882	5.647.167	182.584.077	3,09291%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MMG-MDR	371.568	2,931	1.089.066	182.584.077	0,59647%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MDR-MJA	371.568	4,434	1.647.533	182.584.077	0,90234%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MJA-MK3	371.568	8,882	3.300.267	182.584.077	1,80753%
ANTRACITO	SC	MORRO DA FUMACA	FTC	1	SC	FTC	MUR-MEX	635.799	12,911	8.208.801	182.584.077	4,49590%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MEX-MMG	1.520.086	7,289	11.079.907	182.584.077	6,06839%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MMG-MDR	1.520.086	2,756	4.189.357	182.584.077	2,29448%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MEX-MMG	28.550	7,289	208.101	182.584.077	0,11398%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MMG-MDR	28.550	2,756	78.684	182.584.077	0,04309%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MEX-MMG	635.799	7,289	4.634.339	182.584.077	2,53819%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MMG-MDR	635.799	2,756	1.752.262	182.584.077	0,95970%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MEX-MMG	371.568	7,289	2.708.359	182.584.077	1,48335%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MMG-MDR	371.568	2,756	1.024.041	182.584.077	0,56086%
ANTRACITO	SC	SIDEROPOLIS	FTC	1	SC	FTC	MRF-MPF	1.520.086	9,422	14.322.250	182.584.077	7,84419%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MJA-MK3	1.520.086	4,115	6.255.154	182.584.077	3,42590%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MK3-MTB	1.520.086	3,372	5.125.730	182.584.077	2,80733%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MTB-MCP	1.520.086	3,015	4.583.059	182.584.077	2,51011%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MJA-MK3	28.550	4,115	117.483	182.584.077	0,06434%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MK3-MTB	28.550	3,372	96.271	182.584.077	0,05273%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MTB-MCP	28.550	3,015	86.078	182.584.077	0,04714%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MJA-MK3	635.799	4,115	2.616.313	182.584.077	1,43294%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MK3-MTB	635.799	3,372	2.143.914	182.584.077	1,17421%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MTB-MCP	635.799	3,015	1.916.934	182.584.077	1,04989%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MJA-MK3	371.568	4,115	1.529.002	182.584.077	0,83742%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MK3-MTB	371.568	3,372	1.252.927	182.584.077	0,68622%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MTB-MCP	371.568	3,015	1.120.278	182.584.077	0,61357%
ANTRACITO	SC	URUSSANGA	FTC	1	SC	FTC	MUR-MEX	635.799	10,174	6.468.619	182.584.077	3,54282%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BNS-BKI	190	16,888	3.209	1.540.557	0,20828%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BKI-BVK	190	13,133	2.495	1.540.557	0,16197%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BNS-BKI	281	16,888	4.746	1.540.557	0,30804%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BKI-BVK	281	13,133	3.690	1.540.557	0,23955%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BNS-BKI	1.030	16,888	17.395	1.540.557	1,12911%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BKI-BVK	1.030	13,133	13.527	1.540.557	0,87806%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BNS-BKI	321	16,888	5.421	1.540.557	0,35189%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BKI-BVK	321	13,133	4.216	1.540.557	0,27365%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BNS-BKI	26	16,888	439	1.540.557	0,02850%
AREIA	CE, MA, PI	CARIRE	FTL	3	CE, MA, PI	FTL	BKI-BVK	26	13,133	341	1.540.557	0,02216%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BAR-BCI	190	8,168	1.552	1.540.557	0,10074%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BCI-BGE	190	16,104	3.060	1.540.557	0,19861%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BGE-BPI	190	8,607	1.635	1.540.557	0,10615%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BPI-BQT	190	6,821	1.296	1.540.557	0,08412%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BAR-BCI	281	8,168	2.295	1.540.557	0,14899%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BCI-BGE	281	16,104	4.525	1.540.557	0,29374%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BGE-BPI	281	8,607	2.419	1.540.557	0,15699%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BPI-BQT	281	6,821	1.917	1.540.557	0,12442%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BAR-BCI	1.030	8,168	8.413	1.540.557	0,54610%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BCI-BGE	1.030	16,104	16.587	1.540.557	1,07670%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BGE-BPI	1.030	8,607	8.865	1.540.557	0,57545%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BPI-BQT	1.030	6,821	7.026	1.540.557	0,45604%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BAR-BCI	321	8,168	2.622	1.540.557	0,17019%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BCI-BGE	321	16,104	5.169	1.540.557	0,33555%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BGE-BPI	321	8,607	2.763	1.540.557	0,17934%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BPI-BQT	321	6,821	2.190	1.540.557	0,14213%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BAR-BCI	360	8,168	2.940	1.540.557	0,19087%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BCI-BGE	360	16,104	5.797	1.540.557	0,37632%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BGE-BPI	360	8,607	3.099	1.540.557	0,20113%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BPI-BQT	360	6,821	2.456	1.540.557	0,15939%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BOF-BCI	26	8,483	221	1.540.557	0,01432%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BCI-BGE	26	16,104	419	1.540.557	0,02718%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BGE-BPI	26	8,607	224	1.540.557	0,01453%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BPI-BQT	26	6,821	177	1.540.557	0,01151%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BOF-BCI	10	8,483	85	1.540.557	0,00551%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BCI-BGE	10	16,104	161	1.540.557	0,01045%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BGE-BPI	10	8,607	86	1.540.557	0,00559%
AREIA	CE, MA, PI	CAUCAIA	FTL	3	CE, MA, PI	FTL	BPI-BQT	10	6,821	68	1.540.557	0,00443%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BZS-BCK	190	22,040	4.188	1.540.557	0,27182%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BCK-BIB	190	37,052	7.040	1.540.557	0,45697%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BIB-BOC	190	21,016	3.993	1.540.557	0,25919%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BOC-BBV	190	4,460	847	1.540.557	0,05501%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BZS-BCK	281	22,040	6.193	1.540.557	0,40201%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BCK-BIB	281	37,052	10.412	1.540.557	0,67583%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BIB-BOC	281	21,016	5.905	1.540.557	0,38334%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BOC-BBV	281	4,460	1.253	1.540.557	0,08135%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BZS-BCK	1.030	22,040	22.701	1.540.557	1,47357%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BCK-BIB	1.030	37,052	38.164	1.540.557	2,47726%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BIB-BOC	1.030	21,016	21.646	1.540.557	1,40511%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BOC-BBV	1.030	4,460	4.594	1.540.557	0,29819%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BZS-BCK	321	22,040	7.075	1.540.557	0,45924%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BZS-BCK	26	22,040	573	1.540.557	0,03720%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BCK-BIB	26	37,052	963	1.540.557	0,06253%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BIB-BOC	26	21,016	546	1.540.557	0,03547%
AREIA	CE, MA, PI	CRATEUS	FTL	3	CE, MA, PI	FTL	BOC-BBV	26	4,460	116	1.540.557	0,00753%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BAR-BCI	190	0,835	159	1.540.557	0,01030%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BAR-BCI	281	0,835	235	1.540.557	0,01523%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BAR-BCI	1.030	0,835	860	1.540.557	0,05583%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BAR-BCI	321	0,835	268	1.540.557	0,01740%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BAR-BPR	67	6,862	460	1.540.557	0,02984%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BPR-BJF	67	9,069	608	1.540.557	0,03944%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BJF-BOF	67	4,101	275	1.540.557	0,01784%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BAR-BCI	360	0,835	301	1.540.557	0,01951%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BOF-BCI	26	6,837	178	1.540.557	0,01154%
AREIA	CE, MA, PI	FORTALEZA	FTL	3	CE, MA, PI	FTL	BOF-BCI	10	6,837	68	1.540.557	0,00444%
AREIA	CE, MA, PI	GROAIRAS	FTL	3	CE, MA, PI	FTL	BNS-BKI	190	0,667	127	1.540.557	0,00823%
AREIA	CE, MA, PI	GROAIRAS	FTL	3	CE, MA, PI	FTL	BNS-BKI	281	0,667	187	1.540.557	0,01217%
AREIA	CE, MA, PI	GROAIRAS	FTL	3	CE, MA, PI	FTL	BNS-BKI	1.030	0,667	687	1.540.557	0,04459%
AREIA	CE, MA, PI	GROAIRAS	FTL	3	CE, MA, PI	FTL	BNS-BKI	321	0,667	214	1.540.557	0,01390%
AREIA	CE, MA, PI	GROAIRAS	FTL	3	CE, MA, PI	FTL	BNS-BKI	26	0,667	17	1.540.557	0,00113%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BVK-BIU	190	4,242	806	1.540.557	0,05232%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BIU-BIS	190	17,873	3.396	1.540.557	0,22043%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BVK-BIU	281	4,242	1.192	1.540.557	0,07737%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BIU-BIS	281	17,873	5.022	1.540.557	0,32601%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BVK-BIU	1.030	4,242	4.369	1.540.557	0,28362%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BIU-BIS	1.030	17,873	18.409	1.540.557	1,19497%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BVK-BIU	321	4,242	1.362	1.540.557	0,08839%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BIU-BIS	321	17,873	5.737	1.540.557	0,37241%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BVK-BIU	26	4,242	110	1.540.557	0,00716%
AREIA	CE, MA, PI	IPU	FTL	3	CE, MA, PI	FTL	BIU-BIS	26	17,873	465	1.540.557	0,03016%
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIU-BIS	190	8,935	1.698	1.540.557	0,11020%
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	190	19,489	3.703	1.540.557	0,24036%
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIU-BIS	281	8,935	2.511	1.540.557	0,16298%
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	281	19,489	5.476	1.540.557	0,35548%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIU-BIS	1.030	8,935	9.203	1.540.557	0,59738%
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	1.030	19,489	20.074	1.540.557	1,30301%
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIU-BIS	321	8,935	2.868	1.540.557	0,18618%
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	321	19,489	6.256	1.540.557	0,40608%
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIU-BIS	26	8,935	232	1.540.557	0,01508%
AREIA	CE, MA, PI	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	26	19,489	507	1.540.557	0,03289%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BTR-BIW	190	21,558	4.096	1.540.557	0,26588%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIW-BIT	190	2,869	545	1.540.557	0,03538%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIT-BRW	190	18,422	3.500	1.540.557	0,22720%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BTR-BIW	281	21,558	6.058	1.540.557	0,39322%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIW-BIT	281	2,869	806	1.540.557	0,05233%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIT-BRW	281	18,422	5.177	1.540.557	0,33602%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BTR-BIW	1.030	21,558	22.205	1.540.557	1,44134%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIW-BIT	1.030	2,869	2.955	1.540.557	0,19182%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIT-BRW	1.030	18,422	18.975	1.540.557	1,23168%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BTR-BIW	321	21,558	6.920	1.540.557	0,44920%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIW-BIT	321	2,869	921	1.540.557	0,05978%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIT-BRW	321	18,422	5.913	1.540.557	0,38385%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BTR-BIW	360	21,558	7.761	1.540.557	0,50377%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIW-BIT	360	2,869	1.033	1.540.557	0,06704%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIT-BRW	360	18,422	6.632	1.540.557	0,43049%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BTR-BIW	26	21,558	561	1.540.557	0,03638%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIW-BIT	26	2,869	75	1.540.557	0,00484%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIT-BRW	26	18,422	479	1.540.557	0,03109%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BTR-BIW	10	21,558	216	1.540.557	0,01399%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIW-BIT	10	2,869	29	1.540.557	0,00186%
AREIA	CE, MA, PI	ITAPIPOCA	FTL	3	CE, MA, PI	FTL	BIT-BRW	10	18,422	184	1.540.557	0,01196%
AREIA	CE, MA, PI	MARACANAU	FTL	3	CE, MA, PI	FTL	BAR-BCI	190	7,281	1.383	1.540.557	0,08980%
AREIA	CE, MA, PI	MARACANAU	FTL	3	CE, MA, PI	FTL	BAR-BCI	281	7,281	2.046	1.540.557	0,13281%
AREIA	CE, MA, PI	MARACANAU	FTL	3	CE, MA, PI	FTL	BAR-BCI	1.030	7,281	7.499	1.540.557	0,48680%
AREIA	CE, MA, PI	MARACANAU	FTL	3	CE, MA, PI	FTL	BAR-BCI	321	7,281	2.337	1.540.557	0,15171%
AREIA	CE, MA, PI	MARACANAU	FTL	3	CE, MA, PI	FTL	BAR-BCI	360	7,281	2.621	1.540.557	0,17014%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BIT-BRW	190	25,341	4.815	1.540.557	0,31254%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BRW-BSB	190	2,933	557	1.540.557	0,03617%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BIT-BRW	281	25,341	7.121	1.540.557	0,46222%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BRW-BSB	281	2,933	824	1.540.557	0,05350%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BIT-BRW	1.030	25,341	26.101	1.540.557	1,69427%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BRW-BSB	1.030	2,933	3.021	1.540.557	0,19610%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BIT-BRW	321	25,341	8.134	1.540.557	0,52802%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BRW-BSB	321	2,933	941	1.540.557	0,06111%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BIT-BRW	360	25,341	9.123	1.540.557	0,59217%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BRW-BSB	360	2,933	1.056	1.540.557	0,06854%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BIT-BRW	26	25,341	659	1.540.557	0,04277%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BRW-BSB	26	2,933	76	1.540.557	0,00495%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BIT-BRW	10	25,341	253	1.540.557	0,01645%
AREIA	CE, MA, PI	MIRAIMA	FTL	3	CE, MA, PI	FTL	BRW-BSB	10	2,933	29	1.540.557	0,00190%
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	190	13,947	2.650	1.540.557	0,17201%
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BNR-BZS	190	17,182	3.265	1.540.557	0,21191%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	281	13,947	3.919	1.540.557	0,25440%
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BNR-BZS	281	17,182	4.828	1.540.557	0,31340%
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	1.030	13,947	14.365	1.540.557	0,93248%
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BNR-BZS	1.030	17,182	17.697	1.540.557	1,14877%
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	321	13,947	4.477	1.540.557	0,29061%
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BNR-BZS	321	17,182	5.515	1.540.557	0,35801%
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	26	13,947	363	1.540.557	0,02354%
AREIA	CE, MA, PI	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BNR-BZS	26	17,182	447	1.540.557	0,02900%
AREIA	CE, MA, PI	PIRES FERREIRA	FTL	3	CE, MA, PI	FTL	BVK-BIU	190	14,932	2.837	1.540.557	0,18416%
AREIA	CE, MA, PI	PIRES FERREIRA	FTL	3	CE, MA, PI	FTL	BVK-BIU	281	14,932	4.196	1.540.557	0,27236%
AREIA	CE, MA, PI	PIRES FERREIRA	FTL	3	CE, MA, PI	FTL	BVK-BIU	1.030	14,932	15.380	1.540.557	0,99834%
AREIA	CE, MA, PI	PIRES FERREIRA	FTL	3	CE, MA, PI	FTL	BVK-BIU	321	14,932	4.793	1.540.557	0,31113%
AREIA	CE, MA, PI	PIRES FERREIRA	FTL	3	CE, MA, PI	FTL	BVK-BIU	26	14,932	388	1.540.557	0,02520%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BKI-BVK	190	13,777	2.618	1.540.557	0,16991%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BVK-BIU	190	8,681	1.649	1.540.557	0,10706%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BKI-BVK	281	13,777	3.871	1.540.557	0,25129%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BVK-BIU	281	8,681	2.439	1.540.557	0,15834%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BKI-BVK	1.030	13,777	14.190	1.540.557	0,92112%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BVK-BIU	1.030	8,681	8.941	1.540.557	0,58040%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BKI-BVK	321	13,777	4.422	1.540.557	0,28707%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BVK-BIU	321	8,681	2.787	1.540.557	0,18088%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BKI-BVK	26	13,777	358	1.540.557	0,02325%
AREIA	CE, MA, PI	RERIUTABA	FTL	3	CE, MA, PI	FTL	BVK-BIU	26	8,681	226	1.540.557	0,01465%
AREIA	CE, MA, PI	SANTANA DO ACARAU	FTL	3	CE, MA, PI	FTL	BRW-BSB	190	14,199	2.698	1.540.557	0,17512%
AREIA	CE, MA, PI	SANTANA DO ACARAU	FTL	3	CE, MA, PI	FTL	BRW-BSB	281	14,199	3.990	1.540.557	0,25899%
AREIA	CE, MA, PI	SANTANA DO ACARAU	FTL	3	CE, MA, PI	FTL	BRW-BSB	1.030	14,199	14.625	1.540.557	0,94933%
AREIA	CE, MA, PI	SANTANA DO ACARAU	FTL	3	CE, MA, PI	FTL	BRW-BSB	321	14,199	4.558	1.540.557	0,29586%
AREIA	CE, MA, PI	SANTANA DO ACARAU	FTL	3	CE, MA, PI	FTL	BRW-BSB	360	14,199	5.112	1.540.557	0,33180%
AREIA	CE, MA, PI	SANTANA DO ACARAU	FTL	3	CE, MA, PI	FTL	BRW-BSB	26	14,199	369	1.540.557	0,02396%
AREIA	CE, MA, PI	SANTANA DO ACARAU	FTL	3	CE, MA, PI	FTL	BRW-BSB	10	14,199	142	1.540.557	0,00922%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BPI-BQT	190	22,053	4.190	1.540.557	0,27198%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BQT-BTR	190	12,122	2.303	1.540.557	0,14950%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BPI-BQT	281	22,053	6.197	1.540.557	0,40225%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BQT-BTR	281	12,122	3.406	1.540.557	0,22111%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BPI-BQT	1.030	22,053	22.715	1.540.557	1,47444%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BQT-BTR	1.030	12,122	12.486	1.540.557	0,81046%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BPI-BQT	321	22,053	7.079	1.540.557	0,45951%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BQT-BTR	321	12,122	3.891	1.540.557	0,25258%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BPI-BQT	360	22,053	7.939	1.540.557	0,51534%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BQT-BTR	360	12,122	4.364	1.540.557	0,28327%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BPI-BQT	26	22,053	573	1.540.557	0,03722%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BQT-BTR	26	12,122	315	1.540.557	0,02046%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BPI-BQT	10	22,053	221	1.540.557	0,01431%
AREIA	CE, MA, PI	SÃO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BQT-BTR	10	12,122	121	1.540.557	0,00787%
AREIA	CE, MA, PI	SÃO LUIS DO CURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	190	6,005	1.141	1.540.557	0,07406%
AREIA	CE, MA, PI	SÃO LUIS DO CURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	281	6,005	1.687	1.540.557	0,10953%
AREIA	CE, MA, PI	SÃO LUIS DO CURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	1.030	6,005	6.185	1.540.557	0,40149%
AREIA	CE, MA, PI	SÃO LUIS DO CURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	321	6,005	1.928	1.540.557	0,12512%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	CE, MA, PI	SAO LUIS DO CURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	360	6,005	2.162	1.540.557	0,14033%
AREIA	CE, MA, PI	SAO LUIS DO CURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	26	6,005	156	1.540.557	0,01013%
AREIA	CE, MA, PI	SAO LUIS DO CURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	10	6,005	60	1.540.557	0,00390%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BRW-BSB	190	32,507	6.176	1.540.557	0,40092%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BSB-BNS	190	3,598	684	1.540.557	0,04437%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BNS-BKI	190	11,650	2.214	1.540.557	0,14368%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BRW-BSB	281	32,507	9.134	1.540.557	0,59293%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BSB-BNS	281	3,598	1.011	1.540.557	0,06563%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BNS-BKI	281	11,650	3.274	1.540.557	0,21250%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BRW-BSB	1.030	32,507	33.482	1.540.557	2,17338%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BSB-BNS	1.030	3,598	3.706	1.540.557	0,24056%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BNS-BKI	1.030	11,650	12.000	1.540.557	0,77891%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BRW-BSB	321	32,507	10.435	1.540.557	0,67734%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BSB-BNS	321	3,598	1.155	1.540.557	0,07497%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BNS-BKI	321	11,650	3.740	1.540.557	0,24275%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BRW-BSB	360	32,507	11.703	1.540.557	0,75963%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BRW-BSB	26	32,507	845	1.540.557	0,05486%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BSB-BNS	26	3,598	94	1.540.557	0,00607%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BNS-BKI	26	11,650	303	1.540.557	0,01966%
AREIA	CE, MA, PI	SOBRAL	FTL	3	CE, MA, PI	FTL	BRW-BSB	10	32,507	325	1.540.557	0,02110%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BNR-BZS	190	11,261	2.140	1.540.557	0,13888%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BZS-BCK	190	9,260	1.759	1.540.557	0,11421%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BNR-BZS	281	11,261	3.164	1.540.557	0,20540%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BZS-BCK	281	9,260	2.602	1.540.557	0,16890%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BNR-BZS	1.030	11,261	11.599	1.540.557	0,75290%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BZS-BCK	1.030	9,260	9.538	1.540.557	0,61911%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BNR-BZS	321	11,261	3.615	1.540.557	0,23464%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BZS-BCK	321	9,260	2.972	1.540.557	0,19295%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BNR-BZS	26	11,261	293	1.540.557	0,01901%
AREIA	CE, MA, PI	TAMBORIL	FTL	3	CE, MA, PI	FTL	BZS-BCK	26	9,260	241	1.540.557	0,01563%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	190	11,045	2.099	1.540.557	0,13622%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BTR-BIW	190	1,349	256	1.540.557	0,01664%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	281	11,045	3.104	1.540.557	0,20146%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BTR-BIW	281	1,349	379	1.540.557	0,02461%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	1.030	11,045	11.376	1.540.557	0,73846%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BTR-BIW	1.030	1,349	1.389	1.540.557	0,09019%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	321	11,045	3.545	1.540.557	0,23014%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BTR-BIW	321	1,349	433	1.540.557	0,02811%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	360	11,045	3.976	1.540.557	0,25810%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BTR-BIW	360	1,349	486	1.540.557	0,03152%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	26	11,045	287	1.540.557	0,01864%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BTR-BIW	26	1,349	35	1.540.557	0,00228%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	10	11,045	110	1.540.557	0,00717%
AREIA	CE, MA, PI	TURURU	FTL	3	CE, MA, PI	FTL	BTR-BIW	10	1,349	13	1.540.557	0,00088%
AREIA	CE, MA, PI	UMIRIM	FTL	3	CE, MA, PI	FTL	BQT-BTR	190	12,843	2.440	1.540.557	0,15840%
AREIA	CE, MA, PI	UMIRIM	FTL	3	CE, MA, PI	FTL	BQT-BTR	281	12,843	3.609	1.540.557	0,23426%
AREIA	CE, MA, PI	UMIRIM	FTL	3	CE, MA, PI	FTL	BQT-BTR	1.030	12,843	13.228	1.540.557	0,85867%
AREIA	CE, MA, PI	UMIRIM	FTL	3	CE, MA, PI	FTL	BQT-BTR	321	12,843	4.123	1.540.557	0,26760%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	CE, MA, PI	UMIRIM	FTL	3	CE, MA, PI	FTL	BQT-BTR	360	12,843	4.623	1.540.557	0,30012%
AREIA	CE, MA, PI	UMIRIM	FTL	3	CE, MA, PI	FTL	BQT-BTR	26	12,843	334	1.540.557	0,02168%
AREIA	CE, MA, PI	UMIRIM	FTL	3	CE, MA, PI	FTL	BQT-BTR	10	12,843	128	1.540.557	0,00834%
AREIA	DF, GO, MG	BRASILIA	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EJI-EJK	42.185	29,693	1.252.599	136.578.748	0,91713%
AREIA	DF, GO, MG	BRASILIA	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EJK-EBZ	42.185	13,435	566.755	136.578.748	0,41497%
AREIA	DF, GO, MG	LUZIANIA	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EBU-EYZ	42.185	26,425	1.114.739	136.578.748	0,81619%
AREIA	DF, GO, MG	LUZIANIA	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EYZ-EBW	42.185	38,186	1.610.876	136.578.748	1,17945%
AREIA	DF, GO, MG	LUZIANIA	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EBW-EJI	42.185	60,966	2.571.851	136.578.748	1,88305%
AREIA	DF, GO, MG	LUZIANIA	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EJI-EJK	42.185	3,113	131.322	136.578.748	0,09615%
AREIA	DF, GO, MG	ORIZONA	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EPZ-EBU	42.185	46,641	1.967.551	136.578.748	1,44060%
AREIA	DF, GO, MG	ORIZONA	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EBU-EYZ	42.185	5,352	225.774	136.578.748	0,16531%
AREIA	DF, GO, MG	PIRES DO RIO	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EPZ-EBU	42.185	8,839	372.873	136.578.748	0,27301%
AREIA	DF, GO, MG	VALPARAISO DE GOIAS	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	EJI-EJK	42.185	12,752	537.943	136.578.748	0,39387%
AREIA	CE, MA, PI	BACABEIRA	FTL	3	CE, MA, PI	FTL	AEA-ARS	281	6,137	1.724	1.540.557	0,11194%
AREIA	CE, MA, PI	BACABEIRA	FTL	3	CE, MA, PI	FTL	ARS-ATO	281	6,564	1.844	1.540.557	0,11973%
AREIA	CE, MA, PI	BACABEIRA	FTL	3	CE, MA, PI	FTL	ATO-A26	281	20,594	5.787	1.540.557	0,37564%
AREIA	CE, MA, PI	BACABEIRA	FTL	3	CE, MA, PI	FTL	A26-ATO	58	20,594	1.194	1.540.557	0,07753%
AREIA	CE, MA, PI	BACABEIRA	FTL	3	CE, MA, PI	FTL	ATO-ARS	58	6,564	381	1.540.557	0,02471%
AREIA	CE, MA, PI	BACABEIRA	FTL	3	CE, MA, PI	FTL	ARS-AEA	58	6,137	356	1.540.557	0,02311%
AREIA	CE, MA, PI	CANTANHEDE	FTL	3	CE, MA, PI	FTL	AXK-ANJ	281	30,134	8.468	1.540.557	0,54964%
AREIA	CE, MA, PI	CANTANHEDE	FTL	3	CE, MA, PI	FTL	ANJ-AXK	58	30,134	1.748	1.540.557	0,11345%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	AYM-ACQ	190	10,158	1.930	1.540.557	0,12528%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ACQ-ACS	190	29,961	5.693	1.540.557	0,36952%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ACS-ACX	190	4,374	831	1.540.557	0,05395%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ACX-ABB	190	37,633	7.150	1.540.557	0,46414%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	AYM-ACQ	281	10,158	2.854	1.540.557	0,18528%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ACQ-ACS	281	29,961	8.419	1.540.557	0,54649%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ACS-ACX	281	4,374	1.229	1.540.557	0,07978%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ACX-ABB	281	37,633	10.575	1.540.557	0,68643%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ABB-ACX	58	37,633	2.183	1.540.557	0,14168%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ACX-ACS	58	4,374	254	1.540.557	0,01647%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ACS-ACQ	58	29,961	1.738	1.540.557	0,11280%
AREIA	CE, MA, PI	CAXIAS	FTL	3	CE, MA, PI	FTL	ACQ-AYM	58	10,158	589	1.540.557	0,03824%
AREIA	CE, MA, PI	CODO	FTL	3	CE, MA, PI	FTL	ACX-ABB	190	4,962	943	1.540.557	0,06120%
AREIA	CE, MA, PI	CODO	FTL	3	CE, MA, PI	FTL	ABB-ACD	190	38,914	7.394	1.540.557	0,47993%
AREIA	CE, MA, PI	CODO	FTL	3	CE, MA, PI	FTL	ACD-AXA	190	17,881	3.397	1.540.557	0,22053%
AREIA	CE, MA, PI	CODO	FTL	3	CE, MA, PI	FTL	ACX-ABB	281	4,962	1.394	1.540.557	0,09051%
AREIA	CE, MA, PI	CODO	FTL	3	CE, MA, PI	FTL	ABB-ACD	281	38,914	10.935	1.540.557	0,70980%
AREIA	CE, MA, PI	CODO	FTL	3	CE, MA, PI	FTL	ACD-AXA	281	17,881	5.025	1.540.557	0,32615%
AREIA	CE, MA, PI	CODO	FTL	3	CE, MA, PI	FTL	AXA-ACD	58	17,881	1.037	1.540.557	0,06732%
AREIA	CE, MA, PI	CODO	FTL	3	CE, MA, PI	FTL	ACD-ABB	58	38,914	2.257	1.540.557	0,14651%
AREIA	CE, MA, PI	CODO	FTL	3	CE, MA, PI	FTL	ABB-ACX	58	4,962	288	1.540.557	0,01868%
AREIA	CE, MA, PI	COROATA	FTL	3	CE, MA, PI	FTL	AXA-AOA	190	23,226	4.413	1.540.557	0,28645%
AREIA	CE, MA, PI	COROATA	FTL	3	CE, MA, PI	FTL	AXA-AOA	281	23,226	6.527	1.540.557	0,42365%
AREIA	CE, MA, PI	COROATA	FTL	3	CE, MA, PI	FTL	AOA-AJI	281	26,145	7.347	1.540.557	0,47689%
AREIA	CE, MA, PI	COROATA	FTL	3	CE, MA, PI	FTL	AJI-AXK	281	8,587	2.413	1.540.557	0,15663%
AREIA	CE, MA, PI	COROATA	FTL	3	CE, MA, PI	FTL	AXK-AJI	58	8,587	498	1.540.557	0,03233%
AREIA	CE, MA, PI	COROATA	FTL	3	CE, MA, PI	FTL	AJI-AXK	58	8,587	498	1.540.557	0,03233%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	CE, MA, PI	COROATA	FTL	3	CE, MA, PI	FTL	AXK-AJI	58	8,587	498	1.540.557	0,03233%
AREIA	CE, MA, PI	COROATA	FTL	3	CE, MA, PI	FTL	AJI-AOA	58	26,145	1.516	1.540.557	0,09843%
AREIA	CE, MA, PI	COROATA	FTL	3	CE, MA, PI	FTL	AOA-AXA	58	23,226	1.347	1.540.557	0,08744%
AREIA	CE, MA, PI	ITAPECURU MIRIM	FTL	3	CE, MA, PI	FTL	AXK-ANJ	281	7,987	2.244	1.540.557	0,14569%
AREIA	CE, MA, PI	ITAPECURU MIRIM	FTL	3	CE, MA, PI	FTL	AHP-AEA	281	19,583	5.503	1.540.557	0,35720%
AREIA	CE, MA, PI	ITAPECURU MIRIM	FTL	3	CE, MA, PI	FTL	AEA-AHP	58	19,583	1.136	1.540.557	0,07373%
AREIA	CE, MA, PI	ITAPECURU MIRIM	FTL	3	CE, MA, PI	FTL	ANJ-AXK	58	7,987	463	1.540.557	0,03007%
AREIA	CE, MA, PI	MIRANDA DO NORTE	FTL	3	CE, MA, PI	FTL	AXK-ANJ	281	10,688	3.003	1.540.557	0,19495%
AREIA	CE, MA, PI	MIRANDA DO NORTE	FTL	3	CE, MA, PI	FTL	ANJ-AXK	58	10,688	620	1.540.557	0,04024%
AREIA	CE, MA, PI	PIRAPEMAS	FTL	3	CE, MA, PI	FTL	AJI-AXK	281	19,620	5.513	1.540.557	0,35787%
AREIA	CE, MA, PI	PIRAPEMAS	FTL	3	CE, MA, PI	FTL	AXK-ANJ	281	5,708	1.604	1.540.557	0,10411%
AREIA	CE, MA, PI	PIRAPEMAS	FTL	3	CE, MA, PI	FTL	ANJ-AXK	58	5,708	331	1.540.557	0,02149%
AREIA	CE, MA, PI	PIRAPEMAS	FTL	3	CE, MA, PI	FTL	AXK-AJI	58	19,620	1.138	1.540.557	0,07387%
AREIA	CE, MA, PI	PIRAPEMAS	FTL	3	CE, MA, PI	FTL	AJI-AXK	58	19,620	1.138	1.540.557	0,07387%
AREIA	CE, MA, PI	PIRAPEMAS	FTL	3	CE, MA, PI	FTL	AXK-AJI	58	19,620	1.138	1.540.557	0,07387%
AREIA	CE, MA, PI	ROSARIO	FTL	3	CE, MA, PI	FTL	AEA-ARS	281	6,780	1.905	1.540.557	0,12367%
AREIA	CE, MA, PI	ROSARIO	FTL	3	CE, MA, PI	FTL	ARS-ATO	281	4,298	1.208	1.540.557	0,07840%
AREIA	CE, MA, PI	ROSARIO	FTL	3	CE, MA, PI	FTL	ATO-ARS	58	4,298	249	1.540.557	0,01618%
AREIA	CE, MA, PI	ROSARIO	FTL	3	CE, MA, PI	FTL	ARS-AEA	58	6,780	393	1.540.557	0,02553%
AREIA	CE, MA, PI	SANTA RITA	FTL	3	CE, MA, PI	FTL	AHP-AEA	281	13,960	3.923	1.540.557	0,25463%
AREIA	CE, MA, PI	SANTA RITA	FTL	3	CE, MA, PI	FTL	AEA-ARS	281	10,920	3.069	1.540.557	0,19918%
AREIA	CE, MA, PI	SANTA RITA	FTL	3	CE, MA, PI	FTL	ARS-AEA	58	10,920	633	1.540.557	0,04111%
AREIA	CE, MA, PI	SANTA RITA	FTL	3	CE, MA, PI	FTL	AEA-AHP	58	13,960	810	1.540.557	0,05256%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	ATO-A26	281	4,483	1.260	1.540.557	0,08177%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	A26-A04	281	4,648	1.306	1.540.557	0,08478%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	A04-ALM	281	1,069	300	1.540.557	0,01950%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	ALM-AXR	281	1,314	369	1.540.557	0,02397%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	AXR-A02	281	1,213	341	1.540.557	0,02213%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	A02-ASL	281	14,461	4.064	1.540.557	0,26377%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	ASL-A02	58	14,461	839	1.540.557	0,05444%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	A02-AXR	58	1,213	70	1.540.557	0,00457%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	AXR-ALM	58	1,314	76	1.540.557	0,00495%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	ALM-A04	58	1,069	62	1.540.557	0,00402%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	A04-A26	58	4,648	270	1.540.557	0,01750%
AREIA	CE, MA, PI	SAO LUIS	FTL	3	CE, MA, PI	FTL	A26-ATO	58	4,483	260	1.540.557	0,01688%
AREIA	CE, MA, PI	TIMBIRAS	FTL	3	CE, MA, PI	FTL	ACD-AXA	190	8,145	1.548	1.540.557	0,10045%
AREIA	CE, MA, PI	TIMBIRAS	FTL	3	CE, MA, PI	FTL	AXA-AOA	190	5,544	1.053	1.540.557	0,06838%
AREIA	CE, MA, PI	TIMBIRAS	FTL	3	CE, MA, PI	FTL	ACD-AXA	281	8,145	2.289	1.540.557	0,14857%
AREIA	CE, MA, PI	TIMBIRAS	FTL	3	CE, MA, PI	FTL	AXA-AOA	281	5,544	1.558	1.540.557	0,10112%
AREIA	CE, MA, PI	TIMBIRAS	FTL	3	CE, MA, PI	FTL	AOA-AXA	58	5,544	322	1.540.557	0,02087%
AREIA	CE, MA, PI	TIMBIRAS	FTL	3	CE, MA, PI	FTL	AXA-ACD	58	8,145	472	1.540.557	0,03066%
AREIA	CE, MA, PI	TIMON	FTL	3	CE, MA, PI	FTL	ATZ-AYM	190	1,299	247	1.540.557	0,01602%
AREIA	CE, MA, PI	TIMON	FTL	3	CE, MA, PI	FTL	AYM-ACQ	190	31,074	5.904	1.540.557	0,38324%
AREIA	CE, MA, PI	TIMON	FTL	3	CE, MA, PI	FTL	ATZ-AYM	281	1,299	365	1.540.557	0,02369%
AREIA	CE, MA, PI	TIMON	FTL	3	CE, MA, PI	FTL	AYM-ACQ	281	31,074	8.732	1.540.557	0,56679%
AREIA	CE, MA, PI	TIMON	FTL	3	CE, MA, PI	FTL	ACQ-AYM	58	31,074	1.802	1.540.557	0,11699%
AREIA	CE, MA, PI	TIMON	FTL	3	CE, MA, PI	FTL	AYM-ATZ	58	1,299	75	1.540.557	0,00489%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGO-FAU	7.738	8,687	67.220	136.578.748	0,04922%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAU-FFR	7.738	11,287	87.339	136.578.748	0,06395%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFR-FIN	7.738	5,642	43.658	136.578.748	0,03197%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIN-FIR	7.738	7,546	58.391	136.578.748	0,04275%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIR-FOJ	7.738	4,068	31.478	136.578.748	0,02305%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGO-FAU	19.510	8,687	169.483	136.578.748	0,12409%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAU-FFR	19.510	11,287	220.209	136.578.748	0,16123%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFR-FIN	19.510	5,642	110.075	136.578.748	0,08059%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIN-FIR	19.510	7,546	147.222	136.578.748	0,10779%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIR-FOJ	19.510	4,068	79.367	136.578.748	0,05811%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGO-FAU	7.500	8,687	65.153	136.578.748	0,04770%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAU-FFR	7.500	11,287	84.653	136.578.748	0,06198%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFR-FIN	7.500	5,642	42.315	136.578.748	0,03098%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIN-FIR	7.500	7,546	56.595	136.578.748	0,04144%
AREIA	DF, GO, MG	ANDRELANDIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIR-FOJ	7.500	4,068	30.510	136.578.748	0,02234%
AREIA	DF, GO, MG	ARANTINA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIR-FOJ	7.738	3,459	26.766	136.578.748	0,01960%
AREIA	DF, GO, MG	ARANTINA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIR-FOJ	19.510	3,459	67.485	136.578.748	0,04941%
AREIA	DF, GO, MG	ARANTINA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIR-FOJ	7.500	3,459	25.943	136.578.748	0,01899%
AREIA	DF, GO, MG	BOM JARDIM DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIR-FOJ	7.738	3,748	29.002	136.578.748	0,02123%
AREIA	DF, GO, MG	BOM JARDIM DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOJ-FJT	7.738	8,398	64.984	136.578.748	0,04758%
AREIA	DF, GO, MG	BOM JARDIM DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIR-FOJ	19.510	3,748	73.123	136.578.748	0,05354%
AREIA	DF, GO, MG	BOM JARDIM DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOJ-FJT	19.510	8,398	163.845	136.578.748	0,11996%
AREIA	DF, GO, MG	BOM JARDIM DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIR-FOJ	7.500	3,748	28.110	136.578.748	0,02058%
AREIA	DF, GO, MG	BOM JARDIM DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOJ-FJT	7.500	8,398	62.985	136.578.748	0,04612%
AREIA	DF, GO, MG	CONCEICAO DA BARRA DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.738	2,343	18.134	136.578.748	0,01328%
AREIA	DF, GO, MG	CONCEICAO DA BARRA DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FDE-FGT	7.738	2,497	19.322	136.578.748	0,01415%
AREIA	DF, GO, MG	CONCEICAO DA BARRA DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	19.510	2,343	45.721	136.578.748	0,03348%
AREIA	DF, GO, MG	CONCEICAO DA BARRA DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FDE-FGT	19.510	2,497	48.716	136.578.748	0,03567%
AREIA	DF, GO, MG	CONCEICAO DA BARRA DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.500	2,343	17.576	136.578.748	0,01287%
AREIA	DF, GO, MG	CONCEICAO DA BARRA DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FDE-FGT	7.500	2,497	18.728	136.578.748	0,01371%
AREIA	DF, GO, MG	CONGONHAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFV-FLP	7.738	3,522	27.253	136.578.748	0,01995%
AREIA	DF, GO, MG	CONGONHAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPY-FHC	19.510	1,099	21.441	136.578.748	0,01570%
AREIA	DF, GO, MG	CONGONHAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FHC-FLM	19.510	13,000	253.630	136.578.748	0,18570%
AREIA	DF, GO, MG	CONGONHAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLM-FLF	19.510	7,350	143.399	136.578.748	0,10499%
AREIA	DF, GO, MG	CONGONHAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPY-FHC	7.500	1,099	8.243	136.578.748	0,00603%
AREIA	DF, GO, MG	CONGONHAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FHC-FLM	7.500	13,000	97.500	136.578.748	0,07139%
AREIA	DF, GO, MG	CONGONHAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLM-FLF	7.500	7,350	55.125	136.578.748	0,04036%
AREIA	DF, GO, MG	CORONEL XAVIER CHAVES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIC-FXA	7.738	3,969	30.712	136.578.748	0,02249%
AREIA	DF, GO, MG	CORONEL XAVIER CHAVES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.738	3,984	30.826	136.578.748	0,02257%
AREIA	DF, GO, MG	CORONEL XAVIER CHAVES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIC-FXA	19.510	3,969	77.435	136.578.748	0,05670%
AREIA	DF, GO, MG	CORONEL XAVIER CHAVES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	19.510	3,984	77.723	136.578.748	0,05691%
AREIA	DF, GO, MG	CORONEL XAVIER CHAVES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIC-FXA	7.500	3,969	29.768	136.578.748	0,02180%
AREIA	DF, GO, MG	CORONEL XAVIER CHAVES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.500	3,984	29.878	136.578.748	0,02188%
AREIA	DF, GO, MG	CORONEL XAVIER CHAVES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJC-FJO	7.738	9,575	74.091	136.578.748	0,05425%
AREIA	DF, GO, MG	ENTRE RIOS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJO-FRL	7.738	9,056	70.075	136.578.748	0,05131%
AREIA	DF, GO, MG	ENTRE RIOS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRL-FRC	7.738	0,277	2.143	136.578.748	0,00157%
AREIA	DF, GO, MG	ENTRE RIOS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJC-FJO	19.510	9,575	186.808	136.578.748	0,13678%
AREIA	DF, GO, MG	ENTRE RIOS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJO-FRL	19.510	9,056	176.683	136.578.748	0,12936%
AREIA	DF, GO, MG	ENTRE RIOS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRL-FRC	19.510	0,277	5.404	136.578.748	0,00396%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	DF, GO, MG	ENTRE RIOS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJC-FJO	7.500	9,575	71.813	136.578.748	0,05258%
AREIA	DF, GO, MG	ENTRE RIOS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJO-FRL	7.500	9,056	67.920	136.578.748	0,04973%
AREIA	DF, GO, MG	ENTRE RIOS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRL-FRC	7.500	0,277	2.078	136.578.748	0,00152%
AREIA	DF, GO, MG	JECEABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLP-FLA	7.738	2,960	22.904	136.578.748	0,01677%
AREIA	DF, GO, MG	JECEABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLA-FJC	7.738	5,543	42.892	136.578.748	0,03140%
AREIA	DF, GO, MG	JECEABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLM-FLF	19.510	1,403	27.373	136.578.748	0,02004%
AREIA	DF, GO, MG	JECEABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLF-FJC	19.510	4,645	90.624	136.578.748	0,06635%
AREIA	DF, GO, MG	JECEABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLM-FLF	7.500	1,403	10.523	136.578.748	0,00770%
AREIA	DF, GO, MG	JECEABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLF-FJC	7.500	4,645	34.838	136.578.748	0,02551%
AREIA	DF, GO, MG	LAGOA DOURADA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRL-FRC	7.738	16,552	128.079	136.578.748	0,09378%
AREIA	DF, GO, MG	LAGOA DOURADA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRC-FIC	7.738	3,088	23.895	136.578.748	0,01750%
AREIA	DF, GO, MG	LAGOA DOURADA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRL-FRC	19.510	16,552	322.930	136.578.748	0,23644%
AREIA	DF, GO, MG	LAGOA DOURADA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRC-FIC	19.510	3,088	60.247	136.578.748	0,04411%
AREIA	DF, GO, MG	LAGOA DOURADA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRL-FRC	7.500	16,552	124.140	136.578.748	0,09089%
AREIA	DF, GO, MG	LAGOA DOURADA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRC-FIC	7.500	3,088	23.160	136.578.748	0,01696%
AREIA	DF, GO, MG	MADRE DE DEUS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRN-FPZ	7.738	5,229	40.462	136.578.748	0,02963%
AREIA	DF, GO, MG	MADRE DE DEUS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPZ-FGO	7.738	13,886	107.450	136.578.748	0,07867%
AREIA	DF, GO, MG	MADRE DE DEUS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGO-FAU	7.738	3,390	26.232	136.578.748	0,01921%
AREIA	DF, GO, MG	MADRE DE DEUS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRN-FPZ	19.510	5,229	102.018	136.578.748	0,07470%
AREIA	DF, GO, MG	MADRE DE DEUS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPZ-FGO	19.510	13,886	270.916	136.578.748	0,19836%
AREIA	DF, GO, MG	MADRE DE DEUS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGO-FAU	19.510	3,390	66.139	136.578.748	0,04843%
AREIA	DF, GO, MG	MADRE DE DEUS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRN-FPZ	7.500	5,229	39.218	136.578.748	0,02871%
AREIA	DF, GO, MG	MADRE DE DEUS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPZ-FGO	7.500	13,886	104.145	136.578.748	0,07625%
AREIA	DF, GO, MG	MADRE DE DEUS DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGO-FAU	7.500	3,390	25.425	136.578.748	0,01862%
AREIA	DF, GO, MG	NAZARENO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.738	1,392	10.768	136.578.748	0,00788%
AREIA	DF, GO, MG	NAZARENO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FDE-FGT	7.738	1,397	10.810	136.578.748	0,00791%
AREIA	DF, GO, MG	NAZARENO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGT-FRN	7.738	1,432	11.081	136.578.748	0,00811%
AREIA	DF, GO, MG	NAZARENO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	19.510	1,392	27.149	136.578.748	0,01988%
AREIA	DF, GO, MG	NAZARENO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FDE-FGT	19.510	1,397	27.255	136.578.748	0,01996%
AREIA	DF, GO, MG	NAZARENO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGT-FRN	19.510	1,432	27.938	136.578.748	0,02046%
AREIA	DF, GO, MG	NAZARENO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.500	1,392	10.436	136.578.748	0,00764%
AREIA	DF, GO, MG	NAZARENO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FDE-FGT	7.500	1,397	10.478	136.578.748	0,00767%
AREIA	DF, GO, MG	NAZARENO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGT-FRN	7.500	1,432	10.740	136.578.748	0,00786%
AREIA	DF, GO, MG	OURO PRETO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPY-FHC	19.510	5,340	104.183	136.578.748	0,07628%
AREIA	DF, GO, MG	OURO PRETO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPY-FHC	7.500	5,340	40.050	136.578.748	0,02932%
AREIA	DF, GO, MG	PASSA-VINTE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJT-FSH	7.738	6,385	49.407	136.578.748	0,03617%
AREIA	DF, GO, MG	PASSA-VINTE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSH-FRP	7.738	12,279	95.015	136.578.748	0,06957%
AREIA	DF, GO, MG	PASSA-VINTE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRP-FFU	7.738	3,696	28.600	136.578.748	0,02094%
AREIA	DF, GO, MG	PASSA-VINTE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJT-FSH	19.510	6,385	124.571	136.578.748	0,09121%
AREIA	DF, GO, MG	PASSA-VINTE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSH-FRP	19.510	12,279	239.563	136.578.748	0,17540%
AREIA	DF, GO, MG	PASSA-VINTE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRP-FFU	19.510	3,696	72.109	136.578.748	0,05280%
AREIA	DF, GO, MG	PASSA-VINTE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJT-FSH	7.500	6,385	47.888	136.578.748	0,03506%
AREIA	DF, GO, MG	PASSA-VINTE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSH-FRP	7.500	12,279	92.093	136.578.748	0,06743%
AREIA	DF, GO, MG	PASSA-VINTE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRP-FFU	7.500	3,696	27.720	136.578.748	0,02030%
AREIA	DF, GO, MG	RESENDE COSTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRC-FIC	7.738	6,803	52.642	136.578.748	0,03854%
AREIA	DF, GO, MG	RESENDE COSTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIC-FXA	7.738	1,470	11.375	136.578.748	0,00833%
AREIA	DF, GO, MG	RESENDE COSTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRC-FIC	19.510	6,803	132.727	136.578.748	0,09718%
AREIA	DF, GO, MG	RESENDE COSTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIC-FXA	19.510	1,470	28.680	136.578.748	0,02100%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	DF, GO, MG	CRESENDE COSTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRC-FIC	7.500	6,803	51.023	136.578.748	0,03736%
AREIA	DF, GO, MG	CRESENDE COSTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIC-FXA	7.500	1,470	11.025	136.578.748	0,00807%
AREIA	DF, GO, MG	CRITAPOLIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.738	2,631	20.357	136.578.748	0,01490%
AREIA	DF, GO, MG	CRITAPOLIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	19.510	2,631	51.326	136.578.748	0,03758%
AREIA	DF, GO, MG	CRITAPOLIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.500	2,631	19.731	136.578.748	0,01445%
AREIA	DF, GO, MG	SANTA LUZIA	FCA	2	DF, GO, MG, RJ, SP	FCA, MRS	ECE-ECA	166.455	8,802	1.465.137	136.578.748	1,07274%
AREIA	DF, GO, MG	SANTA RITA DE JACUTINGA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOJ-FJT	7.738	5,740	44.416	136.578.748	0,03252%
AREIA	DF, GO, MG	SANTA RITA DE JACUTINGA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJT-FSH	7.738	9,292	71.901	136.578.748	0,05264%
AREIA	DF, GO, MG	SANTA RITA DE JACUTINGA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOJ-FJT	19.510	5,740	111.987	136.578.748	0,08199%
AREIA	DF, GO, MG	SANTA RITA DE JACUTINGA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJT-FSH	19.510	9,292	181.287	136.578.748	0,13273%
AREIA	DF, GO, MG	SANTA RITA DE JACUTINGA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOJ-FJT	7.500	5,740	43.050	136.578.748	0,03152%
AREIA	DF, GO, MG	SANTA RITA DE JACUTINGA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJT-FSH	7.500	9,292	69.690	136.578.748	0,05103%
AREIA	DF, GO, MG	SAO BRAS DO SUACUI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJC-FJO	7.738	8,279	64.063	136.578.748	0,04691%
AREIA	DF, GO, MG	SAO BRAS DO SUACUI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLF-FJC	19.510	0,543	10.594	136.578.748	0,00776%
AREIA	DF, GO, MG	SAO BRAS DO SUACUI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJC-FJO	19.510	8,279	161.523	136.578.748	0,11826%
AREIA	DF, GO, MG	SAO BRAS DO SUACUI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLF-FJC	7.500	0,543	4.073	136.578.748	0,00298%
AREIA	DF, GO, MG	SAO BRAS DO SUACUI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJC-FJO	7.500	8,279	62.093	136.578.748	0,04546%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.738	28,666	221.818	136.578.748	0,16241%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FDE-FGT	7.738	7,238	56.008	136.578.748	0,04101%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGT-FRN	7.738	14,864	115.018	136.578.748	0,08421%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRN-FPZ	7.738	6,710	51.922	136.578.748	0,03802%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	19.510	28,666	559.276	136.578.748	0,40949%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FDE-FGT	19.510	7,238	141.213	136.578.748	0,10339%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGT-FRN	19.510	14,864	289.997	136.578.748	0,21233%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRN-FPZ	19.510	6,710	130.912	136.578.748	0,09585%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FXA-FDE	7.500	28,666	214.996	136.578.748	0,15742%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FDE-FGT	7.500	7,238	54.285	136.578.748	0,03975%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGT-FRN	7.500	14,864	111.480	136.578.748	0,08162%
AREIA	DF, GO, MG	SAO JOAO DEL REI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRN-FPZ	7.500	6,710	50.325	136.578.748	0,03685%
AREIA	DF, GO, MG	SAO VICENTE DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGO-FAU	7.738	1,146	8.868	136.578.748	0,00649%
AREIA	DF, GO, MG	SAO VICENTE DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAU-FFR	7.738	2,829	21.891	136.578.748	0,01603%
AREIA	DF, GO, MG	SAO VICENTE DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGO-FAU	19.510	1,146	22.358	136.578.748	0,01637%
AREIA	DF, GO, MG	SAO VICENTE DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAU-FFR	19.510	2,829	55.194	136.578.748	0,04041%
AREIA	DF, GO, MG	SAO VICENTE DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGO-FAU	7.500	1,146	8.595	136.578.748	0,00629%
AREIA	DF, GO, MG	SAO VICENTE DE MINAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAU-FFR	7.500	2,829	21.218	136.578.748	0,01553%
AREIA	CE, MA, PI	ALTO LONGA	FTL	3	CE, MA, PI	FTL	BOS-BLY	190	18,742	3.561	1.540.557	0,23115%
AREIA	CE, MA, PI	ALTO LONGA	FTL	3	CE, MA, PI	FTL	BOS-BLY	281	18,742	5.267	1.540.557	0,34186%
AREIA	CE, MA, PI	ALTO LONGA	FTL	3	CE, MA, PI	FTL	BOS-BLY	1.030	18,742	19.304	1.540.557	1,25307%
AREIA	CE, MA, PI	ALTO LONGA	FTL	3	CE, MA, PI	FTL	BOS-BLY	26	18,742	487	1.540.557	0,03163%
AREIA	CE, MA, PI	ALTOS	FTL	3	CE, MA, PI	FTL	BLY-ALT	190	12,044	2.288	1.540.557	0,14854%
AREIA	CE, MA, PI	ALTOS	FTL	3	CE, MA, PI	FTL	ALT-AIT	190	17,219	3.272	1.540.557	0,21237%
AREIA	CE, MA, PI	ALTOS	FTL	3	CE, MA, PI	FTL	BLY-ALT	281	12,044	3.384	1.540.557	0,21968%
AREIA	CE, MA, PI	ALTOS	FTL	3	CE, MA, PI	FTL	ALT-AIT	281	17,219	4.839	1.540.557	0,31408%
AREIA	CE, MA, PI	ALTOS	FTL	3	CE, MA, PI	FTL	BLY-ALT	1.030	12,044	12.405	1.540.557	0,80525%
AREIA	CE, MA, PI	ALTOS	FTL	3	CE, MA, PI	FTL	ALT-AIT	1.030	17,219	17.736	1.540.557	1,15124%
AREIA	CE, MA, PI	ALTOS	FTL	3	CE, MA, PI	FTL	BLY-ALT	26	12,044	313	1.540.557	0,02033%
AREIA	CE, MA, PI	ALTOS	FTL	3	CE, MA, PI	FTL	ALT-AIT	26	17,219	448	1.540.557	0,02906%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BOC-BBV	190	14,848	2.821	1.540.557	0,18312%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BBV-BAB	190	17,973	3.415	1.540.557	0,22166%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BAB-BKS	190	20,274	3.852	1.540.557	0,25004%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BOC-BBV	281	14,848	4.172	1.540.557	0,27083%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BBV-BAB	281	17,973	5.050	1.540.557	0,32783%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BAB-BKS	281	20,274	5.697	1.540.557	0,36980%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BOC-BBV	1.030	14,848	15.293	1.540.557	0,99272%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BBV-BAB	1.030	17,973	18.512	1.540.557	1,20166%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BAB-BKS	1.030	20,274	20.882	1.540.557	1,35550%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BOC-BBV	26	14,848	386	1.540.557	0,02506%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BBV-BAB	26	17,973	467	1.540.557	0,03033%
AREIA	CE, MA, PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BAB-BKS	26	20,274	527	1.540.557	0,03422%
AREIA	CE, MA, PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BOS-BLY	190	3,940	749	1.540.557	0,04859%
AREIA	CE, MA, PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BLY-ALT	190	1,214	231	1.540.557	0,01497%
AREIA	CE, MA, PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BOS-BLY	281	3,940	1.107	1.540.557	0,07187%
AREIA	CE, MA, PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BLY-ALT	281	1,214	341	1.540.557	0,02214%
AREIA	CE, MA, PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BOS-BLY	1.030	3,940	4.058	1.540.557	0,26342%
AREIA	CE, MA, PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BLY-ALT	1.030	1,214	1.250	1.540.557	0,08117%
AREIA	CE, MA, PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BOS-BLY	26	3,940	102	1.540.557	0,00665%
AREIA	CE, MA, PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BLY-ALT	26	1,214	32	1.540.557	0,00205%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BAB-BKS	190	19,736	3.750	1.540.557	0,24341%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BKS-BRE	190	35,367	6.720	1.540.557	0,43619%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BRE-BOS	190	3,585	681	1.540.557	0,04421%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BAB-BKS	281	19,736	5.546	1.540.557	0,35999%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BKS-BRE	281	35,367	9.938	1.540.557	0,64510%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BRE-BOS	281	3,585	1.007	1.540.557	0,06539%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BAB-BKS	1.030	19,736	20.328	1.540.557	1,31953%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BKS-BRE	1.030	35,367	36.428	1.540.557	2,36460%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BRE-BOS	1.030	3,585	3.693	1.540.557	0,23969%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BAB-BKS	26	19,736	513	1.540.557	0,03311%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BKS-BRE	26	35,367	920	1.540.557	0,05969%
AREIA	CE, MA, PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BRE-BOS	26	3,585	93	1.540.557	0,00605%
AREIA	CE, MA, PI	COIVARAS	FTL	3	CE, MA, PI	FTL	BLY-ALT	190	20,929	3.977	1.540.557	0,25812%
AREIA	CE, MA, PI	COIVARAS	FTL	3	CE, MA, PI	FTL	BLY-ALT	281	20,929	5.881	1.540.557	0,38175%
AREIA	CE, MA, PI	COIVARAS	FTL	3	CE, MA, PI	FTL	BLY-ALT	1.030	20,929	21.557	1.540.557	1,39929%
AREIA	CE, MA, PI	COIVARAS	FTL	3	CE, MA, PI	FTL	BLY-ALT	26	20,929	544	1.540.557	0,03532%
AREIA	CE, MA, PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BRE-BOS	190	22,691	4.311	1.540.557	0,27985%
AREIA	CE, MA, PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BOS-BLY	190	0,902	171	1.540.557	0,01112%
AREIA	CE, MA, PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BRE-BOS	281	22,691	6.376	1.540.557	0,41389%
AREIA	CE, MA, PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BOS-BLY	281	0,902	253	1.540.557	0,01645%
AREIA	CE, MA, PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BRE-BOS	1.030	22,691	23.372	1.540.557	1,51710%
AREIA	CE, MA, PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BOS-BLY	1.030	0,902	929	1.540.557	0,06031%
AREIA	CE, MA, PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BRE-BOS	26	22,691	590	1.540.557	0,03830%
AREIA	CE, MA, PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BOS-BLY	26	0,902	23	1.540.557	0,00152%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	ALT-AIT	190	18,764	3.565	1.540.557	0,23142%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	AIT-ATZ	190	1,893	360	1.540.557	0,02335%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	ATZ-AYM	190	7,636	1.451	1.540.557	0,09418%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	ALT-AIT	281	18,764	5.273	1.540.557	0,34226%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	AIT-ATZ	281	1,893	532	1.540.557	0,03453%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	ATZ-AYM	281	7,636	2.146	1.540.557	0,13928%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	ALT-AIT	1.030	18,764	19.327	1.540.557	1,25454%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	AIT-ATZ	1.030	1,893	1.950	1.540.557	0,12656%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	ALT-AIT	26	18,764	488	1.540.557	0,03167%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	AIT-ATZ	26	1,893	49	1.540.557	0,00319%
AREIA	CE, MA, PI	TERESINA	FTL	3	CE, MA, PI	FTL	AYM-ATZ	58	7,636	443	1.540.557	0,02875%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPL-FVA	19.510	1,533	29.909	136.578.748	0,02190%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FVA-FWB	19.510	5,583	108.924	136.578.748	0,07975%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FWB-FPU	19.510	5,522	107.734	136.578.748	0,07888%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPU-FBP	19.510	2,517	49.107	136.578.748	0,03595%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBP-FSB	19.510	4,296	83.815	136.578.748	0,06137%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSB-FMG	19.510	5,005	97.648	136.578.748	0,07150%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPL-FVA	7.500	1,533	11.498	136.578.748	0,00842%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FVA-FWB	7.500	5,583	41.873	136.578.748	0,03066%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FWB-FPU	7.500	5,522	41.415	136.578.748	0,03032%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPU-FBP	7.500	2,517	18.878	136.578.748	0,01382%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBP-FSB	7.500	4,296	32.220	136.578.748	0,02359%
AREIA	DF, GO, MG	BARRA DO PIRAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSB-FMG	7.500	5,005	37.538	136.578.748	0,02748%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPT-FEU	7.738	9,252	71.592	136.578.748	0,05242%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEU-FSE	7.738	4,789	37.057	136.578.748	0,02713%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSE-FPB	7.738	7,016	54.290	136.578.748	0,03975%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPB-FFL	7.738	7,911	61.215	136.578.748	0,04482%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFL-FAN	7.738	0,508	3.931	136.578.748	0,00288%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPT-FEU	19.510	9,252	180.507	136.578.748	0,13216%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEU-FSE	19.510	4,789	93.433	136.578.748	0,06841%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSE-FBM	19.510	2,390	46.629	136.578.748	0,03414%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBM-FBB	19.510	3,927	76.616	136.578.748	0,05610%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBB-FIV	19.510	0,434	8.467	136.578.748	0,00620%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPT-FEU	7.500	9,252	69.390	136.578.748	0,05081%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEU-FSE	7.500	4,789	35.918	136.578.748	0,02630%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSE-FBM	7.500	2,390	17.925	136.578.748	0,01312%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBM-FBB	7.500	3,927	29.453	136.578.748	0,02156%
AREIA	DF, GO, MG	BARRA MANSÁ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBB-FIV	7.500	0,434	3.255	136.578.748	0,00238%
AREIA	DF, GO, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FHA-FER	19.510	3,268	63.759	136.578.748	0,04668%
AREIA	DF, GO, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FER-FPD	19.510	3,851	75.133	136.578.748	0,05501%
AREIA	DF, GO, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPD-F39	19.510	2,542	49.594	136.578.748	0,03631%
AREIA	DF, GO, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FHA-FER	7.500	3,268	24.510	136.578.748	0,01795%
AREIA	DF, GO, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FER-FPD	7.500	3,851	28.883	136.578.748	0,02115%
AREIA	DF, GO, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPD-F39	7.500	2,542	19.065	136.578.748	0,01396%
AREIA	DF, GO, MG	ITAGUAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOS-FBA	19.510	7,973	155.553	136.578.748	0,11389%
AREIA	DF, GO, MG	ITAGUAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBA-FCG	19.510	6,287	122.659	136.578.748	0,08981%
AREIA	DF, GO, MG	ITAGUAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCG-FIS	19.510	1,891	36.893	136.578.748	0,02701%
AREIA	DF, GO, MG	ITAGUAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOS-FBA	7.500	7,973	59.798	136.578.748	0,04378%
AREIA	DF, GO, MG	ITAGUAI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBA-FXS	7.500	2,290	17.175	136.578.748	0,01258%
AREIA	DF, GO, MG	ITATIAIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	7.738	4,670	36.136	136.578.748	0,02646%
AREIA	DF, GO, MG	ITATIAIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FMU-FIA	7.738	3,509	27.151	136.578.748	0,01988%
AREIA	DF, GO, MG	ITATIAIA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIA-FEP	7.738	5,952	46.057	136.578.748	0,03372%
AREIA	DF, GO, MG	MANGARATIBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCG-FIS	19.510	3,726	72.694	136.578.748	0,05323%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	DF, GO, MG	MANGARATIBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIS-FTY	19.510	5,086	99.219	136.578.748	0,07265%
AREIA	DF, GO, MG	MANGARATIBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIS-FTY	19.510	5,086	99.219	136.578.748	0,07265%
AREIA	DF, GO, MG	MANGARATIBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FTY-FSS	19.510	7,461	145.573	136.578.748	0,10659%
AREIA	DF, GO, MG	MANGARATIBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSS-FIB	19.510	4,438	86.585	136.578.748	0,06340%
AREIA	DF, GO, MG	MANGARATIBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIB-FGI	19.510	3,555	69.358	136.578.748	0,05078%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSB-FMG	19.510	0,211	4.117	136.578.748	0,00301%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FMG-FMA	19.510	2,068	40.347	136.578.748	0,02954%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FMA-FME	19.510	5,433	105.998	136.578.748	0,07761%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FME-FHA	19.510	2,114	41.244	136.578.748	0,03020%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FHA-FER	19.510	0,897	17.500	136.578.748	0,01281%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSB-FMG	7.500	0,211	1.583	136.578.748	0,00116%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FMG-FMA	7.500	2,068	15.510	136.578.748	0,01136%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FMA-FME	7.500	5,433	40.748	136.578.748	0,02983%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FME-FHA	7.500	2,114	15.855	136.578.748	0,01161%
AREIA	DF, GO, MG	MEENDES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FHA-FER	7.500	0,897	6.728	136.578.748	0,00493%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPD-F39	19.510	3,211	62.647	136.578.748	0,04587%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	F39-FMB	19.510	4,787	93.394	136.578.748	0,06838%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FMB-FHE	19.510	3,969	77.435	136.578.748	0,05670%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FHE-FQS	19.510	2,388	46.590	136.578.748	0,03411%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FQS-FGD	19.510	1,055	20.583	136.578.748	0,01507%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPD-F39	7.500	3,211	24.083	136.578.748	0,01763%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	F39-FMB	7.500	4,787	35.903	136.578.748	0,02629%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FMB-FHE	7.500	3,969	29.768	136.578.748	0,02180%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FHE-FQS	7.500	2,388	17.910	136.578.748	0,01311%
AREIA	DF, GO, MG	PARACAMBI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FQS-FGD	7.500	1,055	7.913	136.578.748	0,00579%
AREIA	DF, GO, MG	PINHEIRAL	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRK-FPL	19.510	5,290	103.208	136.578.748	0,07557%
AREIA	DF, GO, MG	PINHEIRAL	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPL-FVA	19.510	6,575	128.278	136.578.748	0,09392%
AREIA	DF, GO, MG	PINHEIRAL	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRK-FPL	7.500	5,290	39.675	136.578.748	0,02905%
AREIA	DF, GO, MG	PINHEIRAL	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPL-FVA	7.500	6,575	49.313	136.578.748	0,03611%
AREIA	DF, GO, MG	PORTO REAL	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFL-FAN	7.738	7,321	56.650	136.578.748	0,04148%
AREIA	DF, GO, MG	QUATIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOA-FJQ	7.738	11,450	88.600	136.578.748	0,06487%
AREIA	DF, GO, MG	QUATIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJQ-FPT	7.738	5,087	39.363	136.578.748	0,02882%
AREIA	DF, GO, MG	QUATIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPT-FEU	7.738	7,753	59.993	136.578.748	0,04393%
AREIA	DF, GO, MG	QUATIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOA-FJQ	19.510	11,450	223.390	136.578.748	0,16356%
AREIA	DF, GO, MG	QUATIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJQ-FPT	19.510	5,087	99.247	136.578.748	0,07267%
AREIA	DF, GO, MG	QUATIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPT-FEU	19.510	7,753	151.261	136.578.748	0,11075%
AREIA	DF, GO, MG	QUATIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOA-FJQ	7.500	11,450	85.875	136.578.748	0,06288%
AREIA	DF, GO, MG	QUATIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FJQ-FPT	7.500	5,087	38.153	136.578.748	0,02793%
AREIA	DF, GO, MG	QUATIS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPT-FEU	7.500	7,753	58.148	136.578.748	0,04257%
AREIA	DF, GO, MG	RESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRP-FFU	7.738	3,638	28.151	136.578.748	0,02061%
AREIA	DF, GO, MG	RESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFU-FOA	7.738	9,463	73.225	136.578.748	0,05361%
AREIA	DF, GO, MG	RESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOA-FJQ	7.738	2,640	20.428	136.578.748	0,01496%
AREIA	DF, GO, MG	RESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFL-FAN	7.738	8,084	62.554	136.578.748	0,04580%
AREIA	DF, GO, MG	RESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	7.738	3,986	30.845	136.578.748	0,02258%
AREIA	DF, GO, MG	RESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIA-FEP	7.738	6,405	49.562	136.578.748	0,03629%
AREIA	DF, GO, MG	RESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEP-FQU	7.738	2,578	19.949	136.578.748	0,01461%
AREIA	DF, GO, MG	RESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRP-FFU	19.510	3,638	70.977	136.578.748	0,05197%
AREIA	DF, GO, MG	RESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFU-FOA	19.510	9,463	184.623	136.578.748	0,13518%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	DF, GO, MG	CRESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOA-FJQ	19.510	2,640	51.506	136.578.748	0,03771%
AREIA	DF, GO, MG	CRESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRP-FFU	7.500	3,638	27.285	136.578.748	0,01998%
AREIA	DF, GO, MG	CRESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFU-FOA	7.500	9,463	70.973	136.578.748	0,05196%
AREIA	DF, GO, MG	CRESENDE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOA-FJQ	7.500	2,640	19.800	136.578.748	0,01450%
AREIA	DF, GO, MG	SEROPEDICA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FQS-FGD	19.510	3,003	58.589	136.578.748	0,04290%
AREIA	DF, GO, MG	SEROPEDICA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGD-FFX	19.510	8,423	164.333	136.578.748	0,12032%
AREIA	DF, GO, MG	SEROPEDICA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFX-FOS	19.510	9,983	194.768	136.578.748	0,14261%
AREIA	DF, GO, MG	SEROPEDICA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOS-FBA	19.510	2,117	41.303	136.578.748	0,03024%
AREIA	DF, GO, MG	SEROPEDICA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FQS-FGD	7.500	3,003	22.523	136.578.748	0,01649%
AREIA	DF, GO, MG	SEROPEDICA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGD-FFX	7.500	8,423	63.173	136.578.748	0,04625%
AREIA	DF, GO, MG	SEROPEDICA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FFX-FOS	7.500	9,983	74.873	136.578.748	0,05482%
AREIA	DF, GO, MG	SEROPEDICA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FOS-FBA	7.500	2,117	15.878	136.578.748	0,01163%
AREIA	DF, GO, MG	VOLTA REDONDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBB-FIV	19.510	1,396	27.236	136.578.748	0,01994%
AREIA	DF, GO, MG	VOLTA REDONDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIV-FVR	19.510	3,187	62.178	136.578.748	0,04553%
AREIA	DF, GO, MG	VOLTA REDONDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FVR-FRK	19.510	6,757	131.829	136.578.748	0,09652%
AREIA	DF, GO, MG	VOLTA REDONDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRK-FPL	19.510	2,792	54.472	136.578.748	0,03988%
AREIA	DF, GO, MG	VOLTA REDONDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FBB-FIV	7.500	1,396	10.470	136.578.748	0,00767%
AREIA	DF, GO, MG	VOLTA REDONDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIV-FVR	7.500	3,187	23.903	136.578.748	0,01750%
AREIA	DF, GO, MG	VOLTA REDONDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FVR-FRK	7.500	6,757	50.678	136.578.748	0,03710%
AREIA	DF, GO, MG	VOLTA REDONDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRK-FPL	7.500	2,792	20.940	136.578.748	0,01533%
AREIA	DF, GO, MG	APARECIDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	248.690	1,878	467.040	136.578.748	0,34196%
AREIA	DF, GO, MG	APARECIDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	248.690	5,875	1.461.054	136.578.748	1,06975%
AREIA	DF, GO, MG	APARECIDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	33.504	1,878	62.921	136.578.748	0,04607%
AREIA	DF, GO, MG	APARECIDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	33.504	5,875	196.836	136.578.748	0,14412%
AREIA	DF, GO, MG	APARECIDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	7.738	1,878	14.532	136.578.748	0,01064%
AREIA	DF, GO, MG	APARECIDA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	7.738	5,875	45.461	136.578.748	0,03329%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	248.690	7,861	1.954.952	136.578.748	1,43137%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	248.690	6,844	1.702.034	136.578.748	1,24619%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	33.504	7,861	263.375	136.578.748	0,19284%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	33.504	6,844	229.301	136.578.748	0,16789%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	128.916	7,861	1.013.409	136.578.748	0,74200%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	128.916	6,844	882.301	136.578.748	0,64600%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	99.268	7,861	780.346	136.578.748	0,57135%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	99.268	6,844	679.390	136.578.748	0,49743%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	7.738	7,861	60.828	136.578.748	0,04454%
AREIA	DF, GO, MG	CACAPAVA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	7.738	6,844	52.959	136.578.748	0,03878%
AREIA	DF, GO, MG	CACHOEIRA PAULISTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	248.690	3,271	813.465	136.578.748	0,59560%
AREIA	DF, GO, MG	CACHOEIRA PAULISTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	248.690	4,364	1.085.283	136.578.748	0,79462%
AREIA	DF, GO, MG	CACHOEIRA PAULISTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	33.504	3,271	109.592	136.578.748	0,08024%
AREIA	DF, GO, MG	CACHOEIRA PAULISTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	33.504	4,364	146.211	136.578.748	0,10705%
AREIA	DF, GO, MG	CACHOEIRA PAULISTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	7.738	3,271	25.311	136.578.748	0,01853%
AREIA	DF, GO, MG	CACHOEIRA PAULISTA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	7.738	4,364	33.769	136.578.748	0,02472%
AREIA	DF, GO, MG	CANAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	248.690	5,888	1.464.287	136.578.748	1,07212%
AREIA	DF, GO, MG	CANAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	33.504	5,888	197.272	136.578.748	0,14444%
AREIA	DF, GO, MG	CANAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	7.738	5,888	45.561	136.578.748	0,03336%
AREIA	DF, GO, MG	CRUZEIRO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	248.690	7,832	1.947.740	136.578.748	1,42609%
AREIA	DF, GO, MG	CRUZEIRO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	33.504	7,832	262.403	136.578.748	0,19213%
AREIA	DF, GO, MG	CRUZEIRO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FVQ-FCZ	7.738	4,547	35.185	136.578.748	0,02576%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	DF, GO, MG	CRUZEIRO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	7.738	7,832	60.604	136.578.748	0,04437%
AREIA	DF, GO, MG	GUARAREMA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	248.690	9,780	2.432.188	136.578.748	1,78080%
AREIA	DF, GO, MG	GUARAREMA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	33.504	9,780	327.669	136.578.748	0,23991%
AREIA	DF, GO, MG	GUARAREMA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	128.916	9,780	1.260.798	136.578.748	0,92313%
AREIA	DF, GO, MG	GUARAREMA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	99.268	9,780	970.841	136.578.748	0,71083%
AREIA	DF, GO, MG	GUARAREMA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	7.738	9,780	75.678	136.578.748	0,05541%
AREIA	DF, GO, MG	GUARATINGUETA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	248.690	2,263	562.785	136.578.748	0,41206%
AREIA	DF, GO, MG	GUARATINGUETA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEN-FGU	248.690	5,059	1.258.123	136.578.748	0,92117%
AREIA	DF, GO, MG	GUARATINGUETA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	248.690	2,929	728.413	136.578.748	0,53333%
AREIA	DF, GO, MG	GUARATINGUETA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	33.504	2,263	75.820	136.578.748	0,05551%
AREIA	DF, GO, MG	GUARATINGUETA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEN-FGU	33.504	5,059	169.497	136.578.748	0,12410%
AREIA	DF, GO, MG	GUARATINGUETA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	33.504	2,929	98.133	136.578.748	0,07185%
AREIA	DF, GO, MG	GUARATINGUETA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	7.738	2,263	17.511	136.578.748	0,01282%
AREIA	DF, GO, MG	GUARATINGUETA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEN-FGU	7.738	5,059	39.147	136.578.748	0,02866%
AREIA	DF, GO, MG	GUARATINGUETA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	7.738	2,929	22.665	136.578.748	0,01659%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	248.690	3,903	970.637	136.578.748	0,71068%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPI-IEF	248.690	6,877	1.710.241	136.578.748	1,25220%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	248.690	1,324	329.266	136.578.748	0,24108%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	33.504	3,903	130.766	136.578.748	0,09574%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPI-IEF	33.504	6,877	230.407	136.578.748	0,16870%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	33.504	1,324	44.359	136.578.748	0,03248%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	128.916	3,903	503.159	136.578.748	0,36840%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPI-IEF	128.916	6,877	886.555	136.578.748	0,64912%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	128.916	1,324	170.685	136.578.748	0,12497%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	99.268	3,903	387.443	136.578.748	0,28368%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPI-IEF	99.268	6,877	682.666	136.578.748	0,49983%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	99.268	1,324	131.431	136.578.748	0,09623%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	7.738	3,903	30.201	136.578.748	0,02211%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPI-IEF	7.738	6,877	53.214	136.578.748	0,03896%
AREIA	DF, GO, MG	ITAQUAQUECETUBA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	7.738	1,324	10.245	136.578.748	0,00750%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	248.690	2,592	644.604	136.578.748	0,47197%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPA-FRE	248.690	15,858	3.943.726	136.578.748	2,88751%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	248.690	0,535	133.049	136.578.748	0,09742%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	33.504	2,592	86.842	136.578.748	0,06358%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPA-FRE	33.504	15,858	531.306	136.578.748	0,38901%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	33.504	0,535	17.925	136.578.748	0,01312%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	128.916	2,592	334.150	136.578.748	0,24466%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPA-FRE	128.916	15,858	2.044.350	136.578.748	1,49683%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	128.916	0,535	68.970	136.578.748	0,05050%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	99.268	2,592	257.303	136.578.748	0,18839%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPA-FRE	99.268	15,858	1.574.192	136.578.748	1,15259%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	99.268	0,535	53.108	136.578.748	0,03888%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	7.738	2,592	20.057	136.578.748	0,01469%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPA-FRE	7.738	15,858	122.709	136.578.748	0,08985%
AREIA	DF, GO, MG	JACAREI	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	7.738	0,535	4.140	136.578.748	0,00303%
AREIA	DF, GO, MG	LAVRINHAS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FVQ-FCZ	7.738	10,176	78.742	136.578.748	0,05765%
AREIA	DF, GO, MG	LORENA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	248.690	4,725	1.175.060	136.578.748	0,86035%
AREIA	DF, GO, MG	LORENA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	248.690	5,101	1.268.568	136.578.748	0,92882%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	DF, GO, MG	LORENA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	33.504	4,725	158.306	136.578.748	0,11591%
AREIA	DF, GO, MG	LORENA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	33.504	5,101	170.904	136.578.748	0,12513%
AREIA	DF, GO, MG	LORENA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	7.738	4,725	36.562	136.578.748	0,02677%
AREIA	DF, GO, MG	LORENA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	7.738	5,101	39.472	136.578.748	0,02890%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	248.690	3,456	859.473	136.578.748	0,62929%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIP-FST	248.690	10,238	2.546.088	136.578.748	1,86419%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	248.690	8,782	2.183.996	136.578.748	1,59907%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	33.504	3,456	115.790	136.578.748	0,08478%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIP-FST	33.504	10,238	343.014	136.578.748	0,25115%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	33.504	8,782	294.232	136.578.748	0,21543%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	128.916	3,456	445.534	136.578.748	0,32621%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIP-FST	128.916	10,238	1.319.842	136.578.748	0,96636%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	128.916	8,782	1.132.140	136.578.748	0,82893%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	99.268	3,456	343.070	136.578.748	0,25119%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIP-FST	99.268	10,238	1.016.306	136.578.748	0,74412%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	99.268	8,782	871.772	136.578.748	0,63829%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	7.738	3,456	26.743	136.578.748	0,01958%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FIP-FST	7.738	10,238	79.222	136.578.748	0,05800%
AREIA	DF, GO, MG	MOGI DAS CRUZES	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	7.738	8,782	67.955	136.578.748	0,04976%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	248.690	0,786	195.470	136.578.748	0,14312%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	248.690	5,965	1.483.436	136.578.748	1,08614%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCT-FPG	248.690	6,277	1.561.027	136.578.748	1,14295%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	248.690	6,406	1.593.108	136.578.748	1,16644%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	33.504	0,786	26.334	136.578.748	0,01928%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	33.504	5,965	199.851	136.578.748	0,14633%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCT-FPG	33.504	6,277	210.305	136.578.748	0,15398%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	33.504	6,406	214.627	136.578.748	0,15714%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	128.916	5,965	768.984	136.578.748	0,56303%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	128.916	0,786	101.328	136.578.748	0,07419%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCT-FPG	128.916	6,277	809.206	136.578.748	0,59248%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	128.916	6,406	825.836	136.578.748	0,60466%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	99.268	0,786	78.025	136.578.748	0,05713%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	99.268	5,965	592.134	136.578.748	0,43355%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCT-FPG	99.268	6,277	623.105	136.578.748	0,45622%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	99.268	6,406	635.911	136.578.748	0,46560%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	7.738	5,965	46.157	136.578.748	0,03380%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	7.738	0,786	6.082	136.578.748	0,00445%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCT-FPG	7.738	6,277	48.571	136.578.748	0,03556%
AREIA	DF, GO, MG	PINDAMONHANGABA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	7.738	6,406	49.570	136.578.748	0,03629%
AREIA	DF, GO, MG	QUELUZ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEP-FQU	7.738	8,074	62.477	136.578.748	0,04574%
AREIA	DF, GO, MG	QUELUZ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FQU-FVQ	7.738	8,886	68.760	136.578.748	0,05034%
AREIA	DF, GO, MG	QUELUZ	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FVQ-FCZ	7.738	0,538	4.163	136.578.748	0,00305%
AREIA	DF, GO, MG	ROSEIRA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	248.690	4,609	1.146.212	136.578.748	0,83923%
AREIA	DF, GO, MG	ROSEIRA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRA-FPR	248.690	3,295	819.434	136.578.748	0,59997%
AREIA	DF, GO, MG	ROSEIRA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	33.504	4,609	154.420	136.578.748	0,11306%
AREIA	DF, GO, MG	ROSEIRA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRA-FPR	33.504	3,295	110.396	136.578.748	0,08083%
AREIA	DF, GO, MG	ROSEIRA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRA-FPR	128.916	3,295	424.778	136.578.748	0,31101%
AREIA	DF, GO, MG	ROSEIRA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRA-FPR	99.268	3,295	327.088	136.578.748	0,23949%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	DF, GO, MG	ROSEIRA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	7.738	4,609	35.664	136.578.748	0,02611%
AREIA	DF, GO, MG	ROSEIRA	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FRA-FPR	7.738	3,295	25.497	136.578.748	0,01867%
AREIA	DF, GO, MG	SANTO ANDRE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	ISC-IUT	33.504	0,935	31.326	136.578.748	0,02294%
AREIA	DF, GO, MG	SANTO ANDRE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IUT-OPS	33.504	1,542	51.663	136.578.748	0,03783%
AREIA	DF, GO, MG	SANTO ANDRE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OPS-ISA	33.504	1,765	59.135	136.578.748	0,04330%
AREIA	DF, GO, MG	SAO CAETANO DO SUL	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OTA-ISC	33.504	1,074	35.983	136.578.748	0,02635%
AREIA	DF, GO, MG	SAO CAETANO DO SUL	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	ISC-IUT	33.504	2,451	82.118	136.578.748	0,06013%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	248.690	1,203	299.174	136.578.748	0,21905%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEA-FEG	248.690	1,763	438.440	136.578.748	0,32102%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEG-FEM	248.690	5,007	1.245.191	136.578.748	0,91170%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEM-FSJ	248.690	6,172	1.534.915	136.578.748	1,12383%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	248.690	11,297	2.809.451	136.578.748	2,05702%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	33.504	1,203	40.305	136.578.748	0,02951%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEA-FEG	33.504	1,763	59.068	136.578.748	0,04325%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEG-FEM	33.504	5,007	167.755	136.578.748	0,12283%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEM-FSJ	33.504	6,172	206.787	136.578.748	0,15140%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	33.504	11,297	378.495	136.578.748	0,27713%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	128.916	1,203	155.086	136.578.748	0,11355%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEA-FEG	128.916	1,763	227.279	136.578.748	0,16641%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEG-FEM	128.916	5,007	645.482	136.578.748	0,47261%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEM-FSJ	128.916	6,172	795.670	136.578.748	0,58257%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	128.916	11,297	1.456.364	136.578.748	1,06632%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	99.268	1,203	119.419	136.578.748	0,08744%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEA-FEG	99.268	1,763	175.009	136.578.748	0,12814%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEG-FEM	99.268	5,007	497.035	136.578.748	0,36392%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEM-FSJ	99.268	6,172	612.682	136.578.748	0,44859%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	99.268	11,297	1.121.431	136.578.748	0,82109%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	7.738	1,203	9.309	136.578.748	0,00682%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEA-FEG	7.738	1,763	13.642	136.578.748	0,00999%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEG-FEM	7.738	5,007	38.744	136.578.748	0,02837%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FEM-FSJ	7.738	6,172	47.759	136.578.748	0,03497%
AREIA	DF, GO, MG	SAO JOSE DOS CAMPOS	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	7.738	11,297	87.416	136.578.748	0,06400%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	248.690	11,722	2.915.144	136.578.748	2,13441%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OCE-OSG	248.690	11,424	2.841.035	136.578.748	2,08014%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OSG-IES	248.690	4,447	1.105.924	136.578.748	0,80973%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IES-OBR	248.690	1,852	460.574	136.578.748	0,33722%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OBR-IMO	248.690	3,662	910.703	136.578.748	0,66680%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	33.504	11,722	392.734	136.578.748	0,28755%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OCE-OSG	33.504	11,424	382.750	136.578.748	0,28024%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OSG-IES	33.504	4,447	148.992	136.578.748	0,10909%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IES-OBR	33.504	1,852	62.049	136.578.748	0,04543%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OBR-IMO	33.504	3,662	122.692	136.578.748	0,08983%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IMO-IIP	33.504	0,901	30.187	136.578.748	0,02210%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IIP-OTA	33.504	1,637	54.846	136.578.748	0,04016%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OTA-ISC	33.504	1,443	48.346	136.578.748	0,03540%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	128.916	11,722	1.511.153	136.578.748	1,10643%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OCE-OSG	128.916	11,424	1.472.736	136.578.748	1,07831%
AREIA	DF, GO, MG	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OSG-IES	128.916	4,447	573.289	136.578.748	0,41975%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IES-OBR	128.916	1,852	238.752	136.578.748	0,17481%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OBR-IMO	128.916	3,662	472.090	136.578.748	0,34565%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	99.268	11,722	1.163.619	136.578.748	0,85198%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OCE-OSG	99.268	11,424	1.134.038	136.578.748	0,83032%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OSG-IES	99.268	4,447	441.445	136.578.748	0,32322%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IES-OBR	99.268	1,852	183.844	136.578.748	0,13461%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OBR-ORO	99.268	0,302	29.979	136.578.748	0,02195%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	ORO-IPR	99.268	0,838	83.187	136.578.748	0,06091%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IPR-OLU	99.268	1,181	117.236	136.578.748	0,08584%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OLU-OBF	99.268	3,711	368.384	136.578.748	0,26972%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OBF-IAB	99.268	3,653	362.626	136.578.748	0,26551%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	7.738	11,722	90.705	136.578.748	0,06641%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OCE-OSG	7.738	11,424	88.399	136.578.748	0,06472%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OSG-IES	7.738	4,447	34.411	136.578.748	0,02519%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IES-OBR	7.738	1,852	14.331	136.578.748	0,01049%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	ORO-ORO	7.738	0,302	2.337	136.578.748	0,00171%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	ORO-IPR	7.738	0,838	6.484	136.578.748	0,00475%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	IPR-OLU	7.738	1,181	9.139	136.578.748	0,00669%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OLU-OBF	7.738	3,711	28.716	136.578.748	0,02103%
AREIA	DF, GO, MC	SAO PAULO	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	OBF-IAB	7.738	3,653	28.267	136.578.748	0,02070%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	248.690	3,718	924.629	136.578.748	0,67699%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FTA-FUI	248.690	5,900	1.467.271	136.578.748	1,07430%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	248.690	4,009	996.998	136.578.748	0,72998%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	33.504	3,718	124.568	136.578.748	0,09121%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FTA-FUI	33.504	5,900	197.674	136.578.748	0,14473%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	33.504	4,009	134.318	136.578.748	0,09834%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	128.916	3,718	479.310	136.578.748	0,35094%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FTA-FUI	128.916	5,900	760.604	136.578.748	0,55690%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	128.916	4,009	516.824	136.578.748	0,37841%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	99.268	3,718	369.078	136.578.748	0,27023%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FTA-FUI	99.268	5,900	585.681	136.578.748	0,42882%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	99.268	4,009	397.965	136.578.748	0,29138%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	7.738	3,718	28.770	136.578.748	0,02106%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FTA-FUI	7.738	5,900	45.654	136.578.748	0,03343%
AREIA	DF, GO, MC	TAUBATE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	7.738	4,009	31.022	136.578.748	0,02271%
AREIA	DF, GO, MC	TREMEMBE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	248.690	4,213	1.047.731	136.578.748	0,76713%
AREIA	DF, GO, MC	TREMEMBE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	33.504	4,213	141.152	136.578.748	0,10335%
AREIA	DF, GO, MC	TREMEMBE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	128.916	4,213	543.123	136.578.748	0,39766%
AREIA	DF, GO, MC	TREMEMBE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	99.268	4,213	418.216	136.578.748	0,30621%
AREIA	DF, GO, MC	TREMEMBE	MRS	2	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	7.738	4,213	32.600	136.578.748	0,02387%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BAIXO GUANDU	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAY-VBG	254.245	4,087	1.039.099	683.013.601	0,15213%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BAIXO GUANDU	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBG-VMC	254.245	10,937	2.780.678	683.013.601	0,40712%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BAIXO GUANDU	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VMC-VIA	254.245	10,724	2.726.523	683.013.601	0,39919%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BAIXO GUANDU	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAY-VBG	6.493	4,087	26.537	683.013.601	0,00389%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BAIXO GUANDU	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VBG-VMC	6.493	10,937	71.014	683.013.601	0,01040%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BAIXO GUANDU	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VMC-VIA	6.493	10,724	69.631	683.013.601	0,01019%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CARIACICA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAB-V03	254.245	1,418	360.519	683.013.601	0,05278%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CARIACICA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	V03-VTU	254.245	0,843	214.329	683.013.601	0,03138%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CARIACICA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAB-V03	6.493	1,418	9.207	683.013.601	0,00135%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CARIACICA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	V03-VTU	6.493	0,843	5.474	683.013.601	0,00080%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	COLATINA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VMC-VIA	254.245	0,830	211.023	683.013.601	0,03090%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	COLATINA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VIA-VCL	254.245	20,942	5.324.399	683.013.601	0,77955%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	COLATINA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VCL-VPA	254.245	37,338	9.493.000	683.013.601	1,38987%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	COLATINA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VMC-VIA	6.493	0,830	5.389	683.013.601	0,00079%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	COLATINA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VIA-VCL	6.493	20,942	135.976	683.013.601	0,01991%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	COLATINA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VCL-VPA	6.493	37,338	242.436	683.013.601	0,03549%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	FUNDAO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAR-VFN	254.245	4,258	1.082.575	683.013.601	0,15850%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	FUNDAO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VFN-VAB	254.245	9,628	2.447.871	683.013.601	0,35839%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	FUNDAO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAR-VFN	6.493	4,258	27.647	683.013.601	0,00405%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	FUNDAO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VFN-VAB	6.493	9,628	62.515	683.013.601	0,00915%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	IBIRACU	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VPA-VAR	254.245	7,936	2.017.688	683.013.601	0,29541%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	IBIRACU	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAR-VFN	254.245	9,945	2.528.467	683.013.601	0,37019%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	IBIRACU	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VPA-VAR	6.493	7,936	51.528	683.013.601	0,00754%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	IBIRACU	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAR-VFN	6.493	9,945	64.573	683.013.601	0,00945%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO NEIVA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VCL-VPA	254.245	18,836	4.788.959	683.013.601	0,70115%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO NEIVA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VPA-VAR	254.245	1,640	416.962	683.013.601	0,06105%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO NEIVA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VCL-VPA	6.493	18,836	122.302	683.013.601	0,01791%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO NEIVA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VPA-VAR	6.493	1,640	10.649	683.013.601	0,00156%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LEOPOLDINA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VFN-VAB	254.245	4,229	1.075.202	683.013.601	0,15742%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LEOPOLDINA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAB-V03	254.245	5,263	1.338.091	683.013.601	0,19591%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LEOPOLDINA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VFN-VAB	6.493	4,229	27.459	683.013.601	0,00402%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LEOPOLDINA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAB-V03	6.493	5,263	34.173	683.013.601	0,00500%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SERRA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VFN-VAB	254.245	12,567	3.195.097	683.013.601	0,46779%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SERRA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAB-V03	254.245	2,597	660.274	683.013.601	0,09667%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SERRA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	V03-VTU	254.245	11,585	2.945.428	683.013.601	0,43124%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SERRA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VFN-VAB	6.493	12,567	81.598	683.013.601	0,01195%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SERRA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAB-V03	6.493	2,597	16.862	683.013.601	0,00247%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SERRA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	V03-VTU	6.493	11,585	75.221	683.013.601	0,01101%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	AIMORES	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VIU-VAY	254.245	13,209	3.358.322	683.013.601	0,49169%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	AIMORES	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAY-VBG	254.245	1,607	408.572	683.013.601	0,05982%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	AIMORES	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VIU-VAY	6.493	13,209	85.766	683.013.601	0,01256%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	AIMORES	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAY-VBG	6.493	1,607	10.434	683.013.601	0,00153%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANDRELANDIA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FGO-FAU	124.851	8,687	1.084.581	683.013.601	0,15879%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANDRELANDIA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FAU-FFR	124.851	11,287	1.409.193	683.013.601	0,20632%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANDRELANDIA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FFR-FIN	124.851	5,642	704.409	683.013.601	0,10313%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANDRELANDIA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FIN-FIR	124.851	7,546	942.126	683.013.601	0,13794%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANDRELANDIA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FIR-FOJ	124.851	4,068	507.894	683.013.601	0,07436%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANDRELANDIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ESV-ELN	902.973	15,534	14.026.783	683.013.601	2,05366%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANDRELANDIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ELN-EAT	902.973	22,177	20.025.232	683.013.601	2,93189%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANTONIO DIAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	254.245	14,826	3.769.436	683.013.601	0,55188%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANTONIO DIAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	254.245	29,768	7.568.365	683.013.601	1,10808%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANTONIO DIAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	257.283	14,826	3.814.478	683.013.601	0,55848%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANTONIO DIAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	257.283	29,768	7.658.800	683.013.601	1,12132%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANTONIO DIAS	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	6.493	14,826	96.265	683.013.601	0,01409%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ANTONIO DIAS	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	6.493	29,768	193.284	683.013.601	0,02830%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ARANTINA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FIR-FOJ	124.851	3,459	431.860	683.013.601	0,06323%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ARANTINA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ELN-EAT	902.973	3,066	2.768.515	683.013.601	0,40534%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ARANTINA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EAT-EKW	902.973	10,496	9.477.605	683.013.601	1,38762%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ARCOS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EAO-E68	902.973	11,165	10.081.323	683.013.601	1,47601%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	254.245	3,666	932.062	683.013.601	0,13646%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VGS-VME	254.245	9,806	2.493.126	683.013.601	0,36502%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VME-VDI	254.245	6,992	1.777.681	683.013.601	0,26027%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	254.245	5,503	1.399.110	683.013.601	0,20484%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	257.283	3,666	943.199	683.013.601	0,13809%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VGS-VME	257.283	9,806	2.522.917	683.013.601	0,36938%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VME-VDI	257.283	6,992	1.798.923	683.013.601	0,26338%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	257.283	5,503	1.415.828	683.013.601	0,20729%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	6.493	3,666	23.803	683.013.601	0,00349%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VGS-VME	6.493	9,806	63.670	683.013.601	0,00932%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VME-VDI	6.493	6,992	45.399	683.013.601	0,00665%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARAO DE COCAIS	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	6.493	5,503	35.731	683.013.601	0,00523%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELA VISTA DE MINAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	254.245	5,127	1.303.514	683.013.601	0,19085%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELA VISTA DE MINAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	257.283	5,127	1.319.090	683.013.601	0,19313%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELA VISTA DE MINAS	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	6.493	5,127	33.290	683.013.601	0,00487%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELO HORIZONTE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	254.245	7,037	1.789.122	683.013.601	0,26195%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELO HORIZONTE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	257.283	7,037	1.810.500	683.013.601	0,26508%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELO HORIZONTE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	6.493	7,037	45.691	683.013.601	0,00669%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELO ORIENTE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VJC-VFS	254.245	6,784	1.724.798	683.013.601	0,25253%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELO ORIENTE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	254.245	11,832	3.008.227	683.013.601	0,44043%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELO ORIENTE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VJC-VFS	6.493	6,784	44.049	683.013.601	0,00645%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BELO ORIENTE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	6.493	11,832	76.825	683.013.601	0,01125%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BOM JARDIM DE MINAS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FIR-FOJ	124.851	3,748	467.942	683.013.601	0,06851%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BOM JARDIM DE MINAS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FOJ-FJT	124.851	8,398	1.048.499	683.013.601	0,15351%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BOM JARDIM DE MINAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EAT-EKW	902.973	4,206	3.797.904	683.013.601	0,55605%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BUGRE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VJC-VFS	254.245	1,000	254.245	683.013.601	0,03722%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BUGRE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VJC-VFS	6.493	1,000	6.493	683.013.601	0,00095%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAETE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	254.245	4,754	1.208.681	683.013.601	0,17696%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAETE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VTE-VQT	254.245	9,556	2.429.565	683.013.601	0,35571%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAETE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	254.245	4,751	1.207.918	683.013.601	0,17685%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAETE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	257.283	4,754	1.223.123	683.013.601	0,17908%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAETE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VTE-VQT	257.283	9,556	2.458.596	683.013.601	0,35996%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAETE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	257.283	4,751	1.222.352	683.013.601	0,17896%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAETE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	6.493	4,754	30.868	683.013.601	0,00452%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAETE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VTE-VQT	6.493	9,556	62.047	683.013.601	0,00908%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAETE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	6.493	4,751	30.848	683.013.601	0,00452%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAMPO BELO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECX-ECB	902.973	7,832	7.072.085	683.013.601	1,03542%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAMPO BELO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECB-ESM	902.973	3,099	2.798.313	683.013.601	0,40970%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CAMPO BELO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ESM-EKV	902.973	13,787	12.449.289	683.013.601	1,82270%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CANA VERDE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ESM-EKV	902.973	5,027	4.539.245	683.013.601	0,66459%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CANA VERDE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EKV-EPE	902.973	6,422	5.798.893	683.013.601	0,84902%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CANDEIAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	E69-EBG	902.973	5,454	4.924.815	683.013.601	0,72104%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CANDEIAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EBG-ECX	902.973	17,478	15.782.162	683.013.601	2,31067%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CANDEIAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECX-ECB	902.973	18,428	16.639.986	683.013.601	2,43626%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CARRANCAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EPF-EKA	902.973	0,153	138.155	683.013.601	0,02023%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CARRANCAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EKA-ETU	902.973	13,679	12.351.768	683.013.601	1,80842%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CARRANCAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ETU-EAN	902.973	0,475	428.912	683.013.601	0,06280%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CATAS ALTAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	254.245	0,130	33.052	683.013.601	0,00484%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CATAS ALTAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	257.283	0,130	33.447	683.013.601	0,00490%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CATAS ALTAS	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	6.493	0,130	844	683.013.601	0,00012%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CONSELHEIRO PENA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VST-VBC	254.245	0,713	181.277	683.013.601	0,02654%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CONSELHEIRO PENA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBC-VCP	254.245	13,098	3.330.101	683.013.601	0,48756%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CONSELHEIRO PENA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VCP-VCN	254.245	15,801	4.017.325	683.013.601	0,58818%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CONSELHEIRO PENA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VST-VBC	6.493	0,713	4.630	683.013.601	0,00068%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CONSELHEIRO PENA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VBC-VCP	6.493	13,098	85.045	683.013.601	0,01245%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CONSELHEIRO PENA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VCP-VCN	6.493	15,801	102.596	683.013.601	0,01502%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CORONEL FABRICIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	254.245	0,685	174.158	683.013.601	0,02550%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CORONEL FABRICIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	254.245	1,318	335.095	683.013.601	0,04906%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CORONEL FABRICIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	254.245	4,737	1.204.359	683.013.601	0,17633%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CORONEL FABRICIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	257.283	0,685	176.239	683.013.601	0,02580%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CORONEL FABRICIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	257.283	1,318	339.099	683.013.601	0,04965%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CORONEL FABRICIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	257.283	4,737	1.218.750	683.013.601	0,17844%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CORONEL FABRICIANO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	6.493	0,685	4.448	683.013.601	0,00065%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CORONEL FABRICIANO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	6.493	1,318	8.558	683.013.601	0,00125%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CORONEL FABRICIANO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	6.493	4,737	30.757	683.013.601	0,00450%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	CRUZILIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ETU-EAN	902.973	5,479	4.947.389	683.013.601	0,72435%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	FORMIGA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	E68-ETI	902.973	17,740	16.018.741	683.013.601	2,34530%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	FORMIGA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ETI-E69	902.973	7,345	6.632.337	683.013.601	0,97104%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	FORMIGA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	E69-EBG	902.973	7,055	6.370.475	683.013.601	0,93270%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	GOVERNADOR VALADARES	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	254.245	30,611	7.782.694	683.013.601	1,13946%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	GOVERNADOR VALADARES	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VPC-VGV	254.245	30,611	7.782.694	683.013.601	1,13946%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	GOVERNADOR VALADARES	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VGV-VTR	254.245	30,774	7.824.136	683.013.601	1,14553%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	GOVERNADOR VALADARES	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	6.493	30,611	198.757	683.013.601	0,02910%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	GOVERNADOR VALADARES	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VPC-VGV	6.493	30,611	198.757	683.013.601	0,02910%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	GOVERNADOR VALADARES	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VGV-VTR	6.493	30,774	199.816	683.013.601	0,02925%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	INGAI	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EII-EPF	902.973	14,033	12.671.420	683.013.601	1,85522%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	INGAI	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EPF-EKA	902.973	6,844	6.179.947	683.013.601	0,90481%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	IPATINGA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	254.245	4,119	1.047.235	683.013.601	0,15333%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	IPATINGA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VIC-VJC	254.245	6,565	1.669.118	683.013.601	0,24438%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	IPATINGA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	257.283	4,119	1.059.749	683.013.601	0,15516%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	IPATINGA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	6.493	4,119	26.745	683.013.601	0,00392%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	IPATINGA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VIC-VJC	6.493	6,565	42.627	683.013.601	0,00624%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ITUETA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VRD-VIU	254.245	6,729	1.710.815	683.013.601	0,25048%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ITUETA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VIU-VAY	254.245	7,197	1.829.801	683.013.601	0,26790%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ITUETA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VRD-VIU	6.493	6,729	43.691	683.013.601	0,00640%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ITUETA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VIU-VAY	6.493	7,197	46.730	683.013.601	0,00684%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ITUMIRIM	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EIR-EII	902.973	2,310	2.085.868	683.013.601	0,30539%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	ITUMIRIM	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EII-EPF	902.973	7,697	6.950.183	683.013.601	1,01758%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO MONLEVADE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	254.245	8,064	2.050.232	683.013.601	0,30017%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO MONLEVADE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VJM-VBV	254.245	2,614	664.596	683.013.601	0,09730%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO MONLEVADE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	254.245	2,366	601.544	683.013.601	0,08807%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO MONLEVADE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	257.283	8,064	2.074.730	683.013.601	0,30376%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO MONLEVADE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VJM-VBV	257.283	2,614	672.538	683.013.601	0,09847%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO MONLEVADE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	257.283	2,366	608.732	683.013.601	0,08912%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO MONLEVADE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	6.493	8,064	52.360	683.013.601	0,00767%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO MONLEVADE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VJM-VBV	6.493	2,614	16.973	683.013.601	0,00248%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	JOAO MONLEVADE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	6.493	2,366	15.362	683.013.601	0,00225%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	LAVRAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ERV-ELS	902.973	8,907	8.042.781	683.013.601	1,17754%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	LAVRAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ELS-EEB	902.973	5,678	5.127.081	683.013.601	0,75066%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	LAVRAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EEB-EIR	902.973	14,584	13.168.958	683.013.601	1,92807%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	LAVRAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EIR-EII	902.973	8,326	7.518.153	683.013.601	1,10073%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	LIBERDADE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EAT-EKW	902.973	1,445	1.304.796	683.013.601	0,19104%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	LIBERDADE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EKW-EEP	902.973	20,163	18.206.645	683.013.601	2,66563%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	LIBERDADE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EEP-EEU	902.973	0,227	204.975	683.013.601	0,03001%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	LUMINARIAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EPF-EKA	902.973	10,955	9.892.069	683.013.601	1,44830%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	MADRE DE DEUS DE MINAS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FRN-FPZ	124.851	5,229	652.846	683.013.601	0,09558%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	MADRE DE DEUS DE MINAS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FPZ-FGO	124.851	13,886	1.733.681	683.013.601	0,25383%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	MADRE DE DEUS DE MINAS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FGO-FAU	124.851	3,390	423.245	683.013.601	0,06197%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	MATOZINHOS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EMS-EWL	257.283	4,417	1.136.419	683.013.601	0,16638%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	MATOZINHOS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EWL-EPL	257.283	0,225	57.889	683.013.601	0,00848%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	MINDURI	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ETU-EAN	902.973	13,225	11.941.818	683.013.601	1,74840%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	MINDURI	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EAN-ESV	902.973	4,355	3.932.447	683.013.601	0,57575%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NAQUE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	254.245	11,326	2.879.579	683.013.601	0,42160%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NAQUE	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	6.493	11,326	73.540	683.013.601	0,01077%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NAZARENO	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FGT-FRN	124.851	1,432	178.787	683.013.601	0,02618%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NOVA ERA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	254.245	11,440	2.908.563	683.013.601	0,42584%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NOVA ERA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDD-DDC	254.245	3,282	834.432	683.013.601	0,12217%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NOVA ERA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	254.245	7,168	1.822.428	683.013.601	0,26682%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NOVA ERA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	257.283	11,440	2.943.318	683.013.601	0,43093%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NOVA ERA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDD-DDC	257.283	3,282	844.403	683.013.601	0,12363%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NOVA ERA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	257.283	7,168	1.844.205	683.013.601	0,27001%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NOVA ERA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	6.493	11,440	74.280	683.013.601	0,01088%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NOVA ERA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VDD-DDC	6.493	3,282	21.310	683.013.601	0,00312%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	NOVA ERA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	6.493	7,168	46.542	683.013.601	0,00681%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PASSA-VINTE	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FJT-FSH	124.851	6,385	797.174	683.013.601	0,11671%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PASSA-VINTE	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FSH-FRP	124.851	12,279	1.533.045	683.013.601	0,22445%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PASSA-VINTE	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FRP-FFU	124.851	3,696	461.449	683.013.601	0,06756%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PASSA-VINTE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EEP-EEU	902.973	11,341	10.240.617	683.013.601	1,49933%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PASSA-VINTE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EEU-EPV	902.973	10,168	9.181.429	683.013.601	1,34425%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PASSA-VINTE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EPV-EFL	902.973	8,390	7.575.943	683.013.601	1,10919%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PEDRO LEOPOLDO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EWL-EPL	257.283	5,388	1.386.241	683.013.601	0,20296%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PEDRO LEOPOLDO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EPL-ELD	257.283	5,037	1.295.934	683.013.601	0,18974%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PEDRO LEOPOLDO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ELD-ENG	257.283	0,996	256.254	683.013.601	0,03752%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PERDOES	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EKV-EPE	902.973	9,492	8.571.020	683.013.601	1,25488%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PERDOES	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EPE-ERV	902.973	8,324	7.516.347	683.013.601	1,10047%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PERIQUITO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	254.245	19,905	5.060.747	683.013.601	0,74094%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PERIQUITO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VPC-VGV	254.245	5,486	1.394.788	683.013.601	0,20421%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PERIQUITO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	6.493	19,905	129.243	683.013.601	0,01892%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	PERIQUITO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VPC-VGV	6.493	5,486	35.621	683.013.601	0,00522%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESPLENDOR	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VCP-VCN	254.245	1,236	314.247	683.013.601	0,04601%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESPLENDOR	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VCN-VRD	254.245	16,017	4.072.242	683.013.601	0,59622%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESPLENDOR	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VRD-VIU	254.245	8,436	2.144.811	683.013.601	0,31402%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESPLENDOR	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VCP-VCN	6.493	1,236	8.025	683.013.601	0,00117%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESPLENDOR	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VCN-VRD	6.493	16,017	103.998	683.013.601	0,01523%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESPLENDOR	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VRD-VIU	6.493	8,436	54.775	683.013.601	0,00802%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIBEIRAO VERMELHO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EPE-ERV	902.973	11,501	10.385.092	683.013.601	1,52048%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIBEIRAO VERMELHO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ERV-ELS	902.973	0,316	285.339	683.013.601	0,04178%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIO PIRACICABA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	254.245	4,759	1.209.952	683.013.601	0,17715%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIO PIRACICABA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBS-VRP	254.245	3,345	850.450	683.013.601	0,12451%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIO PIRACICABA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	254.245	5,600	1.423.772	683.013.601	0,20845%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIO PIRACICABA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	257.283	4,759	1.224.410	683.013.601	0,17927%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIO PIRACICABA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBS-VRP	257.283	3,345	860.612	683.013.601	0,12600%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIO PIRACICABA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	257.283	5,600	1.440.785	683.013.601	0,21095%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIO PIRACICABA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	6.493	4,759	30.900	683.013.601	0,00452%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIO PIRACICABA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VBS-VRP	6.493	3,345	21.719	683.013.601	0,00318%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RIO PIRACICABA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	6.493	5,600	36.361	683.013.601	0,00532%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SABARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	254.245	1,919	487.896	683.013.601	0,07143%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SABARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VWI-VDO	254.245	11,359	2.887.969	683.013.601	0,42283%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SABARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	254.245	3,485	886.044	683.013.601	0,12973%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SABARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	257.283	1,919	493.726	683.013.601	0,07229%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SABARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VWI-VDO	257.283	11,359	2.922.478	683.013.601	0,42788%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SABARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	257.283	3,485	896.631	683.013.601	0,13128%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SABARA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	6.493	1,919	12.460	683.013.601	0,00182%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SABARA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VWI-VDO	6.493	11,359	73.754	683.013.601	0,01080%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SABARA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	6.493	3,485	22.628	683.013.601	0,00331%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	254.245	12,572	3.196.368	683.013.601	0,46798%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VCS-OFI	254.245	7,588	1.929.211	683.013.601	0,28246%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	OFI-OPT	254.245	8,815	2.241.170	683.013.601	0,32813%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	254.245	2,014	512.049	683.013.601	0,07497%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	257.283	12,572	3.234.562	683.013.601	0,47357%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VCS-OFI	257.283	7,588	1.952.263	683.013.601	0,28583%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	OFI-OPT	257.283	8,815	2.267.950	683.013.601	0,33205%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	257.283	2,014	518.168	683.013.601	0,07586%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	6.493	12,572	81.630	683.013.601	0,01195%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VCS-OFI	6.493	7,588	49.269	683.013.601	0,00721%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	OFI-OPT	6.493	8,815	57.236	683.013.601	0,00838%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA BARBARA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	6.493	2,014	13.077	683.013.601	0,00191%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LUZIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EVP-ERE	254.245	1,596	405.775	683.013.601	0,05941%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LUZIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ERE-ECA	254.245	6,402	1.627.676	683.013.601	0,23831%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LUZIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECA-ECE	254.245	8,802	2.237.864	683.013.601	0,32765%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LUZIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	254.245	1,039	264.161	683.013.601	0,03868%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LUZIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EVP-ERE	257.283	1,596	410.624	683.013.601	0,06012%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LUZIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ERE-ECA	257.283	6,402	1.647.126	683.013.601	0,24116%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LUZIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECA-ECE	257.283	8,802	2.264.605	683.013.601	0,33156%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LUZIA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	257.283	1,039	267.317	683.013.601	0,03914%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA LUZIA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	6.493	1,039	6.746	683.013.601	0,00099%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA RITA DE JACUTINGA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FOJ-FJT	124.851	5,740	716.645	683.013.601	0,10492%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTA RITA DE JACUTINGA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FJT-FSH	124.851	9,292	1.160.115	683.013.601	0,16985%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTANA DO PARAISO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VIC-VIC	254.245	0,716	182.039	683.013.601	0,02665%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTANA DO PARAISO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VJC-VFS	254.245	21,781	5.537.710	683.013.601	0,81078%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTANA DO PARAISO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VIC-VJC	6.493	0,716	4.649	683.013.601	0,00068%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SANTANA DO PARAISO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VJC-VFS	6.493	21,781	141.424	683.013.601	0,02071%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO GONCALO DO RIO ABAIXO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	254.245	0,562	142.886	683.013.601	0,02092%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO GONCALO DO RIO ABAIXO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	254.245	4,432	1.126.814	683.013.601	0,16498%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO GONCALO DO RIO ABAIXO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	257.283	0,562	144.593	683.013.601	0,02117%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO GONCALO DO RIO ABAIXO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	257.283	4,432	1.140.278	683.013.601	0,16695%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO GONCALO DO RIO ABAIXO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	6.493	0,562	3.649	683.013.601	0,00053%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO GONCALO DO RIO ABAIXO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	6.493	4,432	28.777	683.013.601	0,00421%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO JOAO DEL REI	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FGT-FRN	124.851	14,864	1.855.785	683.013.601	0,27171%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO JOAO DEL REI	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FRN-FPZ	124.851	6,710	837.750	683.013.601	0,12265%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO JOSE DA LAPA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ENG-EVP	254.245	0,868	220.685	683.013.601	0,03231%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO JOSE DA LAPA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ELD-ENG	257.283	7,949	2.045.143	683.013.601	0,29943%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO JOSE DA LAPA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ENG-EVP	257.283	0,868	223.322	683.013.601	0,03270%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO VICENTE DE MINAS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FGO-FAU	124.851	1,146	143.079	683.013.601	0,02095%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO VICENTE DE MINAS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FAU-FFR	124.851	2,829	353.203	683.013.601	0,05171%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO VICENTE DE MINAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EAN-ESV	902.973	21,814	19.697.453	683.013.601	2,88390%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	SAO VICENTE DE MINAS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ESV-ELN	902.973	5,416	4.890.502	683.013.601	0,71602%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TIMOTEO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	254.245	1,060	269.500	683.013.601	0,03946%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TIMOTEO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	254.245	5,017	1.275.547	683.013.601	0,18675%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TIMOTEO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	257.283	1,060	272.720	683.013.601	0,03993%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TIMOTEO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	257.283	5,017	1.290.789	683.013.601	0,18898%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TIMOTEO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	6.493	1,060	6.883	683.013.601	0,00101%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TIMOTEO	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	6.493	5,017	32.575	683.013.601	0,00477%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TUMIRITINGA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VGW-VTR	254.245	12,451	3.165.604	683.013.601	0,46348%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TUMIRITINGA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VTR-VST	254.245	12,451	3.165.604	683.013.601	0,46348%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TUMIRITINGA	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	VST-VBC	254.245	6,710	1.705.984	683.013.601	0,24977%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TUMIRITINGA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VGW-VTR	6.493	12,451	80.844	683.013.601	0,01184%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TUMIRITINGA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VTR-VST	6.493	12,451	80.844	683.013.601	0,01184%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	TUMIRITINGA	EFVM	4	ES, MG, RJ	EFVM, FCA, MRS	VST-VBC	6.493	6,710	43.568	683.013.601	0,00638%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	VESPASIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ENG-EVP	254.245	4,032	1.025.116	683.013.601	0,15009%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	VESPASIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EVP-ERE	254.245	3,510	892.400	683.013.601	0,13066%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	VESPASIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	ENG-EVP	257.283	4,032	1.037.365	683.013.601	0,15188%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	VESPASIANO	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EVP-ERE	257.283	3,510	903.063	683.013.601	0,13222%
CALCÁRIO DOLOMÍTICO	PR	ALMIRANTE TAMANDARE	RMS	5	PR	RMS	LTR-LTD	30.072	11,313	340.205	17.589.023	1,93419%
CALCÁRIO DOLOMÍTICO	PR	ALMIRANTE TAMANDARE	RMS	5	PR	RMS	LTD-LCH	30.072	3,110	93.524	17.589.023	0,53172%
CALCÁRIO DOLOMÍTICO	PR	ALMIRANTE TAMANDARE	RMS	5	PR	RMS	LCH-LCO	30.072	0,807	24.268	17.589.023	0,13797%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	5	PR	RMS	LCF-LJM	30.072	13,612	409.340	17.589.023	2,32725%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	5	PR	RMS	LJM-LAP	30.072	2,084	62.670	17.589.023	0,35630%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	5	PR	RMS	LAP-LPR	30.072	10,267	308.749	17.589.023	1,75535%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	5	PR	RMS	LPR-LAI	30.072	3,822	114.935	17.589.023	0,65345%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	5	PR	RMS	LAA-LAW	30.072	1,297	39.003	17.589.023	0,22175%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	5	PR	RMS	LAW-LAR	30.072	5,453	163.983	17.589.023	0,93230%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	5	PR	RMS	LAR-LAB	30.072	7,584	228.066	17.589.023	1,29664%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	5	PR	RMS	LAB-LGI	30.072	9,780	294.104	17.589.023	1,67209%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	5	PR	RMS	LGI-LBN	30.072	1,669	50.190	17.589.023	0,28535%
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	5	PR	RMS	LGI-LBN	30.072	5,707	171.621	17.589.023	0,97573%
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	5	PR	RMS	LBN-LEB	30.072	9,824	295.427	17.589.023	1,67961%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	5	PR	RMS	LEB-LOZ	30.072	9,785	294.255	17.589.023	1,67294%
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	5	PR	RMS	LOZ-LWV	30.072	0,820	24.659	17.589.023	0,14020%
CALCÁRIO DOLOMÍTICO	PR	CALIFORNIA	RMS	5	PR	RMS	LUV-LCF	30.072	7,149	214.985	17.589.023	1,22227%
CALCÁRIO DOLOMÍTICO	PR	CALIFORNIA	RMS	5	PR	RMS	LCF-LJM	30.072	5,068	152.405	17.589.023	0,86648%
CALCÁRIO DOLOMÍTICO	PR	CAMBIRA	RMS	5	PR	RMS	LPR-LAI	30.072	1,922	57.798	17.589.023	0,32860%
CALCÁRIO DOLOMÍTICO	PR	CAMBIRA	RMS	5	PR	RMS	LAI-LJD	30.072	3,517	105.763	17.589.023	0,60130%
CALCÁRIO DOLOMÍTICO	PR	CONTENDA	RMS	5	PR	RMS	LAB-LGI	30.072	0,908	27.305	17.589.023	0,15524%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	5	PR	RMS	LCH-LCO	30.072	12,166	365.856	17.589.023	2,08002%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	5	PR	RMS	LCO-LTE	30.072	4,030	121.190	17.589.023	0,68901%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	5	PR	RMS	LTE-LNH	30.072	2,142	64.414	17.589.023	0,36622%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	5	PR	RMS	LNH-LKP	30.072	1,611	48.446	17.589.023	0,27543%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	5	PR	RMS	LKP-LKM	30.072	2,722	81.856	17.589.023	0,46538%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	5	PR	RMS	LKM-LIC	30.072	6,697	201.392	17.589.023	1,14499%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	5	PR	RMS	LIC-LAA	30.072	9,815	295.157	17.589.023	1,67807%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	5	PR	RMS	LAJ-LAW	30.072	2,623	78.879	17.589.023	0,44846%
CALCÁRIO DOLOMÍTICO	PR	FAXINAL	RMS	5	PR	RMS	LBJ-LOD	30.072	6,599	198.445	17.589.023	1,12823%
CALCÁRIO DOLOMÍTICO	PR	FAXINAL	RMS	5	PR	RMS	LOD-LMF	30.072	16,617	499.706	17.589.023	2,84101%
CALCÁRIO DOLOMÍTICO	PR	IMBAU	RMS	5	PR	RMS	LFJ-LLH	30.072	0,493	14.825	17.589.023	0,08429%
CALCÁRIO DOLOMÍTICO	PR	IMBAU	RMS	5	PR	RMS	LLH-LMJ	30.072	2,569	77.255	17.589.023	0,43922%
CALCÁRIO DOLOMÍTICO	PR	IPIRANGA	RMS	5	PR	RMS	LLT-LIH	30.072	12,605	379.058	17.589.023	2,15508%
CALCÁRIO DOLOMÍTICO	PR	IPIRANGA	RMS	5	PR	RMS	LIH-LLU	30.072	25,117	755.318	17.589.023	4,29426%
CALCÁRIO DOLOMÍTICO	PR	IPIRANGA	RMS	5	PR	RMS	LLU-LBX	30.072	14,270	429.127	17.589.023	2,43975%
CALCÁRIO DOLOMÍTICO	PR	IVAI	RMS	5	PR	RMS	LLU-LBX	30.072	1,899	57.107	17.589.023	0,32467%
CALCÁRIO DOLOMÍTICO	PR	JANDAIA DO SUL	RMS	5	PR	RMS	LAI-LJD	30.072	1,962	59.001	17.589.023	0,33544%
CALCÁRIO DOLOMÍTICO	PR	JANDAIA DO SUL	RMS	5	PR	RMS	LJD-LMI	30.072	4,401	132.347	17.589.023	0,75244%
CALCÁRIO DOLOMÍTICO	PR	LAPA	RMS	5	PR	RMS	LBN-LEB	30.072	1,641	49.348	17.589.023	0,28056%
CALCÁRIO DOLOMÍTICO	PR	LAPA	RMS	5	PR	RMS	LEB-LOZ	30.072	0,514	15.457	17.589.023	0,08788%
CALCÁRIO DOLOMÍTICO	PR	MANDAGUARI	RMS	5	PR	RMS	LJD-LMI	30.072	7,065	212.459	17.589.023	1,20790%
CALCÁRIO DOLOMÍTICO	PR	MANDAGUARI	RMS	5	PR	RMS	LMI-LMA	30.072	4,989	150.029	17.589.023	0,85297%
CALCÁRIO DOLOMÍTICO	PR	MARIALVA	RMS	5	PR	RMS	LMI-LMA	30.072	10,028	301.562	17.589.023	1,71449%
CALCÁRIO DOLOMÍTICO	PR	MARIALVA	RMS	5	PR	RMS	LMA-LSD	30.072	7,050	212.008	17.589.023	1,20534%
CALCÁRIO DOLOMÍTICO	PR	MARILANDIA DO SUL	RMS	5	PR	RMS	LMF-LGE	30.072	4,754	142.962	17.589.023	0,81279%
CALCÁRIO DOLOMÍTICO	PR	MARILANDIA DO SUL	RMS	5	PR	RMS	LGE-LUV	30.072	15,203	457.185	17.589.023	2,59926%
CALCÁRIO DOLOMÍTICO	PR	MARILANDIA DO SUL	RMS	5	PR	RMS	LUV-LCF	30.072	7,556	227.224	17.589.023	1,29185%
CALCÁRIO DOLOMÍTICO	PR	MARINGA	RMS	5	PR	RMS	LSD-LMN	30.072	1,094	32.899	17.589.023	0,18704%
CALCÁRIO DOLOMÍTICO	PR	MARINGA	RMS	5	PR	RMS	LMN-LRX	30.072	10,095	303.577	17.589.023	1,72594%
CALCÁRIO DOLOMÍTICO	PR	MARINGA	RMS	5	PR	RMS	LRX-LMG	30.072	1,063	31.967	17.589.023	0,18174%
CALCÁRIO DOLOMÍTICO	PR	MAUA DA SERRA	RMS	5	PR	RMS	LOD-LMF	30.072	2,292	68.925	17.589.023	0,39186%
CALCÁRIO DOLOMÍTICO	PR	MAUA DA SERRA	RMS	5	PR	RMS	LMF-LGE	30.072	5,609	168.674	17.589.023	0,95897%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	5	PR	RMS	LLH-LMJ	30.072	7,099	213.481	17.589.023	1,21372%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	5	PR	RMS	LMJ-LOR	30.072	17,588	528.906	17.589.023	3,00703%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	5	PR	RMS	LOR-LBJ	30.072	18,085	543.852	17.589.023	3,09200%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	5	PR	RMS	LBJ-LOD	30.072	14,165	425.970	17.589.023	2,42179%
CALCÁRIO DOLOMÍTICO	PR	PALMEIRA	RMS	5	PR	RMS	LWV-LMO	30.072	1,853	55.723	17.589.023	0,31681%
CALCÁRIO DOLOMÍTICO	PR	PALMEIRA	RMS	5	PR	RMS	LMO-LLP	30.072	11,248	338.250	17.589.023	1,92307%
CALCÁRIO DOLOMÍTICO	PR	PALMEIRA	RMS	5	PR	RMS	LLP-LLY	30.072	7,236	217.601	17.589.023	1,23714%
CALCÁRIO DOLOMÍTICO	PR	PINHAIS	RMS	5	PR	RMS	LTE-LNH	30.072	0,524	15.758	17.589.023	0,08959%
CALCÁRIO DOLOMÍTICO	PR	PINHAIS	RMS	5	PR	RMS	LNH-LKP	30.072	0,488	14.675	17.589.023	0,08343%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	5	PR	RMS	LLP-LLY	30.072	6,203	186.537	17.589.023	1,06053%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	5	PR	RMS	LLY-LDV	30.072	10,169	305.802	17.589.023	1,73860%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	5	PR	RMS	LDV-LVV	30.072	5,022	151.022	17.589.023	0,85861%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	5	PR	RMS	LVV-LUS	30.072	9,965	299.667	17.589.023	1,70372%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	5	PR	RMS	LUS-LPJ	30.072	21,727	653.374	17.589.023	3,71467%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	5	PR	RMS	LPJ-LLT	30.072	32,036	963.387	17.589.023	5,47720%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	5	PR	RMS	LLT-LIH	30.072	0,261	7.849	17.589.023	0,04462%
CALCÁRIO DOLOMÍTICO	PR	PORTO AMAZONAS	RMS	5	PR	RMS	LOZ-LWV	30.072	4,540	136.527	17.589.023	0,77621%
CALCÁRIO DOLOMÍTICO	PR	PORTO AMAZONAS	RMS	5	PR	RMS	LWV-LMO	30.072	8,554	257.236	17.589.023	1,46248%
CALCÁRIO DOLOMÍTICO	PR	PORTO AMAZONAS	RMS	5	PR	RMS	LMO-LLP	30.072	1,865	56.084	17.589.023	0,31886%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	5	PR	RMS	LBX-LBO	30.072	6,175	185.695	17.589.023	1,05574%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	5	PR	RMS	LBO-LRF	30.072	17,304	520.366	17.589.023	2,95847%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	5	PR	RMS	LRF-LFI	30.072	10,898	327.725	17.589.023	1,86323%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	5	PR	RMS	LFI-LLH	30.072	18,832	566.316	17.589.023	3,21971%
CALCÁRIO DOLOMÍTICO	PR	SARANDI	RMS	5	PR	RMS	LMA-LSD	30.072	3,258	97.975	17.589.023	0,55702%
CALCÁRIO DOLOMÍTICO	PR	SARANDI	RMS	5	PR	RMS	LSD-LMN	30.072	1,649	49.589	17.589.023	0,28193%
CALCÁRIO DOLOMÍTICO	PR	TIBAGI	RMS	5	PR	RMS	LLT-LIH	30.072	17,699	532.244	17.589.023	3,02600%
CALCÁRIO DOLOMÍTICO	PR	TIBAGI	RMS	5	PR	RMS	LLU-LBX	30.072	2,620	78.789	17.589.023	0,44794%
CALCÁRIO DOLOMÍTICO	PR	TIBAGI	RMS	5	PR	RMS	LBX-LBO	30.072	5,045	151.713	17.589.023	0,86255%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARRA MANSÁ	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FPT-FEU	124.851	9,252	1.155.121	683.013.601	0,16912%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARRA MANSÁ	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FEU-FSE	124.851	4,789	597.911	683.013.601	0,08754%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARRA MANSÁ	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FSE-FBM	124.851	2,390	298.394	683.013.601	0,04369%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARRA MANSÁ	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FBM-FBB	124.851	3,927	490.290	683.013.601	0,07178%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARRA MANSÁ	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FBB-FIV	124.851	0,434	54.185	683.013.601	0,00793%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARRA MANSÁ	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EGR-EAB	902.973	5,042	4.552.790	683.013.601	0,66657%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	BARRA MANSÁ	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EAB-EBM	902.973	7,859	7.096.465	683.013.601	1,03899%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	QUATIS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FOA-FJQ	124.851	11,450	1.429.544	683.013.601	0,20930%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	QUATIS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FJQ-FPT	124.851	5,087	635.117	683.013.601	0,09299%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	QUATIS	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FPT-FEU	124.851	7,753	967.970	683.013.601	0,14172%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	QUATIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EPV-EFL	902.973	1,803	1.628.060	683.013.601	0,23836%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	QUATIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EFL-EQT	902.973	16,048	14.490.911	683.013.601	2,12161%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	QUATIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EQT-EGR	902.973	10,564	9.539.007	683.013.601	1,39661%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	QUATIS	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EGR-EAB	902.973	0,059	53.275	683.013.601	0,00780%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESENDE	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FRP-FFU	124.851	3,638	454.208	683.013.601	0,06650%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESENDE	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FFU-FOA	124.851	9,463	1.181.465	683.013.601	0,17298%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESENDE	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FOA-FJQ	124.851	2,640	329.607	683.013.601	0,04826%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESENDE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EPV-EFL	902.973	0,617	557.134	683.013.601	0,08157%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	RESENDE	FCA	4	ES, MG, RJ	EFVM, FCA, MRS	EFL-EQT	902.973	1,055	952.637	683.013.601	0,13948%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	VOLTA REDONDA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FBB-FIV	124.851	1,396	174.292	683.013.601	0,02552%
CALCÁRIO DOLOMÍTICO	ES, MG, RJ	VOLTA REDONDA	MRS	4	ES, MG, RJ	EFVM, FCA, MRS	FIV-FVR	124.851	3,187	397.900	683.013.601	0,05826%
DOLOMITO	MG, RJ	ANDRELANDIA	FCA	6	MG, RJ	FCA	ESV-ELN	397.931	15,534	6.181.460	176.941.846	3,49350%
DOLOMITO	MG, RJ	ANDRELANDIA	FCA	6	MG, RJ	FCA	ELN-EAT	397.931	22,177	8.824.916	176.941.846	4,98747%
DOLOMITO	MG, RJ	ARANTINA	FCA	6	MG, RJ	FCA	ELN-EAT	397.931	3,066	1.220.056	176.941.846	0,68952%
DOLOMITO	MG, RJ	ARANTINA	FCA	6	MG, RJ	FCA	EAT-EKW	397.931	10,496	4.176.684	176.941.846	2,36048%
DOLOMITO	MG, RJ	ARCOS	FCA	6	MG, RJ	FCA	EAO-E68	397.931	11,165	4.442.736	176.941.846	2,51085%
DOLOMITO	MG, RJ	BOM JARDIM DE MINAS	FCA	6	MG, RJ	FCA	EAT-EKW	397.931	4,206	1.673.698	176.941.846	0,94590%
DOLOMITO	MG, RJ	CAMPO BELO	FCA	6	MG, RJ	FCA	ECX-ECB	397.931	7,832	3.116.596	176.941.846	1,76137%
DOLOMITO	MG, RJ	CAMPO BELO	FCA	6	MG, RJ	FCA	ECB-ESM	397.931	3,099	1.233.188	176.941.846	0,69695%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
DOLOMITO	MG, RJ	CAMPO BELO	FCA	6	MG, RJ	FCA	ESM-EKV	397.931	13,787	5.486.275	176.941.846	3,10061%
DOLOMITO	MG, RJ	CANA VERDE	FCA	6	MG, RJ	FCA	ESM-EKV	397.931	5,027	2.000.399	176.941.846	1,13054%
DOLOMITO	MG, RJ	CANA VERDE	FCA	6	MG, RJ	FCA	EKV-EPE	397.931	6,422	2.555.513	176.941.846	1,44427%
DOLOMITO	MG, RJ	CANDEIAS	FCA	6	MG, RJ	FCA	E69-EBG	397.931	5,454	2.170.316	176.941.846	1,22657%
DOLOMITO	MG, RJ	CANDEIAS	FCA	6	MG, RJ	FCA	EBG-ECX	397.931	17,478	6.955.038	176.941.846	3,93069%
DOLOMITO	MG, RJ	CANDEIAS	FCA	6	MG, RJ	FCA	ECX-ECB	397.931	18,428	7.333.072	176.941.846	4,14434%
DOLOMITO	MG, RJ	CARRANCAS	FCA	6	MG, RJ	FCA	EPF-EKA	397.931	0,153	60.883	176.941.846	0,03441%
DOLOMITO	MG, RJ	CARRANCAS	FCA	6	MG, RJ	FCA	EKA-ETU	397.931	13,679	5.443.298	176.941.846	3,07632%
DOLOMITO	MG, RJ	CARRANCAS	FCA	6	MG, RJ	FCA	ETU-EAN	397.931	0,475	189.017	176.941.846	0,10682%
DOLOMITO	MG, RJ	CRUZILIA	FCA	6	MG, RJ	FCA	ETU-EAN	397.931	5,479	2.180.264	176.941.846	1,23219%
DOLOMITO	MG, RJ	FORMIGA	FCA	6	MG, RJ	FCA	E68-ETI	397.931	17,740	7.059.296	176.941.846	3,98961%
DOLOMITO	MG, RJ	FORMIGA	FCA	6	MG, RJ	FCA	ETI-E69	397.931	7,345	2.922.803	176.941.846	1,65184%
DOLOMITO	MG, RJ	FORMIGA	FCA	6	MG, RJ	FCA	E69-EBG	397.931	7,055	2.807.403	176.941.846	1,58662%
DOLOMITO	MG, RJ	INGAI	FCA	6	MG, RJ	FCA	EII-EPF	397.931	14,033	5.584.166	176.941.846	3,15593%
DOLOMITO	MG, RJ	INGAI	FCA	6	MG, RJ	FCA	EPF-EKA	397.931	6,844	2.723.440	176.941.846	1,53917%
DOLOMITO	MG, RJ	ITUMIRIM	FCA	6	MG, RJ	FCA	EIR-EII	397.931	2,310	919.221	176.941.846	0,51950%
DOLOMITO	MG, RJ	ITUMIRIM	FCA	6	MG, RJ	FCA	EII-EPF	397.931	7,697	3.062.875	176.941.846	1,73101%
DOLOMITO	MG, RJ	LAVRAS	FCA	6	MG, RJ	FCA	ERV-ELS	397.931	8,907	3.544.371	176.941.846	2,00313%
DOLOMITO	MG, RJ	LAVRAS	FCA	6	MG, RJ	FCA	ELS-EEB	397.931	5,678	2.259.452	176.941.846	1,27695%
DOLOMITO	MG, RJ	LAVRAS	FCA	6	MG, RJ	FCA	EEB-EIR	397.931	14,584	5.803.426	176.941.846	3,27985%
DOLOMITO	MG, RJ	LAVRAS	FCA	6	MG, RJ	FCA	EIR-EII	397.931	8,326	3.313.174	176.941.846	1,87246%
DOLOMITO	MG, RJ	LIBERDADE	FCA	6	MG, RJ	FCA	EAT-EKW	397.931	1,445	575.010	176.941.846	0,32497%
DOLOMITO	MG, RJ	LIBERDADE	FCA	6	MG, RJ	FCA	EKW-EEP	397.931	20,163	8.023.483	176.941.846	4,53453%
DOLOMITO	MG, RJ	LIBERDADE	FCA	6	MG, RJ	FCA	EEP-EEU	397.931	0,227	90.330	176.941.846	0,05105%
DOLOMITO	MG, RJ	LUMINARIAS	FCA	6	MG, RJ	FCA	EPF-EKA	397.931	10,955	4.359.334	176.941.846	2,46371%
DOLOMITO	MG, RJ	MINDURI	FCA	6	MG, RJ	FCA	ETU-EAN	397.931	13,225	5.262.637	176.941.846	2,97422%
DOLOMITO	MG, RJ	MINDURI	FCA	6	MG, RJ	FCA	EAN-ESV	397.931	4,355	1.732.990	176.941.846	0,97941%
DOLOMITO	MG, RJ	PASSA-VINTE	FCA	6	MG, RJ	FCA	EEP-EEU	397.931	11,341	4.512.935	176.941.846	2,55052%
DOLOMITO	MG, RJ	PASSA-VINTE	FCA	6	MG, RJ	FCA	EEU-EPV	397.931	10,168	4.046.162	176.941.846	2,28672%
DOLOMITO	MG, RJ	PASSA-VINTE	FCA	6	MG, RJ	FCA	EPV-EFL	397.931	8,390	3.338.641	176.941.846	1,88686%
DOLOMITO	MG, RJ	PERDOES	FCA	6	MG, RJ	FCA	EKV-EPE	397.931	9,492	3.777.161	176.941.846	2,13469%
DOLOMITO	MG, RJ	PERDOES	FCA	6	MG, RJ	FCA	EPE-ERV	397.931	8,324	3.312.378	176.941.846	1,87201%
DOLOMITO	MG, RJ	RIBEIRAO VERMELHO	FCA	6	MG, RJ	FCA	EPE-ERV	397.931	11,501	4.576.604	176.941.846	2,58650%
DOLOMITO	MG, RJ	RIBEIRAO VERMELHO	FCA	6	MG, RJ	FCA	ERV-ELS	397.931	0,316	125.746	176.941.846	0,07107%
DOLOMITO	MG, RJ	SAO VICENTE DE MINAS	FCA	6	MG, RJ	FCA	EAN-ESV	397.931	21,814	8.680.467	176.941.846	4,90583%
DOLOMITO	MG, RJ	SAO VICENTE DE MINAS	FCA	6	MG, RJ	FCA	ESV-ELN	397.931	5,416	2.155.194	176.941.846	1,21802%
DOLOMITO	MG, RJ	BARRA MANSÁ	FCA	6	MG, RJ	FCA	EGR-EAB	397.931	5,042	2.006.368	176.941.846	1,13391%
DOLOMITO	MG, RJ	BARRA MANSÁ	FCA	6	MG, RJ	FCA	EAB-EBM	397.931	7,859	3.127.340	176.941.846	1,76744%
DOLOMITO	MG, RJ	QUATIS	FCA	6	MG, RJ	FCA	EPV-EFL	397.931	1,803	717.470	176.941.846	0,40548%
DOLOMITO	MG, RJ	QUATIS	FCA	6	MG, RJ	FCA	EFL-EQT	397.931	16,048	6.385.997	176.941.846	3,60909%
DOLOMITO	MG, RJ	QUATIS	FCA	6	MG, RJ	FCA	EQT-EGR	397.931	10,564	4.203.743	176.941.846	2,37578%
DOLOMITO	MG, RJ	QUATIS	FCA	6	MG, RJ	FCA	EGR-EAB	397.931	0,059	23.478	176.941.846	0,01327%
DOLOMITO	MG, RJ	RESENDE	FCA	6	MG, RJ	FCA	EPV-EFL	397.931	0,617	245.523	176.941.846	0,13876%
DOLOMITO	MG, RJ	RESENDE	FCA	6	MG, RJ	FCA	EFL-EQT	397.931	1,055	419.817	176.941.846	0,23726%
FOSFATO	GO, MG, SP	CATALAO	FCA	7	GO, MG, SP	FCA	ELC-EGN	703.036	11,461	8.057.496	214.224.556	3,76124%
FOSFATO	GO, MG, SP	CUMARI	FCA	7	GO, MG, SP	FCA	EGN-EYG	703.036	10,232	7.193.464	214.224.556	3,35791%
FOSFATO	GO, MG, SP	CUMARI	FCA	7	GO, MG, SP	FCA	EYG-EYH	703.036	14,665	10.310.023	214.224.556	4,81272%
FOSFATO	GO, MG, SP	GOIANDIRA	FCA	7	GO, MG, SP	FCA	ELC-EGN	703.036	12,762	8.972.145	214.224.556	4,18820%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
FOSFATO	GO, MG, SP	GOIANDIRA	FCA	7	GO, MG, SP	FCA	EGN-EYG	703.036	12,061	8.479.317	214.224.556	3,95814%
FOSFATO	GO, MG, SP	ARAGUARI	FCA	7	GO, MG, SP	FCA	EYG-EYH	703.036	13,257	9.320.148	214.224.556	4,35064%
FOSFATO	GO, MG, SP	ARAGUARI	FCA	7	GO, MG, SP	FCA	EYH-EAU	703.036	20,201	14.202.030	214.224.556	6,62951%
FOSFATO	GO, MG, SP	ARAGUARI	FCA	7	GO, MG, SP	FCA	EAU-ZHF	703.036	22,058	15.507.568	214.224.556	7,23893%
FOSFATO	GO, MG, SP	ARAGUARI	FCA	7	GO, MG, SP	FCA	ZHF-ZUL	703.036	2,727	1.917.179	214.224.556	0,89494%
FOSFATO	GO, MG, SP	UBERABA	FCA	7	GO, MG, SP	FCA	ZHU-ZYE	703.036	1,577	1.108.688	214.224.556	0,51754%
FOSFATO	GO, MG, SP	UBERABA	FCA	7	GO, MG, SP	FCA	ZYE-ZZB	703.036	10,785	7.582.243	214.224.556	3,53939%
FOSFATO	GO, MG, SP	UBERABA	FCA	7	GO, MG, SP	FCA	ZZB-ZXJ	703.036	34,973	24.587.278	214.224.556	11,47734%
FOSFATO	GO, MG, SP	UBERABA	FCA	7	GO, MG, SP	FCA	ZXJ-ZMN	703.036	19,268	13.546.098	214.224.556	6,32332%
FOSFATO	GO, MG, SP	UBERABA	FCA	7	GO, MG, SP	FCA	ZMN-ZQQ	703.036	36,317	25.532.095	214.224.556	11,91838%
FOSFATO	GO, MG, SP	UBERABA	FCA	7	GO, MG, SP	FCA	ZQQ-ZVF	703.036	14,869	10.453.442	214.224.556	4,87967%
FOSFATO	GO, MG, SP	UBERABA	FCA	7	GO, MG, SP	FCA	ZWA-ZVF	3.997	8,259	33.011	214.224.556	0,01541%
FOSFATO	GO, MG, SP	UBERLANDIA	FCA	7	GO, MG, SP	FCA	ZHF-ZUL	703.036	21,916	15.407.737	214.224.556	7,19233%
FOSFATO	GO, MG, SP	UBERLANDIA	FCA	7	GO, MG, SP	FCA	ZUL-ZHU	703.036	21,345	15.006.303	214.224.556	7,00494%
FOSFATO	GO, MG, SP	UBERLANDIA	FCA	7	GO, MG, SP	FCA	ZHU-ZYE	703.036	20,355	14.310.298	214.224.556	6,68005%
FOSFATO	GO, MG, SP	AGUAI	FCA	7	GO, MG, SP	FCA	ZMQ-ZAI	3.997	10,860	43.407	214.224.556	0,02026%
FOSFATO	GO, MG, SP	AGUAI	FCA	7	GO, MG, SP	FCA	ZAI-ZON	3.997	10,874	43.463	214.224.556	0,02029%
FOSFATO	GO, MG, SP	ALUMINIO	FCA	7	GO, MG, SP	FCA	ZPS-ZCX	3.997	0,471	1.883	214.224.556	0,00088%
FOSFATO	GO, MG, SP	ARAMINA	FCA	7	GO, MG, SP	FCA	ZYW-ZWA	3.997	13,818	55.231	214.224.556	0,02578%
FOSFATO	GO, MG, SP	ARAMINA	FCA	7	GO, MG, SP	FCA	ZWA-ZVF	3.997	0,090	360	214.224.556	0,00017%
FOSFATO	GO, MG, SP	CAMPINAS	FCA	7	GO, MG, SP	FCA	ZIC-ZVK	3.997	2,286	9.137	214.224.556	0,00427%
FOSFATO	GO, MG, SP	CAMPINAS	FCA	7	GO, MG, SP	FCA	ZVK-ZDS	3.997	4,882	19.513	214.224.556	0,00911%
FOSFATO	GO, MG, SP	CAMPINAS	FCA	7	GO, MG, SP	FCA	ZDS-ZQB	3.997	8,359	33.411	214.224.556	0,01560%
FOSFATO	GO, MG, SP	CAMPINAS	FCA	7	GO, MG, SP	FCA	ZQB-ZBL	3.997	3,629	14.505	214.224.556	0,00677%
FOSFATO	GO, MG, SP	CAMPINAS	FCA	7	GO, MG, SP	FCA	ZBL-ZOP	3.997	7,834	31.312	214.224.556	0,01462%
FOSFATO	GO, MG, SP	CASA BRANCA	FCA	7	GO, MG, SP	FCA	ZAI-ZON	3.997	4,949	19.781	214.224.556	0,00923%
FOSFATO	GO, MG, SP	CASA BRANCA	FCA	7	GO, MG, SP	FCA	ZON-ZLB	3.997	9,508	38.003	214.224.556	0,01774%
FOSFATO	GO, MG, SP	CASA BRANCA	FCA	7	GO, MG, SP	FCA	ZLB-ZCB	3.997	18,145	72.526	214.224.556	0,03385%
FOSFATO	GO, MG, SP	CASA BRANCA	FCA	7	GO, MG, SP	FCA	ZCB-ZKB	3.997	12,591	50.326	214.224.556	0,02349%
FOSFATO	GO, MG, SP	CASA BRANCA	FCA	7	GO, MG, SP	FCA	ZKB-ZTD	3.997	8,055	32.196	214.224.556	0,01503%
FOSFATO	GO, MG, SP	COTIA	FCA	7	GO, MG, SP	FCA	ZWI-ZLU	3.997	3,853	15.400	214.224.556	0,00719%
FOSFATO	GO, MG, SP	COTIA	FCA	7	GO, MG, SP	FCA	ZLU-ZKW	3.997	10,432	41.697	214.224.556	0,01946%
FOSFATO	GO, MG, SP	COTIA	FCA	7	GO, MG, SP	FCA	ZKW-ZWW	3.997	7,384	29.514	214.224.556	0,01378%
FOSFATO	GO, MG, SP	CRAVINHOS	FCA	7	GO, MG, SP	FCA	ZCE-ZEK	3.997	7,954	31.792	214.224.556	0,01484%
FOSFATO	GO, MG, SP	CRAVINHOS	FCA	7	GO, MG, SP	FCA	ZEK-ZEG	3.997	5,669	22.659	214.224.556	0,01058%
FOSFATO	GO, MG, SP	CUBATAO	FCA	7	GO, MG, SP	FCA	IUF-IPG	3.997	0,969	3.873	214.224.556	0,00181%
FOSFATO	GO, MG, SP	CUBATAO	FCA	7	GO, MG, SP	FCA	IPG-ICU	3.997	2,073	8.286	214.224.556	0,00387%
FOSFATO	GO, MG, SP	CUBATAO	FCA	7	GO, MG, SP	FCA	ICU-IAA	3.997	0,769	3.074	214.224.556	0,00143%
FOSFATO	GO, MG, SP	CUBATAO	FCA	7	GO, MG, SP	FCA	IAA-ZPG	3.997	0,399	1.595	214.224.556	0,00074%
FOSFATO	GO, MG, SP	CUBATAO	FCA	7	GO, MG, SP	FCA	ZPG-ZZV	3.997	7,516	30.041	214.224.556	0,01402%
FOSFATO	GO, MG, SP	CUBATAO	FCA	7	GO, MG, SP	FCA	ZZV-ZGM	3.997	3,615	14.449	214.224.556	0,00674%
FOSFATO	GO, MG, SP	EMBU-GUACU	FCA	7	GO, MG, SP	FCA	ZEJ-ZEM	3.997	9,001	35.977	214.224.556	0,01679%
FOSFATO	GO, MG, SP	EMBU-GUACU	FCA	7	GO, MG, SP	FCA	ZEM-ZYQ	3.997	6,422	25.669	214.224.556	0,01198%
FOSFATO	GO, MG, SP	ESTIVA GERBI	FCA	7	GO, MG, SP	FCA	ZMG-ZEA	3.997	2,669	10.668	214.224.556	0,00498%
FOSFATO	GO, MG, SP	ESTIVA GERBI	FCA	7	GO, MG, SP	FCA	ZEA-ZMQ	3.997	9,783	39.103	214.224.556	0,01825%
FOSFATO	GO, MG, SP	GUARA	FCA	7	GO, MG, SP	FCA	ZHB-ZGU	3.997	8,016	32.040	214.224.556	0,01496%
FOSFATO	GO, MG, SP	GUARACAI	FCA	7	GO, MG, SP	FCA	ZGU-ZYW	3.997	6,957	27.807	214.224.556	0,01298%
FOSFATO	GO, MG, SP	IGARAPAVA	FCA	7	GO, MG, SP	FCA	ZWA-ZVF	3.997	1,435	5.736	214.224.556	0,00268%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
FOSFATO	GO, MG, SP	INDAIATUBA	FCA	7	GO, MG, SP	FCA	ZST-ZXI	3.997	5,633	22.515	214.224.556	0,01051%
FOSFATO	GO, MG, SP	INDAIATUBA	FCA	7	GO, MG, SP	FCA	ZXI-ZIC	3.997	4,139	16.544	214.224.556	0,00772%
FOSFATO	GO, MG, SP	INDAIATUBA	FCA	7	GO, MG, SP	FCA	ZIC-ZVK	3.997	9,632	38.499	214.224.556	0,01797%
FOSFATO	GO, MG, SP	ITAPECERICA DA SERRA	FCA	7	GO, MG, SP	FCA	ZEM-ZYQ	3.997	2,047	8.182	214.224.556	0,00382%
FOSFATO	GO, MG, SP	ITAPECERICA DA SERRA	FCA	7	GO, MG, SP	FCA	ZYQ-ZWI	3.997	5,517	22.051	214.224.556	0,01029%
FOSFATO	GO, MG, SP	ITAPECERICA DA SERRA	FCA	7	GO, MG, SP	FCA	ZWI-ZLU	3.997	4,504	18.002	214.224.556	0,00840%
FOSFATO	GO, MG, SP	ITU	FCA	7	GO, MG, SP	FCA	ZER-ZDI	3.997	1,071	4.281	214.224.556	0,00200%
FOSFATO	GO, MG, SP	ITU	FCA	7	GO, MG, SP	FCA	ZDI-ZDY	3.997	6,544	26.156	214.224.556	0,01221%
FOSFATO	GO, MG, SP	ITU	FCA	7	GO, MG, SP	FCA	ZDY-ZXP	3.997	4,218	16.859	214.224.556	0,00787%
FOSFATO	GO, MG, SP	ITU	FCA	7	GO, MG, SP	FCA	ZXP-ZFY	3.997	7,728	30.889	214.224.556	0,01442%
FOSFATO	GO, MG, SP	ITU	FCA	7	GO, MG, SP	FCA	ZFY-ZYU	3.997	7,831	31.301	214.224.556	0,01461%
FOSFATO	GO, MG, SP	ITU	FCA	7	GO, MG, SP	FCA	ZYU-ZST	3.997	2,214	8.849	214.224.556	0,00413%
FOSFATO	GO, MG, SP	ITUVERAVA	FCA	7	GO, MG, SP	FCA	ZGU-ZYW	3.997	4,712	18.834	214.224.556	0,00879%
FOSFATO	GO, MG, SP	ITUVERAVA	FCA	7	GO, MG, SP	FCA	ZYW-ZWA	3.997	20,903	83.549	214.224.556	0,03900%
FOSFATO	GO, MG, SP	JAGUARIUNA	FCA	7	GO, MG, SP	FCA	ZOP-ZJJ	3.997	11,570	46.245	214.224.556	0,02159%
FOSFATO	GO, MG, SP	JAGUARIUNA	FCA	7	GO, MG, SP	FCA	ZJJ-ZGE	3.997	4,519	18.062	214.224.556	0,00843%
FOSFATO	GO, MG, SP	JAGUARIUNA	FCA	7	GO, MG, SP	FCA	ZGE-ZXD	3.997	3,179	12.706	214.224.556	0,00593%
FOSFATO	GO, MG, SP	JARDINOPOLIS	FCA	7	GO, MG, SP	FCA	ZRP-ZJN	3.997	11,802	47.173	214.224.556	0,02202%
FOSFATO	GO, MG, SP	JARDINOPOLIS	FCA	7	GO, MG, SP	FCA	ZJN-ZKR	3.997	13,302	53.168	214.224.556	0,02482%
FOSFATO	GO, MG, SP	MAIRINQUE	FCA	7	GO, MG, SP	FCA	ZKE-ZGA	3.997	1,198	4.788	214.224.556	0,00224%
FOSFATO	GO, MG, SP	MAIRINQUE	FCA	7	GO, MG, SP	FCA	ZGA-ZPS	3.997	9,445	37.752	214.224.556	0,01762%
FOSFATO	GO, MG, SP	MAIRINQUE	FCA	7	GO, MG, SP	FCA	ZPS-ZCX	3.997	2,788	11.144	214.224.556	0,00520%
FOSFATO	GO, MG, SP	MAIRINQUE	FCA	7	GO, MG, SP	FCA	ZCX-ZER	3.997	6,214	24.837	214.224.556	0,01159%
FOSFATO	GO, MG, SP	MAIRINQUE	FCA	7	GO, MG, SP	FCA	ZER-ZDI	3.997	7,134	28.515	214.224.556	0,01331%
FOSFATO	GO, MG, SP	MOGI GUACU	FCA	7	GO, MG, SP	FCA	ZMM-ZMG	3.997	4,145	16.568	214.224.556	0,00773%
FOSFATO	GO, MG, SP	MOGI GUACU	FCA	7	GO, MG, SP	FCA	ZMG-ZEA	3.997	7,615	30.437	214.224.556	0,01421%
FOSFATO	GO, MG, SP	MOGI GUACU	FCA	7	GO, MG, SP	FCA	ZEA-ZMQ	3.997	4,957	19.813	214.224.556	0,00925%
FOSFATO	GO, MG, SP	MOGI GUACU	FCA	7	GO, MG, SP	FCA	ZMQ-ZAI	3.997	0,542	2.166	214.224.556	0,00101%
FOSFATO	GO, MG, SP	MOJI MIRIM	FCA	7	GO, MG, SP	FCA	ZXD-ZKF	3.997	5,150	20.585	214.224.556	0,00961%
FOSFATO	GO, MG, SP	MOJI MIRIM	FCA	7	GO, MG, SP	FCA	ZKF-ZMM	3.997	10,594	42.344	214.224.556	0,01977%
FOSFATO	GO, MG, SP	MOJI MIRIM	FCA	7	GO, MG, SP	FCA	ZMM-ZMG	3.997	4,510	18.026	214.224.556	0,00841%
FOSFATO	GO, MG, SP	ORLANDIA	FCA	7	GO, MG, SP	FCA	ZKR-ZOL	3.997	10,621	42.452	214.224.556	0,01982%
FOSFATO	GO, MG, SP	ORLANDIA	FCA	7	GO, MG, SP	FCA	ZOL-ZHB	3.997	10,007	39.998	214.224.556	0,01867%
FOSFATO	GO, MG, SP	PAULINIA	FCA	7	GO, MG, SP	FCA	ZBL-ZOP	3.997	1,943	7.766	214.224.556	0,00363%
FOSFATO	GO, MG, SP	PAULINIA	FCA	7	GO, MG, SP	FCA	ZOP-ZJJ	3.997	7,783	31.109	214.224.556	0,01452%
FOSFATO	GO, MG, SP	PRAIA GRANDE	FCA	7	GO, MG, SP	FCA	ZGM-ZPT	3.997	1,768	7.067	214.224.556	0,00330%
FOSFATO	GO, MG, SP	PRAIA GRANDE	FCA	7	GO, MG, SP	FCA	ZPT-ZWU	3.997	2,758	11.024	214.224.556	0,00515%
FOSFATO	GO, MG, SP	PRAIA GRANDE	FCA	7	GO, MG, SP	FCA	ZWU-ZXW	3.997	0,565	2.258	214.224.556	0,00105%
FOSFATO	GO, MG, SP	RIBEIRAO PRETO	FCA	7	GO, MG, SP	FCA	ZEK-ZEG	3.997	9,354	37.388	214.224.556	0,01745%
FOSFATO	GO, MG, SP	RIBEIRAO PRETO	FCA	7	GO, MG, SP	FCA	ZEG-ZRP	3.997	8,721	34.858	214.224.556	0,01627%
FOSFATO	GO, MG, SP	RIBEIRAO PRETO	FCA	7	GO, MG, SP	FCA	ZRP-ZJN	3.997	8,139	32.532	214.224.556	0,01519%
FOSFATO	GO, MG, SP	SALES OLIVEIRA	FCA	7	GO, MG, SP	FCA	ZJN-ZKR	3.997	1,694	6.771	214.224.556	0,00316%
FOSFATO	GO, MG, SP	SALES OLIVEIRA	FCA	7	GO, MG, SP	FCA	ZKR-ZOL	3.997	11,257	44.994	214.224.556	0,02100%
FOSFATO	GO, MG, SP	SALTO	FCA	7	GO, MG, SP	FCA	ZYU-ZST	3.997	6,821	27.264	214.224.556	0,01273%
FOSFATO	GO, MG, SP	SALTO	FCA	7	GO, MG, SP	FCA	ZST-ZXI	3.997	1,322	5.284	214.224.556	0,00247%
FOSFATO	GO, MG, SP	SANTA RITA DO PASSA QUATRO	FCA	7	GO, MG, SP	FCA	ZTD-ZHM	3.997	4,077	16.296	214.224.556	0,00761%
FOSFATO	GO, MG, SP	SANTA ROSA DE VITERBO	FCA	7	GO, MG, SP	FCA	ZTD-ZHM	3.997	5,775	23.083	214.224.556	0,01077%
FOSFATO	GO, MG, SP	SANTA ROSA DE VITERBO	FCA	7	GO, MG, SP	FCA	ZHM-ZHI	3.997	1,678	6.707	214.224.556	0,00313%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
FOSFATO	GO, MG, SP	SANTO ANTONIO DE POSSE	FCA	7	GO, MG, SP	FCA	ZGE-ZXD	3.997	5,791	23.147	214.224.556	0,01080%
FOSFATO	GO, MG, SP	SANTO ANTONIO DE POSSE	FCA	7	GO, MG, SP	FCA	ZXD-ZKF	3.997	4,484	17.923	214.224.556	0,00837%
FOSFATO	GO, MG, SP	SANTOS	FCA	7	GO, MG, SP	FCA	IUF-IPG	3.997	0,682	2.726	214.224.556	0,00127%
FOSFATO	GO, MG, SP	SÃO JOAQUIM DA BARRA	FCA	7	GO, MG, SP	FCA	ZOL-ZHB	3.997	11,245	44.946	214.224.556	0,02098%
FOSFATO	GO, MG, SP	SÃO JOAQUIM DA BARRA	FCA	7	GO, MG, SP	FCA	ZHB-ZGU	3.997	5,674	22.679	214.224.556	0,01059%
FOSFATO	GO, MG, SP	SÃO LOURENÇO DA SERRA	FCA	7	GO, MG, SP	FCA	ZYQ-ZWI	3.997	0,339	1.355	214.224.556	0,00063%
FOSFATO	GO, MG, SP	SÃO LOURENÇO DA SERRA	FCA	7	GO, MG, SP	FCA	ZWI-ZLU	3.997	0,842	3.365	214.224.556	0,00157%
FOSFATO	GO, MG, SP	SÃO PAULO	FCA	7	GO, MG, SP	FCA	ZEZ-ZEV	3.997	9,001	35.977	214.224.556	0,01679%
FOSFATO	GO, MG, SP	SÃO PAULO	FCA	7	GO, MG, SP	FCA	ZEV-ZRB	3.997	7,384	29.514	214.224.556	0,01378%
FOSFATO	GO, MG, SP	SÃO PAULO	FCA	7	GO, MG, SP	FCA	ZRB-ZEJ	3.997	0,272	1.087	214.224.556	0,00051%
FOSFATO	GO, MG, SP	SÃO PAULO	FCA	7	GO, MG, SP	FCA	ZEJ-ZEM	3.997	8,081	32.300	214.224.556	0,01508%
FOSFATO	GO, MG, SP	SÃO ROQUE	FCA	7	GO, MG, SP	FCA	ZKW-ZWW	3.997	4,165	16.648	214.224.556	0,00777%
FOSFATO	GO, MG, SP	SÃO ROQUE	FCA	7	GO, MG, SP	FCA	ZWW-ZKE	3.997	12,311	49.207	214.224.556	0,02297%
FOSFATO	GO, MG, SP	SÃO ROQUE	FCA	7	GO, MG, SP	FCA	ZKE-ZGA	3.997	0,478	1.911	214.224.556	0,00089%
FOSFATO	GO, MG, SP	SÃO SIMÃO	FCA	7	GO, MG, SP	FCA	ZHM-ZHI	3.997	15,728	62.865	214.224.556	0,02935%
FOSFATO	GO, MG, SP	SÃO SIMÃO	FCA	7	GO, MG, SP	FCA	ZHI-ZCE	3.997	11,721	46.849	214.224.556	0,02187%
FOSFATO	GO, MG, SP	SÃO SIMÃO	FCA	7	GO, MG, SP	FCA	ZCE-ZEK	3.997	5,768	23.055	214.224.556	0,01076%
FOSFATO	GO, MG, SP	SÃO VICENTE	FCA	7	GO, MG, SP	FCA	ZPG-ZZV	3.997	2,982	11.919	214.224.556	0,00556%
FOSFATO	GO, MG, SP	SÃO VICENTE	FCA	7	GO, MG, SP	FCA	ZZV-ZGM	3.997	2,982	11.919	214.224.556	0,00556%
FOSFATO	GO, MG, SP	SÃO VICENTE	FCA	7	GO, MG, SP	FCA	ZGM-ZPT	3.997	7,588	30.329	214.224.556	0,01416%
FOSFATO	GO, MG, SP	SÃO VICENTE	FCA	7	GO, MG, SP	FCA	ZPT-ZWU	3.997	9,377	37.480	214.224.556	0,01750%
FOSFATO	GO, MG, SP	SÃO VICENTE	FCA	7	GO, MG, SP	FCA	ZWU-ZXW	3.997	10,163	40.622	214.224.556	0,01896%
FOSFATO	GO, MG, SP	SÃO VICENTE	FCA	7	GO, MG, SP	FCA	ZXW-ZEZ	3.997	8,468	33.847	214.224.556	0,01580%
FOSFATO	GO, MG, SP	SÃO VICENTE	FCA	7	GO, MG, SP	FCA	ZEZ-ZEV	3.997	1,669	6.671	214.224.556	0,00311%
FOSFATO	GO, MG, SP	SERRANA	FCA	7	GO, MG, SP	FCA	ZEK-ZEG	3.997	5,451	21.788	214.224.556	0,01017%
FOSFATO	GO, MG, SP	TAMBAU	FCA	7	GO, MG, SP	FCA	ZKB-ZTD	3.997	8,591	34.338	214.224.556	0,01603%
FOSFATO	GO, MG, SP	TAMBAU	FCA	7	GO, MG, SP	FCA	ZTD-ZHM	3.997	12,860	51.401	214.224.556	0,02399%
MAGNESITA	BA, MG	ARACATU	FCA	8	BA, MG	FCA	DUV-DOV	64.402	12,229	787.572	181.638.847	0,43359%
MAGNESITA	BA, MG	BARRA DA ESTIVA	FCA	8	BA, MG	FCA	DKY-DWN	64.402	0,398	25.632	181.638.847	0,01411%
MAGNESITA	BA, MG	BARRA DA ESTIVA	FCA	8	BA, MG	FCA	DWN-DZU	64.402	14,965	963.776	181.638.847	0,53060%
MAGNESITA	BA, MG	BRUMADO	FCA	8	BA, MG	FCA	DKZ-DMD	138.389	5,014	693.882	181.638.847	0,38201%
MAGNESITA	BA, MG	BRUMADO	FCA	8	BA, MG	FCA	DKZ-DRU	64.402	8,486	546.515	181.638.847	0,30088%
MAGNESITA	BA, MG	BRUMADO	FCA	8	BA, MG	FCA	DRU-DCB	64.402	9,542	614.524	181.638.847	0,33832%
MAGNESITA	BA, MG	BRUMADO	FCA	8	BA, MG	FCA	DCB-DUV	64.402	16,911	1.089.102	181.638.847	0,59960%
MAGNESITA	BA, MG	BRUMADO	FCA	8	BA, MG	FCA	DUV-DOV	64.402	5,369	345.774	181.638.847	0,19036%
MAGNESITA	BA, MG	CABACEIRAS DO PARAGUACU	FCA	8	BA, MG	FCA	DVS-DEM	64.402	5,138	330.895	181.638.847	0,18217%
MAGNESITA	BA, MG	CACHOEIRA	FCA	8	BA, MG	FCA	DSX-D23	64.402	0,822	52.938	181.638.847	0,02914%
MAGNESITA	BA, MG	CACHOEIRA	FCA	8	BA, MG	FCA	D23-DQF	64.402	8,591	553.278	181.638.847	0,30460%
MAGNESITA	BA, MG	CACULE	FCA	8	BA, MG	FCA	DDH-DKC	138.389	9,628	1.332.409	181.638.847	0,73355%
MAGNESITA	BA, MG	CACULE	FCA	8	BA, MG	FCA	DKC-DPL	138.389	28,222	3.905.614	181.638.847	2,15021%
MAGNESITA	BA, MG	CANDEIAS	FCA	8	BA, MG	FCA	DBH-DTC	64.402	4,772	307.326	181.638.847	0,16920%
MAGNESITA	BA, MG	CANDEIAS	FCA	8	BA, MG	FCA	DTC-DCS	64.402	2,479	159.653	181.638.847	0,08790%
MAGNESITA	BA, MG	CANDEIAS	FCA	8	BA, MG	FCA	DCS-DDM	64.402	4,881	314.346	181.638.847	0,17306%
MAGNESITA	BA, MG	CANDEIAS	FCA	8	BA, MG	FCA	DDM-DPA	64.402	6,469	416.617	181.638.847	0,22937%
MAGNESITA	BA, MG	CASTRO ALVES	FCA	8	BA, MG	FCA	DTT-DVS	64.402	10,765	693.288	181.638.847	0,38168%
MAGNESITA	BA, MG	CASTRO ALVES	FCA	8	BA, MG	FCA	DVS-DEM	64.402	40,719	2.622.395	181.638.847	1,44374%
MAGNESITA	BA, MG	CONCEICAO DA FEIRA	FCA	8	BA, MG	FCA	D23-DQF	64.402	6,984	449.784	181.638.847	0,24763%
MAGNESITA	BA, MG	CONCEICAO DA FEIRA	FCA	8	BA, MG	FCA	DQF-DDT	64.402	11,499	740.559	181.638.847	0,40771%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MAGNESITA	BA, MG	CONTENDAS DO SINCORA	FCA	8	BA, MG	FCA	DHX-DFC	64.402	18,329	1.180.424	181.638.847	0,64987%
MAGNESITA	BA, MG	CONTENDAS DO SINCORA	FCA	8	BA, MG	FCA	DFC-DKY	64.402	14,033	903.753	181.638.847	0,49756%
MAGNESITA	BA, MG	CONTENDAS DO SINCORA	FCA	8	BA, MG	FCA	DKY-DWN	64.402	24,397	1.571.216	181.638.847	0,86502%
MAGNESITA	BA, MG	CRUZ DAS ALMAS	FCA	8	BA, MG	FCA	DVS-DEM	64.402	12,357	795.796	181.638.847	0,43812%
MAGNESITA	BA, MG	CRUZ DAS ALMAS	FCA	8	BA, MG	FCA	DEM-DZD	64.402	5,224	336.436	181.638.847	0,18522%
MAGNESITA	BA, MG	IACU	FCA	8	BA, MG	FCA	DTM-DPW	64.402	21,599	1.391.019	181.638.847	0,76582%
MAGNESITA	BA, MG	IACU	FCA	8	BA, MG	FCA	DPW-DZA	64.402	5,631	362.648	181.638.847	0,19965%
MAGNESITA	BA, MG	IACU	FCA	8	BA, MG	FCA	DZA-DIL	64.402	18,102	1.165.805	181.638.847	0,64183%
MAGNESITA	BA, MG	IACU	FCA	8	BA, MG	FCA	DIL-DLG	64.402	39,275	2.529.389	181.638.847	1,39254%
MAGNESITA	BA, MG	IACU	FCA	8	BA, MG	FCA	DLG-DTT	64.402	8,131	523.653	181.638.847	0,28829%
MAGNESITA	BA, MG	IRAMAIA	FCA	8	BA, MG	FCA	DWN-DZU	64.402	10,666	686.912	181.638.847	0,37817%
MAGNESITA	BA, MG	IRAMAIA	FCA	8	BA, MG	FCA	DZU-DIY	64.402	39,500	2.543.879	181.638.847	1,40051%
MAGNESITA	BA, MG	IRAMAIA	FCA	8	BA, MG	FCA	DIY-DQI	64.402	9,444	608.212	181.638.847	0,33485%
MAGNESITA	BA, MG	ITATIM	FCA	8	BA, MG	FCA	DLG-DTT	64.402	11,219	722.526	181.638.847	0,39778%
MAGNESITA	BA, MG	ITATIM	FCA	8	BA, MG	FCA	DTT-DVS	64.402	5,284	340.300	181.638.847	0,18735%
MAGNESITA	BA, MG	ITATIM	FCA	8	BA, MG	FCA	DVS-DEM	64.402	5,091	327.869	181.638.847	0,18051%
MAGNESITA	BA, MG	ITUACU	FCA	8	BA, MG	FCA	DUV-DOV	64.402	1,419	91.386	181.638.847	0,05031%
MAGNESITA	BA, MG	JACARACI	FCA	8	BA, MG	FCA	DKC-DPL	138.389	0,847	117.215	181.638.847	0,06453%
MAGNESITA	BA, MG	LICINIO DE ALMEIDA	FCA	8	BA, MG	FCA	DKC-DPL	138.389	1,463	202.463	181.638.847	0,11146%
MAGNESITA	BA, MG	LICINIO DE ALMEIDA	FCA	8	BA, MG	FCA	DPL-DLL	138.389	18,181	2.516.050	181.638.847	1,38519%
MAGNESITA	BA, MG	LICINIO DE ALMEIDA	FCA	8	BA, MG	FCA	DLL-DEO	138.389	15,853	2.193.881	181.638.847	1,20783%
MAGNESITA	BA, MG	LICINIO DE ALMEIDA	FCA	8	BA, MG	FCA	DEO-DUN	138.389	0,655	90.645	181.638.847	0,04990%
MAGNESITA	BA, MG	MALHADA DE PEDRAS	FCA	8	BA, MG	FCA	DKZ-DMD	138.389	21,458	2.969.551	181.638.847	1,63487%
MAGNESITA	BA, MG	MALHADA DE PEDRAS	FCA	8	BA, MG	FCA	DMD-DDH	138.389	3,292	455.577	181.638.847	0,25081%
MAGNESITA	BA, MG	MARCIONILIO SOUZA	FCA	8	BA, MG	FCA	DIY-DQI	64.402	35,185	2.265.984	181.638.847	1,24752%
MAGNESITA	BA, MG	MARCIONILIO SOUZA	FCA	8	BA, MG	FCA	DQI-DTM	64.402	28,886	1.860.316	181.638.847	1,02418%
MAGNESITA	BA, MG	MARCIONILIO SOUZA	FCA	8	BA, MG	FCA	DTM-DPW	64.402	5,957	383.643	181.638.847	0,21121%
MAGNESITA	BA, MG	MURITIBA	FCA	8	BA, MG	FCA	DVS-DEM	64.402	12,363	796.221	181.638.847	0,43835%
MAGNESITA	BA, MG	MURITIBA	FCA	8	BA, MG	FCA	DEM-DZD	64.402	8,219	529.320	181.638.847	0,29141%
MAGNESITA	BA, MG	MURITIBA	FCA	8	BA, MG	FCA	DZD-DSX	64.402	1,867	120.239	181.638.847	0,06620%
MAGNESITA	BA, MG	RIO DO ANTONIO	FCA	8	BA, MG	FCA	DMD-DDH	138.389	24,093	3.334.206	181.638.847	1,83562%
MAGNESITA	BA, MG	RIO DO ANTONIO	FCA	8	BA, MG	FCA	DDH-DKC	138.389	12,089	1.672.985	181.638.847	0,92105%
MAGNESITA	BA, MG	SANTA TERESINHA	FCA	8	BA, MG	FCA	DTT-DVS	64.402	19,840	1.277.736	181.638.847	0,70345%
MAGNESITA	BA, MG	SANTA TEREZINHA	FCA	8	BA, MG	FCA	DVS-DEM	64.402	18,344	1.181.388	181.638.847	0,65041%
MAGNESITA	BA, MG	SANTO AMARO	FCA	8	BA, MG	FCA	DDT-DGX	64.402	0,177	11.399	181.638.847	0,00628%
MAGNESITA	BA, MG	SANTO AMARO	FCA	8	BA, MG	FCA	DGX-DWR	64.402	18,091	1.165.097	181.638.847	0,64144%
MAGNESITA	BA, MG	SANTO AMARO	FCA	8	BA, MG	FCA	DWR-DTE	64.402	4,209	271.068	181.638.847	0,14923%
MAGNESITA	BA, MG	SANTO AMARO	FCA	8	BA, MG	FCA	DTE-DBH	64.402	6,184	398.262	181.638.847	0,21926%
MAGNESITA	BA, MG	SAO FELIX	FCA	8	BA, MG	FCA	DVS-DEM	64.402	0,053	3.433	181.638.847	0,00189%
MAGNESITA	BA, MG	SAO FELIX	FCA	8	BA, MG	FCA	DEM-DZD	64.402	1,295	83.401	181.638.847	0,04592%
MAGNESITA	BA, MG	SAO FELIX	FCA	8	BA, MG	FCA	DZD-DSX	64.402	3,343	215.296	181.638.847	0,11853%
MAGNESITA	BA, MG	SAO FELIX	FCA	8	BA, MG	FCA	DSX-D23	64.402	0,190	12.236	181.638.847	0,00674%
MAGNESITA	BA, MG	SAO GONCALO DOS CAMPOS	FCA	8	BA, MG	FCA	DQF-DDT	64.402	2,819	181.549	181.638.847	0,09995%
MAGNESITA	BA, MG	SAO GONCALO DOS CAMPOS	FCA	8	BA, MG	FCA	DDT-DGX	64.402	9,414	606.280	181.638.847	0,33378%
MAGNESITA	BA, MG	SAO GONCALO DOS CAMPOS	FCA	8	BA, MG	FCA	DGX-DWR	64.402	1,751	112.768	181.638.847	0,06208%
MAGNESITA	BA, MG	SAO SEBASTIAO DO PASSE	FCA	8	BA, MG	FCA	DTE-DBH	64.402	0,212	13.653	181.638.847	0,00752%
MAGNESITA	BA, MG	SAO SEBASTIAO DO PASSE	FCA	8	BA, MG	FCA	DBH-DTC	64.402	16,550	1.065.853	181.638.847	0,58680%
MAGNESITA	BA, MG	SAPEACU	FCA	8	BA, MG	FCA	DVS-DEM	64.402	1,223	78.771	181.638.847	0,04337%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MAGNESITA	BA, MG	TANHACU	FCA	8	BA, MG	FCA	DUV-DOV	64.402	5,560	358.075	181.638.847	0,19714%
MAGNESITA	BA, MG	TANHACU	FCA	8	BA, MG	FCA	DOV-DHX	64.402	11,529	742.491	181.638.847	0,40877%
MAGNESITA	BA, MG	TANHACU	FCA	8	BA, MG	FCA	DHX-DFC	64.402	16,454	1.059.671	181.638.847	0,58339%
MAGNESITA	BA, MG	URANDI	FCA	8	BA, MG	FCA	DEO-DUN	138.389	29,706	4.110.984	181.638.847	2,26327%
MAGNESITA	BA, MG	URANDI	FCA	8	BA, MG	FCA	DUN-DEN	138.389	18,356	2.540.268	181.638.847	1,39853%
MAGNESITA	BA, MG	ARACAI	FCA	8	BA, MG	FCA	EOR-EAI	138.389	5,018	694.436	181.638.847	0,38232%
MAGNESITA	BA, MG	ARACAI	FCA	8	BA, MG	FCA	EAI-ESX	138.389	17,607	2.436.615	181.638.847	1,34146%
MAGNESITA	BA, MG	AUGUSTO DE LIMA	FCA	8	BA, MG	FCA	EBL-EAL	138.389	18,477	2.557.014	181.638.847	1,40775%
MAGNESITA	BA, MG	AUGUSTO DE LIMA	FCA	8	BA, MG	FCA	EAL-EAA	138.389	19,606	2.713.255	181.638.847	1,49376%
MAGNESITA	BA, MG	BELO HORIZONTE	FCA	8	BA, MG	FCA	ECE-VWI	138.389	7,037	973.843	181.638.847	0,53614%
MAGNESITA	BA, MG	BELO HORIZONTE	FCA	8	BA, MG	FCA	OCR-EHF	138.389	4,122	570.439	181.638.847	0,31405%
MAGNESITA	BA, MG	BELO HORIZONTE	FCA	8	BA, MG	FCA	EHF-EBH	138.389	2,862	396.069	181.638.847	0,21805%
MAGNESITA	BA, MG	BELO HORIZONTE	FCA	8	BA, MG	FCA	EBH-ECL	138.389	6,472	895.654	181.638.847	0,49310%
MAGNESITA	BA, MG	BELO HORIZONTE	FCA	8	BA, MG	FCA	ECL-EEL	138.389	6,836	946.027	181.638.847	0,52083%
MAGNESITA	BA, MG	BOCAIUVA	FCA	8	BA, MG	FCA	EGL-EEA	138.389	14,821	2.051.063	181.638.847	1,12920%
MAGNESITA	BA, MG	BOCAIUVA	FCA	8	BA, MG	FCA	EEA-EBV	138.389	25,161	3.482.006	181.638.847	1,91699%
MAGNESITA	BA, MG	BOCAIUVA	FCA	8	BA, MG	FCA	EBV-EEN	138.389	18,853	2.609.048	181.638.847	1,43639%
MAGNESITA	BA, MG	BOCAIUVA	FCA	8	BA, MG	FCA	EEN-EEO	138.389	12,394	1.715.193	181.638.847	0,94429%
MAGNESITA	BA, MG	BOCAIUVA	FCA	8	BA, MG	FCA	EEO-EBP	138.389	3,182	440.354	181.638.847	0,24243%
MAGNESITA	BA, MG	BUENOPOLIS	FCA	8	BA, MG	FCA	EJF-EBL	138.389	7,641	1.057.430	181.638.847	0,58216%
MAGNESITA	BA, MG	BUENOPOLIS	FCA	8	BA, MG	FCA	EBL-EAL	138.389	13,262	1.835.315	181.638.847	1,01042%
MAGNESITA	BA, MG	CAPITAO ENEAS	FCA	8	BA, MG	FCA	EJN-EEM	138.389	2,878	398.284	181.638.847	0,21927%
MAGNESITA	BA, MG	CAPITAO ENEAS	FCA	8	BA, MG	FCA	EEM-EON	138.389	20,733	2.869.219	181.638.847	1,57963%
MAGNESITA	BA, MG	CAPITAO ENEAS	FCA	8	BA, MG	FCA	EON-EEZ	138.389	20,479	2.834.068	181.638.847	1,56028%
MAGNESITA	BA, MG	CAPITAO ENEAS	FCA	8	BA, MG	FCA	EEZ-ENA	138.389	11,714	1.621.089	181.638.847	0,89248%
MAGNESITA	BA, MG	CATUTI	FCA	8	BA, MG	FCA	EMA-EEW	138.389	2,283	315.942	181.638.847	0,17394%
MAGNESITA	BA, MG	CATUTI	FCA	8	BA, MG	FCA	EEW-EYP	138.389	2,032	281.206	181.638.847	0,15482%
MAGNESITA	BA, MG	CONTAGEM	FCA	8	BA, MG	FCA	ECL-EEL	138.389	0,696	96.319	181.638.847	0,05303%
MAGNESITA	BA, MG	CONTAGEM	FCA	8	BA, MG	FCA	EEL-EPI	138.389	1,256	173.817	181.638.847	0,09569%
MAGNESITA	BA, MG	CORDISBURGO	FCA	8	BA, MG	FCA	EMX-EOR	138.389	9,623	1.331.717	181.638.847	0,73317%
MAGNESITA	BA, MG	CORDISBURGO	FCA	8	BA, MG	FCA	EOR-EAI	138.389	10,092	1.396.622	181.638.847	0,76890%
MAGNESITA	BA, MG	CORINTO	FCA	8	BA, MG	FCA	EAL-EAA	138.389	8,187	1.132.991	181.638.847	0,62376%
MAGNESITA	BA, MG	CORINTO	FCA	8	BA, MG	FCA	EAA-ECO	138.389	13,488	1.866.591	181.638.847	1,02764%
MAGNESITA	BA, MG	CORINTO	FCA	8	BA, MG	FCA	ECO-EOA	138.389	23,530	3.256.293	181.638.847	1,79273%
MAGNESITA	BA, MG	CORINTO	FCA	8	BA, MG	FCA	EOA-ECV	138.389	1,924	266.260	181.638.847	0,14659%
MAGNESITA	BA, MG	CURVELO	FCA	8	BA, MG	FCA	ECO-EOA	138.389	2,951	408.386	181.638.847	0,22483%
MAGNESITA	BA, MG	CURVELO	FCA	8	BA, MG	FCA	EOA-ECV	138.389	31,359	4.339.741	181.638.847	2,38921%
MAGNESITA	BA, MG	CURVELO	FCA	8	BA, MG	FCA	ECV-EMX	138.389	7,019	971.352	181.638.847	0,53477%
MAGNESITA	BA, MG	CURVELO	FCA	8	BA, MG	FCA	EMX-EOR	138.389	34,069	4.714.775	181.638.847	2,59569%
MAGNESITA	BA, MG	ENGENHEIRO NAVARRO	FCA	8	BA, MG	FCA	EBV-EEN	138.389	11,385	1.575.559	181.638.847	0,86741%
MAGNESITA	BA, MG	ENGENHEIRO NAVARRO	FCA	8	BA, MG	FCA	EEN-EEO	138.389	13,547	1.874.756	181.638.847	1,03213%
MAGNESITA	BA, MG	ESPINOSA	FCA	8	BA, MG	FCA	DUN-DEN	138.389	8,929	1.235.675	181.638.847	0,68029%
MAGNESITA	BA, MG	ESPINOSA	FCA	8	BA, MG	FCA	DEN-DMN	138.389	16,974	2.349.015	181.638.847	1,29323%
MAGNESITA	BA, MG	ESPINOSA	FCA	8	BA, MG	FCA	DMN-EMA	138.389	0,623	86.216	181.638.847	0,04747%
MAGNESITA	BA, MG	FRANCISCO SA	FCA	8	BA, MG	FCA	EEZ-ENA	138.389	24,826	3.435.645	181.638.847	1,89147%
MAGNESITA	BA, MG	FRANCISCO SA	FCA	8	BA, MG	FCA	ENA-EMC	138.389	0,541	74.868	181.638.847	0,04122%
MAGNESITA	BA, MG	GLAUCILANDIA	FCA	8	BA, MG	FCA	EMC-EGL	138.389	0,243	33.629	181.638.847	0,01851%
MAGNESITA	BA, MG	GLAUCILANDIA	FCA	8	BA, MG	FCA	EGL-EEA	138.389	0,044	6.089	181.638.847	0,00335%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MAGNESITA	BA, MG	JANAUBA	FCA	8	BA, MG	FCA	ETO-EJN	138.389	2,080	287.849	181.638.847	0,15847%
MAGNESITA	BA, MG	JANAUBA	FCA	8	BA, MG	FCA	EJN-EEM	138.389	39,414	5.454.464	181.638.847	3,00292%
MAGNESITA	BA, MG	JOAQUIM FELICIO	FCA	8	BA, MG	FCA	EEO-EBP	138.389	7,957	1.101.161	181.638.847	0,60624%
MAGNESITA	BA, MG	JOAQUIM FELICIO	FCA	8	BA, MG	FCA	EBP-EKT	138.389	16,701	2.311.235	181.638.847	1,27243%
MAGNESITA	BA, MG	JOAQUIM FELICIO	FCA	8	BA, MG	FCA	EKT-EJF	138.389	16,291	2.254.495	181.638.847	1,24120%
MAGNESITA	BA, MG	JOAQUIM FELICIO	FCA	8	BA, MG	FCA	EJF-EBL	138.389	8,717	1.206.337	181.638.847	0,66414%
MAGNESITA	BA, MG	MATO VERDE	FCA	8	BA, MG	FCA	EMA-EEW	138.389	2,051	283.836	181.638.847	0,15626%
MAGNESITA	BA, MG	MATO VERDE	FCA	8	BA, MG	FCA	EEW-EYP	138.389	4,600	636.589	181.638.847	0,35047%
MAGNESITA	BA, MG	MATOZINHOS	FCA	8	BA, MG	FCA	EPM-EMS	138.389	5,041	697.619	181.638.847	0,38407%
MAGNESITA	BA, MG	MATOZINHOS	FCA	8	BA, MG	FCA	EMS-EWL	138.389	4,417	611.264	181.638.847	0,33653%
MAGNESITA	BA, MG	MATOZINHOS	FCA	8	BA, MG	FCA	EWL-EPL	138.389	0,225	31.138	181.638.847	0,01714%
MAGNESITA	BA, MG	MONTE AZUL	FCA	8	BA, MG	FCA	DMN-EMA	138.389	23,583	3.263.628	181.638.847	1,79677%
MAGNESITA	BA, MG	MONTE AZUL	FCA	8	BA, MG	FCA	EMA-EEW	138.389	20,655	2.858.425	181.638.847	1,57369%
MAGNESITA	BA, MG	MONTES CLAROS	FCA	8	BA, MG	FCA	ENA-EMC	138.389	23,291	3.223.218	181.638.847	1,77452%
MAGNESITA	BA, MG	MONTES CLAROS	FCA	8	BA, MG	FCA	EMC-EGL	138.389	28,726	3.975.362	181.638.847	2,18861%
MAGNESITA	BA, MG	MONTES CLAROS	FCA	8	BA, MG	FCA	EGL-EEA	138.389	1,892	261.832	181.638.847	0,14415%
MAGNESITA	BA, MG	NOVA PORTEIRINHA	FCA	8	BA, MG	FCA	ETO-EJN	138.389	13,164	1.821.753	181.638.847	1,00295%
MAGNESITA	BA, MG	PAI PEDRO	FCA	8	BA, MG	FCA	EEW-EYP	138.389	15,723	2.175.890	181.638.847	1,19792%
MAGNESITA	BA, MG	PAI PEDRO	FCA	8	BA, MG	FCA	EYP-ETO	138.389	10,556	1.460.834	181.638.847	0,80425%
MAGNESITA	BA, MG	PEDRO LEOPOLDO	FCA	8	BA, MG	FCA	EWL-EPL	138.389	5,388	745.640	181.638.847	0,41051%
MAGNESITA	BA, MG	PEDRO LEOPOLDO	FCA	8	BA, MG	FCA	EPL-ELD	138.389	5,037	697.065	181.638.847	0,38376%
MAGNESITA	BA, MG	PEDRO LEOPOLDO	FCA	8	BA, MG	FCA	ELD-ENG	138.389	0,996	137.835	181.638.847	0,07588%
MAGNESITA	BA, MG	PORTEIRINHA	FCA	8	BA, MG	FCA	EYP-ETO	138.389	8,579	1.187.239	181.638.847	0,65363%
MAGNESITA	BA, MG	PORTEIRINHA	FCA	8	BA, MG	FCA	ETO-EJN	138.389	10,572	1.463.049	181.638.847	0,80547%
MAGNESITA	BA, MG	PRUDENTE DE MORAIS	FCA	8	BA, MG	FCA	ESL-EPM	138.389	0,991	137.143	181.638.847	0,07550%
MAGNESITA	BA, MG	PRUDENTE DE MORAIS	FCA	8	BA, MG	FCA	EPM-EMS	138.389	6,638	918.626	181.638.847	0,50574%
MAGNESITA	BA, MG	SABARA	FCA	8	BA, MG	FCA	ECE-VWI	138.389	1,919	265.568	181.638.847	0,14621%
MAGNESITA	BA, MG	SABARA	FCA	8	BA, MG	FCA	VWI-EGC	138.389	1,266	175.200	181.638.847	0,09646%
MAGNESITA	BA, MG	SABARA	FCA	8	BA, MG	FCA	EGC-OCR	138.389	1,077	149.045	181.638.847	0,08206%
MAGNESITA	BA, MG	SABARA	FCA	8	BA, MG	FCA	OCR-EHF	138.389	4,132	571.823	181.638.847	0,31481%
MAGNESITA	BA, MG	SANTA LUZIA	FCA	8	BA, MG	FCA	EVP-ERE	138.389	1,596	220.869	181.638.847	0,12160%
MAGNESITA	BA, MG	SANTA LUZIA	FCA	8	BA, MG	FCA	ERE-ECA	138.389	6,402	885.966	181.638.847	0,48776%
MAGNESITA	BA, MG	SANTA LUZIA	FCA	8	BA, MG	FCA	ECA-ECE	138.389	8,802	1.218.100	181.638.847	0,67062%
MAGNESITA	BA, MG	SANTA LUZIA	FCA	8	BA, MG	FCA	ECE-VWI	138.389	1,039	143.786	181.638.847	0,07916%
MAGNESITA	BA, MG	SAO JOSE DA LAPA	FCA	8	BA, MG	FCA	ELD-ENG	138.389	7,949	1.100.054	181.638.847	0,60563%
MAGNESITA	BA, MG	SAO JOSE DA LAPA	FCA	8	BA, MG	FCA	ENG-EVP	138.389	0,868	120.122	181.638.847	0,06613%
MAGNESITA	BA, MG	SETE LAGOAS	FCA	8	BA, MG	FCA	EAI-ESX	138.389	5,674	785.219	181.638.847	0,43230%
MAGNESITA	BA, MG	SETE LAGOAS	FCA	8	BA, MG	FCA	ESX-ESL	138.389	17,194	2.379.460	181.638.847	1,31000%
MAGNESITA	BA, MG	SETE LAGOAS	FCA	8	BA, MG	FCA	ESL-EPM	138.389	7,453	1.031.413	181.638.847	0,56784%
MAGNESITA	BA, MG	VESPASIANO	FCA	8	BA, MG	FCA	ENG-EVP	138.389	4,032	557.984	181.638.847	0,30719%
MAGNESITA	BA, MG	VESPASIANO	FCA	8	BA, MG	FCA	EVP-ERE	138.389	3,510	485.745	181.638.847	0,26742%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BRASILIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EBZ-EJK	1.080.949	13,435	14.522.550	1.707.949.011	0,85029%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BRASILIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EJK-EJI	1.080.949	29,693	32.096.619	1.707.949.011	1,87925%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CATALAO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EVV-EGN	1.080.949	3,416	3.692.522	1.707.949.011	0,21620%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CUMARI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EGN-EYG	1.080.949	10,232	11.060.270	1.707.949.011	0,64758%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CUMARI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EYG-EYH	1.080.949	14,665	15.852.117	1.707.949.011	0,92814%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	GOIANDIRA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EVV-EGN	1.080.949	19,124	20.672.069	1.707.949.011	1,21034%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	GOIANDIRA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EGN-EYG	1.080.949	12,061	13.037.326	1.707.949.011	0,76333%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	DF, GO, MG	IPAMERI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EPZ-ENJ	1.080.949	7,257	7.844.447	1.707.949.011	0,45929%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	IPAMERI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ENJ-EPO	1.080.949	12,386	13.388.634	1.707.949.011	0,78390%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	IPAMERI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EPO-EVV	1.080.949	19,774	21.374.686	1.707.949.011	1,25148%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	IPAMERI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EVV-EGN	1.080.949	5,872	6.347.333	1.707.949.011	0,37163%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	LUZIANIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EJK-EJI	1.080.949	3,113	3.364.994	1.707.949.011	0,19702%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	LUZIANIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EJI-EBW	1.080.949	60,966	65.901.137	1.707.949.011	3,85850%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	LUZIANIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EBW-EYZ	1.080.949	38,186	41.277.119	1.707.949.011	2,41677%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	LUZIANIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EYZ-EBU	1.080.949	26,425	28.564.077	1.707.949.011	1,67242%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ORIZONA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EYZ-EBU	1.080.949	5,352	5.785.239	1.707.949.011	0,33872%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ORIZONA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EBU-EPZ	1.080.949	46,641	50.416.542	1.707.949.011	2,95188%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PIRES DO RIO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EBU-EPZ	1.080.949	8,839	9.554.508	1.707.949.011	0,55941%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PIRES DO RIO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EPZ-ENJ	1.080.949	1,274	1.377.129	1.707.949.011	0,08063%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	URUTAI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EPZ-ENJ	1.080.949	26,705	28.866.743	1.707.949.011	1,69014%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VALPARAISO DE GOIAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EJK-EJI	1.080.949	12,752	13.784.262	1.707.949.011	0,80707%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ARAGUARI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EYG-EYH	1.080.949	13,257	14.330.141	1.707.949.011	0,83903%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ARAGUARI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EYH-EAU	1.080.949	20,201	21.836.251	1.707.949.011	1,27851%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ARAGUARI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	EAU-ZHF	1.080.949	22,058	23.843.573	1.707.949.011	1,39604%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ARAGUARI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHF-ZUL	1.080.949	2,727	2.947.748	1.707.949.011	0,17259%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	POCOS DE CALDAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZBA-ZHV	344.535	5,287	1.821.636	1.707.949.011	0,10666%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERABA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHU-ZYE	1.080.949	1,577	1.704.657	1.707.949.011	0,09981%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERABA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZYE-ZZB	1.080.949	10,785	11.658.035	1.707.949.011	0,68258%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERABA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZZB-ZXJ	1.080.949	34,973	37.804.029	1.707.949.011	2,21342%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERABA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXJ-ZMN	1.080.949	19,268	20.827.725	1.707.949.011	1,21946%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERABA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMN-ZQQ	1.080.949	36,317	39.256.728	1.707.949.011	2,29847%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERABA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZQQ-ZVF	1.080.949	14,869	16.072.631	1.707.949.011	0,94105%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERABA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVF-ZWA	1.080.949	8,259	8.927.558	1.707.949.011	0,52271%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERLANDIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHF-ZUL	1.080.949	21,916	23.690.078	1.707.949.011	1,38705%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERLANDIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZUL-ZHU	1.080.949	21,345	23.072.856	1.707.949.011	1,35091%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	UBERLANDIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHU-ZYE	1.080.949	20,355	22.002.717	1.707.949.011	1,28825%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA DO PIRAI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FAT-FDQ	578.644	3,240	1.874.807	1.707.949.011	0,10977%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA DO PIRAI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FDQ-FBP	578.644	2,767	1.601.108	1.707.949.011	0,09374%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA DO PIRAI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FBP-FPU	578.644	2,517	1.456.447	1.707.949.011	0,08527%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA DO PIRAI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPU-FWB	578.644	5,522	3.195.272	1.707.949.011	0,18708%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA DO PIRAI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FWB-FVA	578.644	5,583	3.230.569	1.707.949.011	0,18915%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA DO PIRAI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FVA-FPL	578.644	1,533	887.061	1.707.949.011	0,05194%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA MANSÁ	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FIV-FBB	578.644	0,434	251.131	1.707.949.011	0,01470%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA MANSÁ	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FBB-FBM	578.644	3,927	2.272.335	1.707.949.011	0,13304%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA MANSÁ	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FBM-FSE	578.644	2,390	1.382.959	1.707.949.011	0,08097%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA MANSÁ	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FSE-FPB	578.644	7,016	4.059.766	1.707.949.011	0,23770%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA MANSÁ	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPB-FFL	578.644	7,911	4.577.653	1.707.949.011	0,26802%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	BARRA MANSÁ	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FFL-FAN	578.644	0,508	293.951	1.707.949.011	0,01721%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITATIAIA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	578.644	4,670	2.702.210	1.707.949.011	0,15821%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITATIAIA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FMU-FIA	578.644	3,509	2.030.358	1.707.949.011	0,11888%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITATIAIA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FIA-FEP	578.644	5,952	3.444.089	1.707.949.011	0,20165%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PARAIBA DO SUL	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FBN-FPS	578.644	5,305	3.069.706	1.707.949.011	0,17973%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PARAIBA DO SUL	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPS-FVC	578.644	8,109	4.692.224	1.707.949.011	0,27473%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PARAIBA DO SUL	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FVC-FAP	578.644	5,370	3.107.318	1.707.949.011	0,18193%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PINHEIRAL	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FVA-FPL	578.644	6,575	3.804.584	1.707.949.011	0,22276%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PINHEIRAL	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPL-FRK	578.644	5,290	3.061.027	1.707.949.011	0,17922%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PORTO REAL	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FFL-FAN	578.644	7,321	4.236.253	1.707.949.011	0,24803%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	RESENDE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FFL-FAN	578.644	8,084	4.677.758	1.707.949.011	0,27388%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	RESENDE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	578.644	3,986	2.306.573	1.707.949.011	0,13505%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	RESENDE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FIA-FEP	578.644	6,405	3.706.215	1.707.949.011	0,21700%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	RESENDE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FEP-FQU	578.644	2,578	1.491.744	1.707.949.011	0,08734%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	RIO DAS FLORES	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FAI-FBL	578.644	0,565	326.934	1.707.949.011	0,01914%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VALENCA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FBL-FBJ	578.644	2,580	1.492.902	1.707.949.011	0,08741%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VALENCA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FBJ-FVS	578.644	2,737	1.583.749	1.707.949.011	0,09273%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FVC-FAP	578.644	3,277	1.896.216	1.707.949.011	0,11102%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FAP-FNY	578.644	4,252	2.460.394	1.707.949.011	0,14406%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FNY-FNC	578.644	2,758	1.595.900	1.707.949.011	0,09344%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FNC-FSL	578.644	2,731	1.580.277	1.707.949.011	0,09252%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FSL-FAI	578.644	4,748	2.747.402	1.707.949.011	0,16086%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FAI-FBL	578.644	7,795	4.510.530	1.707.949.011	0,26409%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FBL-FBJ	578.644	11,886	6.877.763	1.707.949.011	0,40269%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FBJ-FVS	578.644	1,356	784.641	1.707.949.011	0,04594%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FVS-FDR	578.644	7,100	4.108.372	1.707.949.011	0,24054%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FDR-FAT	578.644	7,341	4.247.826	1.707.949.011	0,24871%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VASSOURAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FAT-FDQ	578.644	0,097	56.128	1.707.949.011	0,00329%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VOLTA REDONDA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPL-FRK	578.644	2,792	1.615.574	1.707.949.011	0,09459%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VOLTA REDONDA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FRK-FVR	578.644	6,757	3.909.898	1.707.949.011	0,22892%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VOLTA REDONDA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FVR-FIV	578.644	3,187	1.844.138	1.707.949.011	0,10797%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VOLTA REDONDA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FIV-FBB	578.644	1,396	807.787	1.707.949.011	0,04730%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	AGUAI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHV-ZAI	344.535	10,442	3.597.634	1.707.949.011	0,21064%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	AGUAI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZAI-ZMQ	344.535	10,860	3.741.650	1.707.949.011	0,21907%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	AGUAI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZON-ZAI	1.080.949	10,874	11.754.239	1.707.949.011	0,68821%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	AGUAI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZAI-ZMQ	1.080.949	10,860	11.739.106	1.707.949.011	0,68732%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	AGUAS DA PRATA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZBA-ZHV	344.535	19,304	6.650.738	1.707.949.011	0,38940%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ALUMINIO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	578.644	0,471	272.541	1.707.949.011	0,01596%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ALUMINIO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	578.644	3,684	2.131.724	1.707.949.011	0,12481%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ALUMINIO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	344.535	0,471	162.276	1.707.949.011	0,00950%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ALUMINIO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	344.535	3,684	1.269.267	1.707.949.011	0,07432%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ALUMINIO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	1.080.949	0,471	509.127	1.707.949.011	0,02981%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ALUMINIO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	1.080.949	3,684	3.982.216	1.707.949.011	0,23316%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	APARECIDA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	578.644	1,878	1.086.693	1.707.949.011	0,06363%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	APARECIDA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	578.644	5,875	3.399.534	1.707.949.011	0,19904%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ARAMINA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVF-ZWA	1.080.949	0,090	97.285	1.707.949.011	0,00570%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ARAMINA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZWA-ZYW	1.080.949	13,818	14.936.553	1.707.949.011	0,87453%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CACAPAVA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	578.644	7,861	4.548.720	1.707.949.011	0,26633%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CACAPAVA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	578.644	6,844	3.960.240	1.707.949.011	0,23187%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CACHOEIRA PAULISTA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	578.644	3,271	1.892.745	1.707.949.011	0,11082%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CACHOEIRA PAULISTA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	578.644	4,364	2.525.202	1.707.949.011	0,14785%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAIEIRAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	IPE-OCI	578.644	2,312	1.337.825	1.707.949.011	0,07833%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAIEIRAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OCI-OFR	578.644	1,708	988.324	1.707.949.011	0,05787%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVH-ZSX	578.644	4,912	2.842.299	1.707.949.011	0,16642%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZSX-ZCP	578.644	3,699	2.140.404	1.707.949.011	0,12532%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZCP-Z51	578.644	7,574	4.382.650	1.707.949.011	0,25660%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	Z51-ZBL	578.644	1,544	893.426	1.707.949.011	0,05231%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZBL-ZQB	578.644	3,629	2.099.899	1.707.949.011	0,12295%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZQB-ZDS	578.644	8,359	4.836.885	1.707.949.011	0,28320%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDS-ZVK	578.644	4,882	2.824.940	1.707.949.011	0,16540%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	578.644	2,286	1.322.780	1.707.949.011	0,07745%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZOP-ZBL	344.535	7,834	2.699.087	1.707.949.011	0,15803%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZBL-ZQB	344.535	3,629	1.250.318	1.707.949.011	0,07321%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZQB-ZDS	344.535	8,359	2.879.968	1.707.949.011	0,16862%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDS-ZVK	344.535	4,882	1.682.020	1.707.949.011	0,09848%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	344.535	2,286	787.607	1.707.949.011	0,04611%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZOP-ZBL	1.080.949	7,834	8.468.154	1.707.949.011	0,49581%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZBL-ZQB	1.080.949	3,629	3.922.764	1.707.949.011	0,22968%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZQB-ZDS	1.080.949	8,359	9.035.653	1.707.949.011	0,52904%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDS-ZVK	1.080.949	4,882	5.277.193	1.707.949.011	0,30898%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPINAS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	1.080.949	2,286	2.471.049	1.707.949.011	0,14468%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPO LIMPO PAULISTA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OFM-OCL	578.644	6,636	3.839.882	1.707.949.011	0,22482%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CAMPO LIMPO PAULISTA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OCL-OVP	578.644	2,585	1.495.795	1.707.949.011	0,08758%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CANAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	578.644	5,888	3.407.056	1.707.949.011	0,19948%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CASA BRANCA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZTD-ZKB	1.080.949	8,055	8.707.044	1.707.949.011	0,50980%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CASA BRANCA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZKB-ZCB	1.080.949	12,591	13.610.229	1.707.949.011	0,79688%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CASA BRANCA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZCB-ZLB	1.080.949	18,145	19.613.820	1.707.949.011	1,14838%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CASA BRANCA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZLB-ZON	1.080.949	9,508	10.277.663	1.707.949.011	0,60175%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CASA BRANCA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZON-ZAI	1.080.949	4,949	5.349.617	1.707.949.011	0,31322%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CRAVINHOS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZEG-ZEK	1.080.949	5,669	6.127.900	1.707.949.011	0,35879%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CRAVINHOS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZEK-ZCE	1.080.949	7,954	8.597.868	1.707.949.011	0,50340%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CRUZEIRO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FVQ-FCZ	578.644	4,547	2.631.094	1.707.949.011	0,15405%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	CRUZEIRO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	578.644	7,832	4.531.940	1.707.949.011	0,26534%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ESTIVA GERBI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMQ-ZEA	344.535	9,783	3.370.586	1.707.949.011	0,19735%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ESTIVA GERBI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZEA-ZMG	344.535	2,669	919.564	1.707.949.011	0,05384%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ESTIVA GERBI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMQ-ZEA	1.080.949	9,783	10.574.924	1.707.949.011	0,61916%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ESTIVA GERBI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZEA-ZMG	1.080.949	2,669	2.885.053	1.707.949.011	0,16892%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	FRANCISCO MORATO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OFR-OBA	578.644	0,817	472.752	1.707.949.011	0,02768%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	FRANCISCO MORATO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OBA-OFM	578.644	2,002	1.158.445	1.707.949.011	0,06783%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	FRANCISCO MORATO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OFM-OCL	578.644	3,823	2.212.156	1.707.949.011	0,12952%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	FRANCO DA ROCHA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OCI-OFR	578.644	3,680	2.129.410	1.707.949.011	0,12468%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	FRANCO DA ROCHA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OFR-OBA	578.644	3,254	1.882.908	1.707.949.011	0,11024%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	GUARA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZGU-ZHB	1.080.949	8,016	8.664.887	1.707.949.011	0,50733%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	GUARACAI	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZYW-ZGU	1.080.949	6,957	7.520.162	1.707.949.011	0,44030%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	GUARAREMA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	578.644	9,780	5.659.138	1.707.949.011	0,33134%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	GUARATINGUETA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	578.644	2,263	1.309.471	1.707.949.011	0,07667%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	GUARATINGUETA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FEN-FGU	578.644	5,059	2.927.360	1.707.949.011	0,17140%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	GUARATINGUETA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	578.644	2,929	1.694.848	1.707.949.011	0,09923%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	IGARAPAVA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVF-ZWA	1.080.949	1,435	1.551.162	1.707.949.011	0,09082%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	INDAIATUBA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	578.644	9,632	5.573.499	1.707.949.011	0,32633%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	INDAIATUBA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZIC-ZXI	578.644	4,139	2.395.008	1.707.949.011	0,14023%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	INDAIATUBA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	578.644	5,633	3.259.502	1.707.949.011	0,19084%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	INDAIATUBA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	344.535	9,632	3.318.561	1.707.949.011	0,19430%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	INDAIATUBA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZIC-ZXI	344.535	4,139	1.426.030	1.707.949.011	0,08349%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	DF, GO, MG	INDAIATUBA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	344.535	5,633	1.940.766	1.707.949.011	0,11363%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	INDAIATUBA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	1.080.949	9,632	10.411.701	1.707.949.011	0,60960%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	INDAIATUBA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZIC-ZXI	1.080.949	4,139	4.474.048	1.707.949.011	0,26195%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	INDAIATUBA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	1.080.949	5,633	6.088.986	1.707.949.011	0,35651%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITAQUAQUECETUBA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	578.644	3,903	2.258.448	1.707.949.011	0,13223%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITAQUAQUECETUBA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPI-IEF	578.644	6,877	3.979.335	1.707.949.011	0,23299%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITAQUAQUECETUBA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	578.644	1,324	766.125	1.707.949.011	0,04486%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZYT-ZYU	578.644	2,214	1.281.118	1.707.949.011	0,07501%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZYU-ZFY	578.644	7,831	4.531.361	1.707.949.011	0,26531%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZFY-ZXP	578.644	7,728	4.471.761	1.707.949.011	0,26182%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXP-ZDY	578.644	4,218	2.440.720	1.707.949.011	0,14290%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDY-ZDI	578.644	6,544	3.786.646	1.707.949.011	0,22171%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	578.644	1,071	619.728	1.707.949.011	0,03628%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZST-ZYU	344.535	2,214	762.800	1.707.949.011	0,04466%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZYU-ZFY	344.535	7,831	2.698.054	1.707.949.011	0,15797%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZFY-ZXP	344.535	7,728	2.662.566	1.707.949.011	0,15589%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXP-ZDY	344.535	4,218	1.453.249	1.707.949.011	0,08509%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDY-ZDI	344.535	6,544	2.254.637	1.707.949.011	0,13201%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	344.535	1,071	368.997	1.707.949.011	0,02160%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZST-ZYU	1.080.949	2,214	2.393.221	1.707.949.011	0,14012%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZYU-ZFY	1.080.949	7,831	8.464.912	1.707.949.011	0,49562%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZFY-ZXP	1.080.949	7,728	8.353.574	1.707.949.011	0,48910%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXP-ZDY	1.080.949	4,218	4.559.443	1.707.949.011	0,26695%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDY-ZDI	1.080.949	6,544	7.073.730	1.707.949.011	0,41417%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	1.080.949	1,071	1.157.696	1.707.949.011	0,06778%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITUVERAVA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZWA-ZYW	1.080.949	20,903	22.595.077	1.707.949.011	1,32294%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ITUVERAVA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZYW-ZGU	1.080.949	4,712	5.093.432	1.707.949.011	0,29822%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JACAREI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	578.644	2,592	1.499.845	1.707.949.011	0,08782%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JACAREI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPA-FRE	578.644	15,858	9.176.137	1.707.949.011	0,53726%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JACAREI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	578.644	0,535	309.575	1.707.949.011	0,01813%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JAGUARIUNA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXD-ZGE	344.535	3,179	1.095.277	1.707.949.011	0,06413%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JAGUARIUNA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZGE-ZIJ	344.535	4,519	1.556.954	1.707.949.011	0,09116%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JAGUARIUNA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZIJ-ZOP	344.535	11,570	3.986.270	1.707.949.011	0,23340%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JAGUARIUNA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXD-ZGE	1.080.949	3,179	3.436.337	1.707.949.011	0,20120%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JAGUARIUNA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZGE-ZIJ	1.080.949	4,519	4.884.809	1.707.949.011	0,28600%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JAGUARIUNA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZIJ-ZOP	1.080.949	11,570	12.506.580	1.707.949.011	0,73226%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JARDINOPOLIS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZKR-ZJN	1.080.949	13,302	14.378.784	1.707.949.011	0,84187%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JARDINOPOLIS	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZJN-ZRP	1.080.949	11,802	12.757.360	1.707.949.011	0,74694%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JUNDIAI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OVP-ZJY	578.644	2,766	1.600.529	1.707.949.011	0,09371%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	JUNDIAI	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZJY-ZLV	578.644	13,831	8.003.225	1.707.949.011	0,46859%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	LAVRINHAS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FVQ-FCZ	578.644	10,176	5.888.281	1.707.949.011	0,34476%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	LORENA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	578.644	4,725	2.734.093	1.707.949.011	0,16008%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	LORENA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	578.644	5,101	2.951.663	1.707.949.011	0,17282%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	LOUVEIRA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZJY-ZLV	578.644	1,996	1.154.973	1.707.949.011	0,06762%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	LOUVEIRA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZLV-ZVN	578.644	2,469	1.428.672	1.707.949.011	0,08365%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	578.644	7,134	4.128.046	1.707.949.011	0,24170%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZER-ZCX	578.644	6,214	3.595.694	1.707.949.011	0,21053%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	578.644	2,788	1.613.259	1.707.949.011	0,09446%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	578.644	0,970	561.285	1.707.949.011	0,03286%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	344.535	7,134	2.457.913	1.707.949.011	0,14391%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZER-ZCX	344.535	6,214	2.140.940	1.707.949.011	0,12535%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	344.535	2,788	960.564	1.707.949.011	0,05624%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	344.535	0,970	334.199	1.707.949.011	0,01957%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	1.080.949	7,134	7.711.490	1.707.949.011	0,45151%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZER-ZCX	1.080.949	6,214	6.717.017	1.707.949.011	0,39328%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	1.080.949	2,788	3.013.686	1.707.949.011	0,17645%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MAIRINQUE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	1.080.949	0,970	1.048.521	1.707.949.011	0,06139%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI DAS CRUZES	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	578.644	3,456	1.999.794	1.707.949.011	0,11709%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI DAS CRUZES	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FIP-FST	578.644	10,238	5.924.157	1.707.949.011	0,34686%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI DAS CRUZES	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	578.644	8,782	5.081.652	1.707.949.011	0,29753%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI GUACU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZAI-ZMQ	344.535	0,542	186.738	1.707.949.011	0,01093%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI GUACU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMQ-ZEA	344.535	4,957	1.707.860	1.707.949.011	0,09999%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI GUACU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZEA-ZMG	344.535	7,615	2.623.634	1.707.949.011	0,15361%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI GUACU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMG-ZMM	344.535	4,145	1.428.098	1.707.949.011	0,08361%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI GUACU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZAI-ZMQ	1.080.949	0,542	585.874	1.707.949.011	0,03430%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI GUACU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMQ-ZEA	1.080.949	4,957	5.358.264	1.707.949.011	0,31373%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI GUACU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZEA-ZMG	1.080.949	7,615	8.231.427	1.707.949.011	0,48195%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOGI GUACU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMG-ZMM	1.080.949	4,145	4.480.534	1.707.949.011	0,26233%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOJI MIRIM	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMG-ZMM	344.535	4,510	1.553.853	1.707.949.011	0,09098%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOJI MIRIM	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMM-ZKF	344.535	10,594	3.650.004	1.707.949.011	0,21371%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOJI MIRIM	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZKF-ZXD	344.535	5,150	1.774.355	1.707.949.011	0,10389%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOJI MIRIM	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMG-ZMM	1.080.949	4,510	4.875.080	1.707.949.011	0,28543%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOJI MIRIM	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZMM-ZKF	1.080.949	10,594	11.451.574	1.707.949.011	0,67049%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	MOJI MIRIM	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZKF-ZXD	1.080.949	5,150	5.566.887	1.707.949.011	0,32594%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ORLANDIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHB-ZOL	1.080.949	10,007	10.817.057	1.707.949.011	0,63334%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ORLANDIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZOL-ZKR	1.080.949	10,621	11.480.759	1.707.949.011	0,67220%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PAULINIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZIJ-ZOP	344.535	7,783	2.681.516	1.707.949.011	0,15700%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PAULINIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZOP-ZBL	344.535	1,943	669.432	1.707.949.011	0,03920%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PAULINIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZIJ-ZOP	1.080.949	7,783	8.413.026	1.707.949.011	0,49258%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PAULINIA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZOP-ZBL	1.080.949	1,943	2.100.284	1.707.949.011	0,12297%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PINDAMONHANGABA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	578.644	0,786	454.814	1.707.949.011	0,02663%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PINDAMONHANGABA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	578.644	5,965	3.451.611	1.707.949.011	0,20209%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PINDAMONHANGABA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FCT-FPG	578.644	6,277	3.632.148	1.707.949.011	0,21266%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	PINDAMONHANGABA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	578.644	6,406	3.706.793	1.707.949.011	0,21703%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	QUELUZ	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FEP-FQU	578.644	8,074	4.671.972	1.707.949.011	0,27354%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	QUELUZ	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FQU-FVQ	578.644	8,886	5.141.831	1.707.949.011	0,30105%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	QUELUZ	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FVQ-FCZ	578.644	0,538	311.310	1.707.949.011	0,01823%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	RIBEIRAO PRETO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZJN-ZRP	1.080.949	8,139	8.797.844	1.707.949.011	0,51511%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	RIBEIRAO PRETO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZRP-ZEG	1.080.949	8,721	9.426.956	1.707.949.011	0,55195%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	RIBEIRAO PRETO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZEG-ZEK	1.080.949	9,354	10.111.197	1.707.949.011	0,59201%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ROSEIRA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	578.644	4,609	2.666.970	1.707.949.011	0,15615%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	ROSEIRA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FRA-FPR	578.644	3,295	1.906.632	1.707.949.011	0,11163%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	SALES OLIVEIRA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZOL-ZKR	1.080.949	11,257	12.168.243	1.707.949.011	0,71245%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	SALES OLIVEIRA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZKR-ZJN	1.080.949	1,694	1.831.128	1.707.949.011	0,10721%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	SALTO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	578.644	1,322	764.967	1.707.949.011	0,04479%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	SALTO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZST-ZYU	578.644	6,821	3.946.931	1.707.949.011	0,23109%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SALTO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	344.535	1,322	455.475	1.707.949.011	0,02667%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SALTO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZST-ZYU	344.535	6,821	2.350.073	1.707.949.011	0,13760%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SALTO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	1.080.949	1,322	1.429.015	1.707.949.011	0,08367%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SALTO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZST-ZYU	1.080.949	6,821	7.373.153	1.707.949.011	0,43170%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SANTA RITA DO PASSA QUATRO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHM-ZTD	1.080.949	4,077	4.407.029	1.707.949.011	0,25803%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SANTA ROSA DE VITERBO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHI-ZHM	1.080.949	1,678	1.813.832	1.707.949.011	0,10620%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SANTA ROSA DE VITERBO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHM-ZTD	1.080.949	5,775	6.242.480	1.707.949.011	0,36550%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SANTO ANTONIO DE POSSE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZKF-ZXD	344.535	4,484	1.544.895	1.707.949.011	0,09045%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SANTO ANTONIO DE POSSE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXD-ZGE	344.535	5,791	1.995.202	1.707.949.011	0,11682%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SANTO ANTONIO DE POSSE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZKF-ZXD	1.080.949	4,484	4.846.975	1.707.949.011	0,28379%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SANTO ANTONIO DE POSSE	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZXD-ZGE	1.080.949	5,791	6.259.776	1.707.949.011	0,36651%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO JOAO DA BOA VISTA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZBA-ZHV	344.535	10,382	3.577.107	1.707.949.011	0,20944%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO JOAO DA BOA VISTA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHV-ZAI	344.535	19,452	6.701.895	1.707.949.011	0,39239%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO JOAQUIM DA BARRA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZGU-ZHB	1.080.949	5,674	6.133.305	1.707.949.011	0,35910%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO JOAQUIM DA BARRA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHB-ZOL	1.080.949	11,245	12.155.272	1.707.949.011	0,71169%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO JOSE DOS CAMPOS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	578.644	1,203	696.109	1.707.949.011	0,04076%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO JOSE DOS CAMPOS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FEA-FEG	578.644	1,763	1.020.149	1.707.949.011	0,05973%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO JOSE DOS CAMPOS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FEG-FEM	578.644	5,007	2.897.271	1.707.949.011	0,16963%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO JOSE DOS CAMPOS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FEM-FSJ	578.644	6,172	3.571.391	1.707.949.011	0,20910%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO JOSE DOS CAMPOS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	578.644	11,297	6.536.941	1.707.949.011	0,38274%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	578.644	11,722	6.782.865	1.707.949.011	0,39714%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OCE-OSG	578.644	11,424	6.610.429	1.707.949.011	0,38704%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OSG-IES	578.644	4,447	2.573.230	1.707.949.011	0,15066%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	IES-OBR	578.644	1,852	1.071.649	1.707.949.011	0,06274%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OBR-ORO	578.644	0,302	174.750	1.707.949.011	0,01023%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ORO-IPR	578.644	0,838	484.904	1.707.949.011	0,02839%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	IPR-OLU	578.644	1,181	683.379	1.707.949.011	0,04001%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OLU-OBF	578.644	3,711	2.147.348	1.707.949.011	0,12573%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OBF-IAB	578.644	3,653	2.113.787	1.707.949.011	0,12376%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	IAB-ILA	578.644	1,336	773.068	1.707.949.011	0,04526%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ILA-OPQ	578.644	0,985	569.964	1.707.949.011	0,03337%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OPQ-IPB	578.644	2,033	1.176.383	1.707.949.011	0,06888%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	IPB-OVC	578.644	3,087	1.786.274	1.707.949.011	0,10459%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OVC-OJA	578.644	1,772	1.025.357	1.707.949.011	0,06003%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OJA-IPE	578.644	6,576	3.805.163	1.707.949.011	0,22279%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO PAULO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	IPE-OCI	578.644	2,179	1.260.865	1.707.949.011	0,07382%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO SIMAO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZEK-ZCE	1.080.949	5,768	6.234.914	1.707.949.011	0,36505%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO SIMAO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZCE-ZHI	1.080.949	11,721	12.669.803	1.707.949.011	0,74181%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SAO SIMAO	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHI-ZHM	1.080.949	15,728	17.001.166	1.707.949.011	0,99541%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	SERRANA	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZEG-ZEK	1.080.949	5,451	5.892.253	1.707.949.011	0,34499%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	TAMBAU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZHM-ZTD	1.080.949	12,860	13.901.004	1.707.949.011	0,81390%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	TAMBAU	FCA	9	DF, GO, MG, RJ, SP	FCA, MRS	ZTD-ZKB	1.080.949	8,591	9.286.433	1.707.949.011	0,54372%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	TAUBATE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	578.644	3,718	2.151.398	1.707.949.011	0,12596%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	TAUBATE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FTA-FUI	578.644	5,900	3.414.000	1.707.949.011	0,19989%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	TAUBATE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	578.644	4,009	2.319.784	1.707.949.011	0,13582%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	TREMEMBE	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	578.644	4,213	2.437.827	1.707.949.011	0,14273%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	VALINHOS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVN-ZVH	578.644	4,331	2.506.107	1.707.949.011	0,14673%
MINÉRIO DE ALUMÍNIO	DF, GO, MC	VALINHOS	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVH-ZSX	578.644	4,883	2.825.519	1.707.949.011	0,16543%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VARZEA PAULISTA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OCL-OVP	578.644	3,300	1.909.525	1.707.949.011	0,11180%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VARZEA PAULISTA	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	OVP-ZIY	578.644	2,141	1.238.877	1.707.949.011	0,07254%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VINHEDO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZLV-ZVN	578.644	5,282	3.056.398	1.707.949.011	0,17895%
MINÉRIO DE ALUMÍNIO	DF, GO, MG	VINHEDO	MRS	9	DF, GO, MG, RJ, SP	FCA, MRS	ZVN-ZVH	578.644	3,314	1.917.626	1.707.949.011	0,11228%
MINÉRIO DE COBRE	MA, PA	ACAILANDIA	EFC	10	MA, PA	EFC	QMA-QAL	727.806	21,089	15.348.701	632.870.258	2,42525%
MINÉRIO DE COBRE	MA, PA	ACAILANDIA	EFC	10	MA, PA	EFC	QAL-QNV	727.806	93,024	67.703.425	632.870.258	10,69784%
MINÉRIO DE COBRE	MA, PA	ALTO ALEGRE DO PINDARE	EFC	10	MA, PA	EFC	QNV-QSI	727.806	85,709	62.379.524	632.870.258	9,85661%
MINÉRIO DE COBRE	MA, PA	ANAJATUBA	EFC	10	MA, PA	EFC	QSI-QRO	727.806	20,553	14.958.597	632.870.258	2,36361%
MINÉRIO DE COBRE	MA, PA	ARARI	EFC	10	MA, PA	EFC	QSI-QRO	727.806	26,677	19.415.681	632.870.258	3,06788%
MINÉRIO DE COBRE	MA, PA	BACABEIRA	EFC	10	MA, PA	EFC	QSI-QRO	727.806	19,722	14.353.790	632.870.258	2,26805%
MINÉRIO DE COBRE	MA, PA	BACABEIRA	EFC	10	MA, PA	EFC	QRO-QPM	727.806	20,405	14.850.881	632.870.258	2,34659%
MINÉRIO DE COBRE	MA, PA	BOM JARDIM	EFC	10	MA, PA	EFC	QNV-QSI	727.806	5,860	4.264.943	632.870.258	0,67390%
MINÉRIO DE COBRE	MA, PA	BOM JESUS DAS SELVAS	EFC	10	MA, PA	EFC	QAL-QNV	727.806	28,940	21.062.706	632.870.258	3,32812%
MINÉRIO DE COBRE	MA, PA	BOM JESUS DAS SELVAS	EFC	10	MA, PA	EFC	QNV-QSI	727.806	20,241	14.731.521	632.870.258	2,32773%
MINÉRIO DE COBRE	MA, PA	BURITICUPU	EFC	10	MA, PA	EFC	QNV-QSI	727.806	28,360	20.640.578	632.870.258	3,26142%
MINÉRIO DE COBRE	MA, PA	CIDELANDIA	EFC	10	MA, PA	EFC	QMA-QAL	727.806	46,879	34.118.817	632.870.258	5,39112%
MINÉRIO DE COBRE	MA, PA	IGARAPE DO MEIO	EFC	10	MA, PA	EFC	QSI-QRO	727.806	26,165	19.043.044	632.870.258	3,00900%
MINÉRIO DE COBRE	MA, PA	ITAPECURU MIRIM	EFC	10	MA, PA	EFC	QSI-QRO	727.806	13,156	9.575.016	632.870.258	1,51295%
MINÉRIO DE COBRE	MA, PA	ITINGA DO MARANHÃO	EFC	10	MA, PA	EFC	QAL-QNV	727.806	7,583	5.518.953	632.870.258	0,87205%
MINÉRIO DE COBRE	MA, PA	MIRANDA DO NORTE	EFC	10	MA, PA	EFC	QSI-QRO	727.806	8,322	6.056.802	632.870.258	0,95704%
MINÉRIO DE COBRE	MA, PA	MONCAO	EFC	10	MA, PA	EFC	QSI-QRO	727.806	12,915	9.399.614	632.870.258	1,48524%
MINÉRIO DE COBRE	MA, PA	PINDARE-MIRIM	EFC	10	MA, PA	EFC	QNV-QSI	727.806	12,708	9.248.959	632.870.258	1,46143%
MINÉRIO DE COBRE	MA, PA	SANTA INES	EFC	10	MA, PA	EFC	QNV-QSI	727.806	1,614	1.174.679	632.870.258	0,18561%
MINÉRIO DE COBRE	MA, PA	SANTA INES	EFC	10	MA, PA	EFC	QSI-QRO	727.806	9,590	6.979.660	632.870.258	1,10286%
MINÉRIO DE COBRE	MA, PA	SANTA LUZIA	EFC	10	MA, PA	EFC	QNV-QSI	727.806	4,290	3.122.288	632.870.258	0,49335%
MINÉRIO DE COBRE	MA, PA	SANTA RITA	EFC	10	MA, PA	EFC	QSI-QRO	727.806	14,855	10.811.558	632.870.258	1,70834%
MINÉRIO DE COBRE	MA, PA	SAO FRANCISCO DO BREJAO	EFC	10	MA, PA	EFC	QMA-QAL	727.806	5,042	3.669.598	632.870.258	0,57983%
MINÉRIO DE COBRE	MA, PA	SAO LUIS	EFC	10	MA, PA	EFC	QRO-QPM	727.806	18,639	13.565.576	632.870.258	2,14350%
MINÉRIO DE COBRE	MA, PA	SAO LUIS	EFC	10	MA, PA	EFC	QPM-APB	727.806	7,100	5.167.423	632.870.258	0,81651%
MINÉRIO DE COBRE	MA, PA	SAO LUIS	EFC	10	MA, PA	EFC	APB-ABL	727.806	0,700	509.464	632.870.258	0,08050%
MINÉRIO DE COBRE	MA, PA	SAO LUIS	EFC	10	MA, PA	EFC	ABL-A03	727.806	0,300	218.342	632.870.258	0,03450%
MINÉRIO DE COBRE	MA, PA	SAO LUIS	EFC	10	MA, PA	EFC	A03-A99	727.806	1,466	1.066.964	632.870.258	0,16859%
MINÉRIO DE COBRE	MA, PA	SAO LUIS	EFC	10	MA, PA	EFC	A99-QCO	727.806	1,017	740.179	632.870.258	0,11696%
MINÉRIO DE COBRE	MA, PA	SAO PEDRO DA AGUA BRANCA	EFC	10	MA, PA	EFC	QMA-QAL	727.806	48,422	35.241.822	632.870.258	5,56857%
MINÉRIO DE COBRE	MA, PA	TUFILANDIA	EFC	10	MA, PA	EFC	QNV-QSI	727.806	14,416	10.492.051	632.870.258	1,65785%
MINÉRIO DE COBRE	MA, PA	VILA NOVA DOS MARTIROS	EFC	10	MA, PA	EFC	QMA-QAL	727.806	34,957	25.441.914	632.870.258	4,02008%
MINÉRIO DE COBRE	MA, PA	VITORIA DO MEARIM	EFC	10	MA, PA	EFC	QSI-QRO	727.806	21,479	15.632.545	632.870.258	2,47010%
MINÉRIO DE COBRE	MA, PA	BOM JESUS DO TO	EFC	10	MA, PA	EFC	QMA-QAL	727.806	42,939	31.251.262	632.870.258	4,93802%
MINÉRIO DE COBRE	MA, PA	CURIONOPOLIS	EFC	10	MA, PA	EFC	QRS-QSL	727.806	5,346	3.890.851	632.870.258	0,61479%
MINÉRIO DE COBRE	MA, PA	MARABA	EFC	10	MA, PA	EFC	QRS-QSL	727.806	1,395	1.015.289	632.870.258	0,16043%
MINÉRIO DE COBRE	MA, PA	MARABA	EFC	10	MA, PA	EFC	QSL-QMA	727.806	99,202	72.199.811	632.870.258	11,40831%
MINÉRIO DE COBRE	MA, PA	MARABA	EFC	10	MA, PA	EFC	QMA-QAL	727.806	22,128	16.104.891	632.870.258	2,54474%
MINÉRIO DE COBRE	MA, PA	PARAUPEBAS	EFC	10	MA, PA	EFC	QPA-QRS	727.806	0,422	307.134	632.870.258	0,04853%
MINÉRIO DE COBRE	MA, PA	PARAUPEBAS	EFC	10	MA, PA	EFC	QRS-QSL	727.806	15,932	11.595.405	632.870.258	1,83219%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	11	BA	FCA	DLM-DAF	264.376	15,420	4.076.678	98.622.362	4,13362%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	11	BA	FCA	DAF-DIA	264.376	22,846	6.039.934	98.622.362	6,12430%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	11	BA	FCA	DIA-D10	264.376	4,528	1.197.095	98.622.362	1,21382%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	11	BA	FCA	DLM-DAF	50.487	15,420	778.510	98.622.362	0,78938%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	11	BA	FCA	DAF-DIA	50.487	22,846	1.153.426	98.622.362	1,16954%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	11	BA	FCA	DIA-D10	50.487	4,528	228.605	98.622.362	0,23180%
MINÉRIO DE CROMO	BA	ALAGOINHAS	FCA	11	BA	FCA	DAM-DSF	264.376	10,476	2.769.603	98.622.362	2,80829%
MINÉRIO DE CROMO	BA	ALAGOINHAS	FCA	11	BA	FCA	DSF-DNV	264.376	12,876	3.404.105	98.622.362	3,45166%
MINÉRIO DE CROMO	BA	ALAGOINHAS	FCA	11	BA	FCA	DAM-DSF	50.487	10,476	528.902	98.622.362	0,53629%
MINÉRIO DE CROMO	BA	ALAGOINHAS	FCA	11	BA	FCA	DSF-DNV	50.487	12,876	650.071	98.622.362	0,65915%
MINÉRIO DE CROMO	BA	ANTONIO GONCALVES	FCA	11	BA	FCA	DCF-DGS	50.487	8,520	430.149	98.622.362	0,43616%
MINÉRIO DE CROMO	BA	ANTONIO GONCALVES	FCA	11	BA	FCA	DGS-DBO	50.487	9,797	494.621	98.622.362	0,50153%
MINÉRIO DE CROMO	BA	ARACI	FCA	11	BA	FCA	DWL-DFT	264.376	0,066	17.449	98.622.362	0,01769%
MINÉRIO DE CROMO	BA	ARACI	FCA	11	BA	FCA	DWL-DFT	50.487	0,066	3.332	98.622.362	0,00338%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	11	BA	FCA	DIA-D10	264.376	6,670	1.763.388	98.622.362	1,78802%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	11	BA	FCA	D10-DAM	264.376	16,920	4.473.242	98.622.362	4,53573%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	11	BA	FCA	DAM-DSF	264.376	3,148	832.256	98.622.362	0,84388%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	11	BA	FCA	DIA-D10	50.487	6,670	336.748	98.622.362	0,34145%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	11	BA	FCA	D10-DAM	50.487	16,920	854.240	98.622.362	0,86617%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	11	BA	FCA	DAM-DSF	50.487	3,148	158.933	98.622.362	0,16115%
MINÉRIO DE CROMO	BA	BARROCAS	FCA	11	BA	FCA	DWL-DFT	264.376	9,253	2.446.271	98.622.362	2,48044%
MINÉRIO DE CROMO	BA	BARROCAS	FCA	11	BA	FCA	DFT-DSH	264.376	5,696	1.505.886	98.622.362	1,52692%
MINÉRIO DE CROMO	BA	BARROCAS	FCA	11	BA	FCA	DWL-DFT	50.487	9,253	467.156	98.622.362	0,47368%
MINÉRIO DE CROMO	BA	BARROCAS	FCA	11	BA	FCA	DFT-DSH	50.487	5,696	287.574	98.622.362	0,29159%
MINÉRIO DE CROMO	BA	CAMPO FORMOSO	FCA	11	BA	FCA	DCF-DGS	50.487	1,406	70.985	98.622.362	0,07198%
MINÉRIO DE CROMO	BA	CATU	FCA	11	BA	FCA	DSF-DNV	264.376	2,055	543.293	98.622.362	0,55088%
MINÉRIO DE CROMO	BA	CATU	FCA	11	BA	FCA	DNV-DUL	264.376	7,364	1.946.865	98.622.362	1,97406%
MINÉRIO DE CROMO	BA	CATU	FCA	11	BA	FCA	DUL-DKT	264.376	7,345	1.941.842	98.622.362	1,96897%
MINÉRIO DE CROMO	BA	CATU	FCA	11	BA	FCA	DKT-DWG	264.376	4,139	1.094.252	98.622.362	1,10954%
MINÉRIO DE CROMO	BA	CATU	FCA	11	BA	FCA	DSF-DNV	50.487	2,055	103.751	98.622.362	0,10520%
MINÉRIO DE CROMO	BA	CATU	FCA	11	BA	FCA	DNV-DUL	50.487	7,364	371.786	98.622.362	0,37698%
MINÉRIO DE CROMO	BA	CATU	FCA	11	BA	FCA	DUL-DKT	50.487	7,345	370.827	98.622.362	0,37601%
MINÉRIO DE CROMO	BA	CATU	FCA	11	BA	FCA	DKT-DWG	50.487	4,139	208.966	98.622.362	0,21188%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	11	BA	FCA	DSI-D26	264.376	0,311	82.221	98.622.362	0,08337%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	11	BA	FCA	D26-DWL	264.376	15,740	4.161.278	98.622.362	4,21941%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	11	BA	FCA	DWL-DFT	264.376	7,914	2.092.272	98.622.362	2,12150%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	11	BA	FCA	DSI-D26	50.487	0,311	15.701	98.622.362	0,01592%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	11	BA	FCA	D26-DWL	50.487	15,740	794.665	98.622.362	0,80577%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	11	BA	FCA	DWL-DFT	50.487	7,914	399.554	98.622.362	0,40514%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	11	BA	FCA	DHT-D12	264.376	23,600	6.239.274	98.622.362	6,32643%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	11	BA	FCA	D12-DQM	264.376	14,053	3.715.276	98.622.362	3,76717%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	11	BA	FCA	DQE-DHT	50.487	21,113	1.065.932	98.622.362	1,08082%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	11	BA	FCA	DHT-D12	50.487	23,600	1.191.493	98.622.362	1,20814%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	11	BA	FCA	D12-DQM	50.487	14,053	709.494	98.622.362	0,71940%
MINÉRIO DE CROMO	BA	LAMARAO	FCA	11	BA	FCA	DSH-DLM	264.376	7,690	2.033.051	98.622.362	2,06145%
MINÉRIO DE CROMO	BA	LAMARAO	FCA	11	BA	FCA	DLM-DAF	264.376	2,242	592.731	98.622.362	0,60101%
MINÉRIO DE CROMO	BA	LAMARAO	FCA	11	BA	FCA	DSH-DLM	50.487	7,690	388.245	98.622.362	0,39367%
MINÉRIO DE CROMO	BA	LAMARAO	FCA	11	BA	FCA	DLM-DAF	50.487	2,242	113.192	98.622.362	0,11477%
MINÉRIO DE CROMO	BA	OURICANGAS	FCA	11	BA	FCA	DAF-DIA	264.376	0,157	41.507	98.622.362	0,04209%
MINÉRIO DE CROMO	BA	OURICANGAS	FCA	11	BA	FCA	DIA-D10	264.376	0,401	106.015	98.622.362	0,10750%
MINÉRIO DE CROMO	BA	OURICANGAS	FCA	11	BA	FCA	DAF-DIA	50.487	0,157	7.926	98.622.362	0,00804%
MINÉRIO DE CROMO	BA	OURICANGAS	FCA	11	BA	FCA	DIA-D10	50.487	0,401	20.245	98.622.362	0,02053%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE CROMO	BA	POJUCA	FCA	11	BA	FCA	DKT-DWG	264.376	2,432	642.962	98.622.362	0,65194%
MINÉRIO DE CROMO	BA	POJUCA	FCA	11	BA	FCA	DWG-DIX	264.376	1,878	496.498	98.622.362	0,50343%
MINÉRIO DE CROMO	BA	POJUCA	FCA	11	BA	FCA	DKT-DWG	50.487	2,432	122.784	98.622.362	0,12450%
MINÉRIO DE CROMO	BA	POJUCA	FCA	11	BA	FCA	DWG-DIX	50.487	1,878	94.815	98.622.362	0,09614%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	11	BA	FCA	D12-DQM	264.376	4,305	1.138.139	98.622.362	1,15404%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	11	BA	FCA	DQM-D11	264.376	19,819	5.239.668	98.622.362	5,31286%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	11	BA	FCA	D11-DSI	264.376	1,517	401.058	98.622.362	0,40666%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	11	BA	FCA	D12-DQM	50.487	4,305	217.347	98.622.362	0,22038%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	11	BA	FCA	DQM-D11	50.487	19,819	1.000.602	98.622.362	1,01458%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	11	BA	FCA	D11-DSI	50.487	1,517	76.589	98.622.362	0,07766%
MINÉRIO DE CROMO	BA	SANTALUZ	FCA	11	BA	FCA	D11-DSI	264.376	24,934	6.591.951	98.622.362	6,68403%
MINÉRIO DE CROMO	BA	SANTALUZ	FCA	11	BA	FCA	DSI-D26	264.376	17,381	4.595.119	98.622.362	4,65931%
MINÉRIO DE CROMO	BA	SANTALUZ	FCA	11	BA	FCA	D11-DSI	50.487	24,934	1.258.843	98.622.362	1,27643%
MINÉRIO DE CROMO	BA	SANTALUZ	FCA	11	BA	FCA	DSI-D26	50.487	17,381	877.515	98.622.362	0,88977%
MINÉRIO DE CROMO	BA	SENHOR DO BONFIM	FCA	11	BA	FCA	DGS-DBO	50.487	11,219	566.414	98.622.362	0,57433%
MINÉRIO DE CROMO	BA	SENHOR DO BONFIM	FCA	11	BA	FCA	DBO-DQE	50.487	25,072	1.265.810	98.622.362	1,28349%
MINÉRIO DE CROMO	BA	SENHOR DO BONFIM	FCA	11	BA	FCA	DQE-DHT	50.487	6,156	310.798	98.622.362	0,31514%
MINÉRIO DE CROMO	BA	SERRINHA	FCA	11	BA	FCA	DFT-DSH	264.376	12,449	3.291.217	98.622.362	3,33719%
MINÉRIO DE CROMO	BA	SERRINHA	FCA	11	BA	FCA	DSH-DLM	264.376	14,244	3.765.772	98.622.362	3,81838%
MINÉRIO DE CROMO	BA	SERRINHA	FCA	11	BA	FCA	DFT-DSH	50.487	12,449	628.513	98.622.362	0,63729%
MINÉRIO DE CROMO	BA	SERRINHA	FCA	11	BA	FCA	DSH-DLM	50.487	14,244	719.137	98.622.362	0,72918%
MINÉRIO DE FERRO	BA, ES, MG	ARACATU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUV-DOV	464.959	12,229	5.685.984	109.087.901.658	0,00521%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DA ESTIVA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKY-DWN	464.959	0,398	185.054	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DA ESTIVA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DWN-DZU	464.959	14,965	6.958.111	109.087.901.658	0,00638%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DMD-DKZ	464.959	5,014	2.331.304	109.087.901.658	0,00214%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKZ-DRU	464.959	8,486	3.945.642	109.087.901.658	0,00362%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DRU-DCB	464.959	9,542	4.436.639	109.087.901.658	0,00407%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DCB-DUV	464.959	16,911	7.862.922	109.087.901.658	0,00721%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUV-DOV	464.959	5,369	2.496.365	109.087.901.658	0,00229%
MINÉRIO DE FERRO	BA, ES, MG	CACULE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DPL-DKC	464.959	28,222	13.122.073	109.087.901.658	0,01203%
MINÉRIO DE FERRO	BA, ES, MG	CACULE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKC-DDH	464.959	9,628	4.476.625	109.087.901.658	0,00410%
MINÉRIO DE FERRO	BA, ES, MG	CASTRO ALVES	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTT-DVS	464.959	10,765	5.005.284	109.087.901.658	0,00459%
MINÉRIO DE FERRO	BA, ES, MG	CONTENDAS DO SINCORA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DHX-DFC	464.959	18,329	8.522.234	109.087.901.658	0,00781%
MINÉRIO DE FERRO	BA, ES, MG	CONTENDAS DO SINCORA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DFC-DKY	464.959	14,033	6.524.770	109.087.901.658	0,00598%
MINÉRIO DE FERRO	BA, ES, MG	CONTENDAS DO SINCORA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKY-DWN	464.959	24,397	11.343.605	109.087.901.658	0,01040%
MINÉRIO DE FERRO	BA, ES, MG	FCA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DVS-DMB	464.959	42,505	19.763.082	109.087.901.658	0,01812%
MINÉRIO DE FERRO	BA, ES, MG	IACU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTM-DPW	464.959	21,599	10.042.649	109.087.901.658	0,00921%
MINÉRIO DE FERRO	BA, ES, MG	IACU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DPW-DZA	464.959	5,631	2.618.184	109.087.901.658	0,00240%
MINÉRIO DE FERRO	BA, ES, MG	IACU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DZA-DIL	464.959	18,102	8.416.688	109.087.901.658	0,00772%
MINÉRIO DE FERRO	BA, ES, MG	IACU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DIL-DLG	464.959	39,275	18.261.265	109.087.901.658	0,01674%
MINÉRIO DE FERRO	BA, ES, MG	IACU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DLG-DTT	464.959	8,131	3.780.582	109.087.901.658	0,00347%
MINÉRIO DE FERRO	BA, ES, MG	IRAMAIA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DWN-DZU	464.959	10,666	4.959.253	109.087.901.658	0,00455%
MINÉRIO DE FERRO	BA, ES, MG	IRAMAIA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DZU-DIY	464.959	39,500	18.365.881	109.087.901.658	0,01684%
MINÉRIO DE FERRO	BA, ES, MG	IRAMAIA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DIY-DQI	464.959	9,444	4.391.073	109.087.901.658	0,00403%
MINÉRIO DE FERRO	BA, ES, MG	ITATIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DLG-DTT	464.959	11,219	5.216.375	109.087.901.658	0,00478%
MINÉRIO DE FERRO	BA, ES, MG	ITATIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTT-DVS	464.959	5,284	2.456.843	109.087.901.658	0,00225%
MINÉRIO DE FERRO	BA, ES, MG	ITUACU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUV-DOV	464.959	1,419	659.777	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	JACARACI	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DPL-DKC	464.959	0,847	393.820	109.087.901.658	0,00036%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	LICINIO DE ALMEIDA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DLL-DPL	464.959	18,181	8.453.420	109.087.901.658	0,00775%
MINÉRIO DE FERRO	BA, ES, MG	LICINIO DE ALMEIDA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DPL-DKC	464.959	1,463	680.235	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	LICINIO DE ALMEIDA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DLL-DEO	20.854	15,853	330.598	109.087.901.658	0,00030%
MINÉRIO DE FERRO	BA, ES, MG	LICINIO DE ALMEIDA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DEO-DUN	20.854	0,655	13.659	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	MALHADA DE PEDRAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDH-DMD	464.959	3,292	1.530.645	109.087.901.658	0,00140%
MINÉRIO DE FERRO	BA, ES, MG	MALHADA DE PEDRAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DMD-DKZ	464.959	21,458	9.977.090	109.087.901.658	0,00915%
MINÉRIO DE FERRO	BA, ES, MG	MARCIONILIO SOUZA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DIY-DQI	464.959	35,185	16.359.582	109.087.901.658	0,01500%
MINÉRIO DE FERRO	BA, ES, MG	MARCIONILIO SOUZA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DQI-DTM	464.959	28,886	13.430.806	109.087.901.658	0,01231%
MINÉRIO DE FERRO	BA, ES, MG	MARCIONILIO SOUZA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTM-DPW	464.959	5,957	2.769.761	109.087.901.658	0,00254%
MINÉRIO DE FERRO	BA, ES, MG	RIO DO ANTONIO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKC-DDH	464.959	12,089	5.620.889	109.087.901.658	0,00515%
MINÉRIO DE FERRO	BA, ES, MG	RIO DO ANTONIO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDH-DMD	464.959	24,093	11.202.257	109.087.901.658	0,01027%
MINÉRIO DE FERRO	BA, ES, MG	SANTA TERESINHA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTT-DVS	464.959	19,840	9.224.787	109.087.901.658	0,00846%
MINÉRIO DE FERRO	BA, ES, MG	TANHACU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUV-DOV	464.959	5,560	2.585.172	109.087.901.658	0,00237%
MINÉRIO DE FERRO	BA, ES, MG	TANHACU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DOV-DHX	464.959	11,529	5.360.512	109.087.901.658	0,00491%
MINÉRIO DE FERRO	BA, ES, MG	TANHACU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DHX-DFC	464.959	16,454	7.650.435	109.087.901.658	0,00701%
MINÉRIO DE FERRO	BA, ES, MG	URANDI	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DEO-DUN	20.854	29,706	619.489	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	URANDI	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUN-DEN	20.854	18,356	382.796	109.087.901.658	0,00035%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VMC	9.877	10,724	105.921	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VBG	9.877	10,937	108.025	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VAY	9.877	4,087	40.367	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	1.702.127	4,087	6.956.593	109.087.901.658	0,00638%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	1.702.127	10,937	18.616.163	109.087.901.658	0,01707%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	1.702.127	10,724	18.253.610	109.087.901.658	0,01673%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	18.062.495	4,087	73.821.417	109.087.901.658	0,06767%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	18.062.495	10,937	197.549.508	109.087.901.658	0,18109%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	18.062.495	10,724	193.702.196	109.087.901.658	0,17757%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	21.380.399	4,087	87.381.691	109.087.901.658	0,08010%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	21.380.399	10,937	233.837.424	109.087.901.658	0,21436%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	21.380.399	10,724	229.283.399	109.087.901.658	0,21018%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	10.601.866	4,087	43.329.826	109.087.901.658	0,03972%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	10.601.866	10,937	115.952.608	109.087.901.658	0,10629%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	10.601.866	10,724	113.694.411	109.087.901.658	0,10422%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	7.831.444	4,087	32.007.112	109.087.901.658	0,02934%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	7.831.444	10,937	85.652.503	109.087.901.658	0,07852%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	7.831.444	10,724	83.984.405	109.087.901.658	0,07699%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	4.554.324	4,087	18.613.522	109.087.901.658	0,01706%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	4.554.324	10,937	49.810.642	109.087.901.658	0,04566%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	4.554.324	10,724	48.840.571	109.087.901.658	0,04477%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	22.613	4,087	92.419	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	22.613	10,937	247.318	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	22.613	10,724	242.502	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	12.308.312	4,087	50.304.071	109.087.901.658	0,04611%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	12.308.312	10,937	134.616.008	109.087.901.658	0,12340%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	12.308.312	10,724	131.994.338	109.087.901.658	0,12100%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	277.740	4,087	1.135.123	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	277.740	10,937	3.037.642	109.087.901.658	0,00278%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	277.740	10,724	2.978.484	109.087.901.658	0,00273%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VMC	314.966	10,724	3.377.695	109.087.901.658	0,00310%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VBG	314.966	10,937	3.444.783	109.087.901.658	0,00316%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VAY	314.966	4,087	1.287.266	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	2.254.606	4,087	9.214.575	109.087.901.658	0,00845%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	2.254.606	10,937	24.658.626	109.087.901.658	0,02260%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	2.254.606	10,724	24.178.395	109.087.901.658	0,02216%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	175.611	4,087	717.722	109.087.901.658	0,00066%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	175.611	10,937	1.920.658	109.087.901.658	0,00176%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	175.611	10,724	1.883.252	109.087.901.658	0,00173%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	5.767	4,087	23.570	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	5.767	10,937	63.074	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BAIXO GUANDU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	5.767	10,724	61.845	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPN-VFH	9.877	5,344	52.783	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFH-VEA	9.877	6,366	62.877	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VEA-V03	9.877	2,662	26.293	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	9.877	1,418	14.006	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	133.400	1,418	189.161	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	133.400	0,843	112.456	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	1.702.127	1,418	2.413.616	109.087.901.658	0,00221%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	1.702.127	0,843	1.434.893	109.087.901.658	0,00132%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	18.062.495	1,418	25.612.618	109.087.901.658	0,02348%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	18.062.495	0,843	15.226.683	109.087.901.658	0,01396%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPN-VFH	9.424	5,344	50.362	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFH-VEA	9.424	6,366	59.993	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VEA-V03	9.424	2,662	25.087	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	9.424	0,843	7.944	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	70.452	0,843	59.391	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VEA	70.452	2,662	187.543	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VEA-VFH	70.452	6,366	448.497	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFH-VPN	70.452	5,344	376.495	109.087.901.658	0,00035%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	21.380.399	1,418	30.317.406	109.087.901.658	0,02779%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	21.380.399	0,843	18.023.676	109.087.901.658	0,01652%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	10.601.866	1,418	15.033.446	109.087.901.658	0,01378%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	10.601.866	0,843	8.937.373	109.087.901.658	0,00819%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	7.831.444	1,418	11.104.988	109.087.901.658	0,01018%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	7.831.444	0,843	6.601.907	109.087.901.658	0,00605%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	4.554.324	1,418	6.458.031	109.087.901.658	0,00592%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	4.554.324	0,843	3.839.295	109.087.901.658	0,00352%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	12.308.312	1,418	17.453.186	109.087.901.658	0,01600%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	12.308.312	0,843	10.375.907	109.087.901.658	0,00951%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	65.314	0,843	55.060	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	65.314	1,418	92.615	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	314.966	0,843	265.516	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	314.966	1,418	446.622	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	2.254.606	1,418	3.197.031	109.087.901.658	0,00293%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	2.254.606	0,843	1.900.633	109.087.901.658	0,00174%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	175.611	1,418	249.016	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	175.611	0,843	148.040	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	7.561	0,843	6.374	109.087.901.658	0,00001%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	7.561	1,418	10.721	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	5.767	1,418	8.178	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CARIACICA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	5.767	0,843	4.862	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VCL	9.877	37,338	368.787	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VIA	9.877	20,942	206.844	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VMC	9.877	0,830	8.198	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	1.702.127	0,830	1.412.765	109.087.901.658	0,00130%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	1.702.127	20,942	35.645.944	109.087.901.658	0,03268%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	1.702.127	37,338	63.554.018	109.087.901.658	0,05826%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	18.062.495	0,830	14.991.871	109.087.901.658	0,01374%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	18.062.495	20,942	378.264.770	109.087.901.658	0,34675%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	18.062.495	37,338	674.417.438	109.087.901.658	0,61823%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	21.380.399	0,830	17.745.731	109.087.901.658	0,01627%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	21.380.399	20,942	447.748.316	109.087.901.658	0,41045%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	21.380.399	37,338	798.301.338	109.087.901.658	0,73180%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	10.601.866	0,830	8.799.549	109.087.901.658	0,00807%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	10.601.866	20,942	222.024.278	109.087.901.658	0,20353%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	10.601.866	37,338	395.852.473	109.087.901.658	0,36287%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	7.831.444	0,830	6.500.099	109.087.901.658	0,00596%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	7.831.444	20,942	164.006.100	109.087.901.658	0,15034%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	7.831.444	37,338	292.410.456	109.087.901.658	0,26805%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	4.554.324	0,830	3.780.089	109.087.901.658	0,00347%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	4.554.324	20,942	95.376.653	109.087.901.658	0,08743%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	4.554.324	37,338	170.049.350	109.087.901.658	0,15588%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	22.613	0,830	18.769	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	22.613	20,942	473.561	109.087.901.658	0,00043%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	22.613	37,338	844.324	109.087.901.658	0,00077%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	12.308.312	0,830	10.215.899	109.087.901.658	0,00936%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	12.308.312	20,942	257.760.670	109.087.901.658	0,23629%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	12.308.312	37,338	459.567.753	109.087.901.658	0,42128%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	277.740	0,830	230.524	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	277.740	20,942	5.816.431	109.087.901.658	0,00533%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	277.740	37,338	10.370.256	109.087.901.658	0,00951%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VCL	314.966	37,338	11.760.201	109.087.901.658	0,01078%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VIA	314.966	20,942	6.596.018	109.087.901.658	0,00605%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VMC	314.966	0,830	261.422	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	2.254.606	0,830	1.871.323	109.087.901.658	0,00172%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	2.254.606	20,942	47.215.959	109.087.901.658	0,04328%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	2.254.606	37,338	84.182.479	109.087.901.658	0,07717%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	175.611	0,830	145.757	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	175.611	20,942	3.677.646	109.087.901.658	0,00337%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	175.611	37,338	6.556.964	109.087.901.658	0,00601%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	5.767	0,830	4.787	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	5.767	20,942	120.773	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	COLATINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	5.767	37,338	215.328	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	9.877	9,628	95.096	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAR	9.877	4,258	42.056	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	133.400	4,258	568.017	109.087.901.658	0,00052%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	133.400	9,628	1.284.375	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	1.702.127	4,258	7.247.657	109.087.901.658	0,00664%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	1.702.127	9,628	16.388.079	109.087.901.658	0,01502%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	18.062.495	4,258	76.910.104	109.087.901.658	0,07050%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	18.062.495	9,628	173.905.702	109.087.901.658	0,15942%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	21.380.399	4,258	91.037.739	109.087.901.658	0,08345%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	21.380.399	9,628	205.850.482	109.087.901.658	0,18870%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	10.601.866	4,258	45.142.745	109.087.901.658	0,04138%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	10.601.866	9,628	102.074.766	109.087.901.658	0,09357%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	7.831.444	4,258	33.346.289	109.087.901.658	0,03057%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	7.831.444	9,628	75.401.143	109.087.901.658	0,06912%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	4.554.324	4,258	19.392.312	109.087.901.658	0,01778%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	4.554.324	9,628	43.849.031	109.087.901.658	0,04020%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	12.308.312	4,258	52.408.792	109.087.901.658	0,04804%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	12.308.312	9,628	118.504.428	109.087.901.658	0,10863%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	65.314	9,628	628.843	109.087.901.658	0,00058%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAR	65.314	4,258	278.107	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	314.966	9,628	3.032.493	109.087.901.658	0,00278%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAR	314.966	4,258	1.341.125	109.087.901.658	0,00123%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	2.254.606	4,258	9.600.112	109.087.901.658	0,00880%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	2.254.606	9,628	21.707.347	109.087.901.658	0,01990%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	175.611	4,258	747.752	109.087.901.658	0,00069%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	175.611	9,628	1.690.783	109.087.901.658	0,00155%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	5.767	4,258	24.556	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	FUNDAO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	5.767	9,628	55.525	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAR	9.877	9,945	98.227	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VPA	9.877	7,936	78.384	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	133.400	7,936	1.058.662	109.087.901.658	0,00097%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	133.400	9,945	1.326.663	109.087.901.658	0,00122%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	1.702.127	7,936	13.508.080	109.087.901.658	0,01238%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	1.702.127	9,945	16.927.653	109.087.901.658	0,01552%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	18.062.495	7,936	143.343.960	109.087.901.658	0,13140%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	18.062.495	9,945	179.631.513	109.087.901.658	0,16467%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	21.380.399	7,936	169.674.846	109.087.901.658	0,15554%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	21.380.399	9,945	212.628.068	109.087.901.658	0,19491%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	10.601.866	7,936	84.136.409	109.087.901.658	0,07713%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	10.601.866	9,945	105.435.557	109.087.901.658	0,09665%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	7.831.444	7,936	62.150.340	109.087.901.658	0,05697%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	7.831.444	9,945	77.883.711	109.087.901.658	0,07140%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	4.554.324	7,936	36.143.115	109.087.901.658	0,03313%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	4.554.324	9,945	45.292.752	109.087.901.658	0,04152%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	12.308.312	7,936	97.678.764	109.087.901.658	0,08954%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	12.308.312	9,945	122.406.163	109.087.901.658	0,11221%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAR	65.314	9,945	649.548	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VPA	65.314	7,936	518.332	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAR	314.966	9,945	3.132.337	109.087.901.658	0,00287%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VPA	314.966	7,936	2.499.570	109.087.901.658	0,00229%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	2.254.606	7,936	17.892.553	109.087.901.658	0,01640%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	2.254.606	9,945	22.422.057	109.087.901.658	0,02055%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	175.611	7,936	1.393.649	109.087.901.658	0,00128%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	175.611	9,945	1.746.451	109.087.901.658	0,00160%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	5.767	7,936	45.767	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	IBIRACU	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	5.767	9,945	57.353	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VPA	9.877	1,640	16.198	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VCL	9.877	18,836	186.043	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	133.400	1,640	218.776	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	1.702.127	18,836	32.061.264	109.087.901.658	0,02939%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	1.702.127	1,640	2.791.488	109.087.901.658	0,00256%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	18.062.495	18,836	340.225.156	109.087.901.658	0,31188%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	18.062.495	1,640	29.622.492	109.087.901.658	0,02715%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	21.380.399	18,836	402.721.196	109.087.901.658	0,36917%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	21.380.399	1,640	35.063.854	109.087.901.658	0,03214%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	10.601.866	18,836	199.696.748	109.087.901.658	0,18306%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	10.601.866	1,640	17.387.060	109.087.901.658	0,01594%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	7.831.444	18,836	147.513.079	109.087.901.658	0,13522%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	7.831.444	1,640	12.843.568	109.087.901.658	0,01177%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	4.554.324	18,836	85.785.247	109.087.901.658	0,07864%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	4.554.324	1,640	7.469.091	109.087.901.658	0,00685%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	22.613	18,836	425.938	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	12.308.312	18,836	231.839.365	109.087.901.658	0,21253%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	12.308.312	1,640	20.185.632	109.087.901.658	0,01850%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	277.740	18,836	5.231.511	109.087.901.658	0,00480%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VPA	65.314	1,640	107.115	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VPA	314.966	1,640	516.544	109.087.901.658	0,00047%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VCL	314.966	18,836	5.932.700	109.087.901.658	0,00544%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	2.254.606	18,836	42.467.759	109.087.901.658	0,03893%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	2.254.606	1,640	3.697.554	109.087.901.658	0,00339%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	175.611	18,836	3.307.809	109.087.901.658	0,00303%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	175.611	1,640	288.002	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	5.767	18,836	108.627	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	JOAO NEIVA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	5.767	1,640	9.458	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	9.877	5,263	51.983	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	9.877	4,229	41.770	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	133.400	4,229	564.149	109.087.901.658	0,00052%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	133.400	5,263	702.084	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	1.702.127	4,229	7.198.295	109.087.901.658	0,00660%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	1.702.127	5,263	8.958.294	109.087.901.658	0,00821%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	18.062.495	4,229	76.386.291	109.087.901.658	0,07002%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	18.062.495	5,263	95.062.911	109.087.901.658	0,08714%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	21.380.399	4,229	90.417.707	109.087.901.658	0,08289%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	21.380.399	5,263	112.525.040	109.087.901.658	0,10315%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	10.601.866	4,229	44.835.291	109.087.901.658	0,04110%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	10.601.866	5,263	55.797.621	109.087.901.658	0,05115%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	7.831.444	4,229	33.119.177	109.087.901.658	0,03036%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	7.831.444	5,263	41.216.890	109.087.901.658	0,03778%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	4.554.324	4,229	19.260.236	109.087.901.658	0,01766%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	4.554.324	5,263	23.969.407	109.087.901.658	0,02197%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	12.308.312	4,229	52.051.851	109.087.901.658	0,04772%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	12.308.312	5,263	64.778.646	109.087.901.658	0,05938%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	65.314	5,263	343.748	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	65.314	4,229	276.213	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	314.966	5,263	1.657.666	109.087.901.658	0,00152%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	314.966	4,229	1.331.991	109.087.901.658	0,00122%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	2.254.606	4,229	9.534.729	109.087.901.658	0,00874%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	2.254.606	5,263	11.865.991	109.087.901.658	0,01088%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	175.611	4,229	742.659	109.087.901.658	0,00068%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	175.611	5,263	924.241	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	7.561	5,263	39.794	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	5.767	4,229	24.389	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LEOPOLDINA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	5.767	5,263	30.352	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	9.877	2,597	25.651	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	9.877	12,567	124.124	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	133.400	12,567	1.676.438	109.087.901.658	0,00154%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	133.400	2,597	346.440	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	133.400	11,585	1.545.439	109.087.901.658	0,00142%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	1.702.127	12,567	21.390.630	109.087.901.658	0,01961%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	1.702.127	2,597	4.420.424	109.087.901.658	0,00405%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	1.702.127	11,585	19.719.141	109.087.901.658	0,01808%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	18.062.495	12,567	226.991.375	109.087.901.658	0,20808%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	18.062.495	2,597	46.908.300	109.087.901.658	0,04300%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	18.062.495	11,585	209.254.005	109.087.901.658	0,19182%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	9.424	11,585	109.177	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	70.452	11,585	816.186	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	21.380.399	12,567	268.687.474	109.087.901.658	0,24630%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	21.380.399	2,597	55.524.896	109.087.901.658	0,05090%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	21.380.399	11,585	247.691.922	109.087.901.658	0,22706%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	10.601.866	12,567	133.233.650	109.087.901.658	0,12213%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	10.601.866	2,597	27.533.046	109.087.901.658	0,02524%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	10.601.866	11,585	122.822.618	109.087.901.658	0,11259%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	7.831.444	12,567	98.417.757	109.087.901.658	0,09022%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	7.831.444	2,597	20.338.260	109.087.901.658	0,01864%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	7.831.444	11,585	90.727.279	109.087.901.658	0,08317%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	4.554.324	12,567	57.234.190	109.087.901.658	0,05247%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	4.554.324	2,597	11.827.579	109.087.901.658	0,01084%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	4.554.324	11,585	52.761.844	109.087.901.658	0,04837%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	12.308.312	12,567	154.678.557	109.087.901.658	0,14179%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	12.308.312	2,597	31.964.686	109.087.901.658	0,02930%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	12.308.312	11,585	142.591.795	109.087.901.658	0,13071%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	65.314	11,585	756.663	109.087.901.658	0,00069%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	65.314	2,597	169.620	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	65.314	12,567	820.801	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	314.966	11,585	3.648.881	109.087.901.658	0,00334%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	314.966	2,597	817.967	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	314.966	12,567	3.958.178	109.087.901.658	0,00363%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	2.254.606	12,567	28.333.634	109.087.901.658	0,02597%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	2.254.606	2,597	5.855.212	109.087.901.658	0,00537%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	2.254.606	11,585	26.119.611	109.087.901.658	0,02394%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	175.611	12,567	2.206.903	109.087.901.658	0,00202%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	175.611	2,597	456.062	109.087.901.658	0,00042%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	175.611	11,585	2.034.453	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	7.561	11,585	87.594	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	7.561	2,597	19.636	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	5.767	12,567	72.474	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	5.767	2,597	14.977	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SERRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	5.767	11,585	66.811	109.087.901.658	0,00006%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QMA-QAL	543.513	21,089	11.462.146	157.207.576.503	0,00729%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QAL-QNV	543.513	93,024	50.559.753	157.207.576.503	0,03216%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QMA-QAL	74.006.486	21,089	1.560.722.783	157.207.576.503	0,99278%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QAL-QNV	74.006.486	93,024	6.884.379.354	157.207.576.503	4,37917%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QMA-QAL	90.289.295	21,089	1.904.110.942	157.207.576.503	1,21121%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QAL-QNV	90.289.295	93,024	8.399.071.378	157.207.576.503	5,34266%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QMA-QAL	4.738.635	21,089	99.933.074	157.207.576.503	0,06357%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QAL-QNV	4.738.635	93,024	440.806.782	157.207.576.503	0,28040%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QAL-QNV	612.798	93,024	57.004.921	157.207.576.503	0,03626%
MINÉRIO DE FERRO	MA, PA	ACAILANDIA	EFC	12	MA, PA	EFC	QMA-QAL	1.588.131	21,089	33.492.095	157.207.576.503	0,02130%
MINÉRIO DE FERRO	MA, PA	ALTO ALEGRE DO PINDARE	EFC	12	MA, PA	EFC	QNV-QSI	543.513	85,709	46.583.956	157.207.576.503	0,02963%
MINÉRIO DE FERRO	MA, PA	ALTO ALEGRE DO PINDARE	EFC	12	MA, PA	EFC	QNV-QSI	74.006.486	85,709	6.343.021.909	157.207.576.503	4,03481%
MINÉRIO DE FERRO	MA, PA	ALTO ALEGRE DO PINDARE	EFC	12	MA, PA	EFC	QNV-QSI	90.289.295	85,709	7.738.605.185	157.207.576.503	4,92254%
MINÉRIO DE FERRO	MA, PA	ALTO ALEGRE DO PINDARE	EFC	12	MA, PA	EFC	QNV-QSI	4.738.635	85,709	406.143.667	157.207.576.503	0,25835%
MINÉRIO DE FERRO	MA, PA	ALTO ALEGRE DO PINDARE	EFC	12	MA, PA	EFC	QNV-QSI	612.798	85,709	52.522.304	157.207.576.503	0,03341%
MINÉRIO DE FERRO	MA, PA	ANAJATUBA	EFC	12	MA, PA	EFC	QSI-QRO	543.513	20,553	11.170.823	157.207.576.503	0,00711%
MINÉRIO DE FERRO	MA, PA	ANAJATUBA	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	20,553	1.521.055.307	157.207.576.503	0,96755%
MINÉRIO DE FERRO	MA, PA	ANAJATUBA	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	20,553	1.855.715.880	157.207.576.503	1,18042%
MINÉRIO DE FERRO	MA, PA	ANAJATUBA	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	20,553	97.393.165	157.207.576.503	0,06195%
MINÉRIO DE FERRO	MA, PA	ANAJATUBA	EFC	12	MA, PA	EFC	QSI-QRO	612.798	20,553	12.594.837	157.207.576.503	0,00801%
MINÉRIO DE FERRO	MA, PA	ARARI	EFC	12	MA, PA	EFC	QSI-QRO	543.513	26,677	14.499.296	157.207.576.503	0,00922%
MINÉRIO DE FERRO	MA, PA	ARARI	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	26,677	1.974.271.027	157.207.576.503	1,25584%
MINÉRIO DE FERRO	MA, PA	ARARI	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	26,677	2.408.647.523	157.207.576.503	1,53214%
MINÉRIO DE FERRO	MA, PA	ARARI	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	26,677	126.412.566	157.207.576.503	0,08041%
MINÉRIO DE FERRO	MA, PA	ARARI	EFC	12	MA, PA	EFC	QSI-QRO	612.798	26,677	16.347.612	157.207.576.503	0,01040%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QSI-QRO	543.513	19,722	10.719.163	157.207.576.503	0,00682%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QRO-QPM	543.513	20,405	11.090.383	157.207.576.503	0,00705%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	19,722	1.459.555.917	157.207.576.503	0,92843%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QRO-QPM	74.006.486	20,405	1.510.102.347	157.207.576.503	0,96058%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	19,722	1.780.685.476	157.207.576.503	1,13270%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QRO-QPM	90.289.295	20,405	1.842.353.064	157.207.576.503	1,17192%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	19,722	93.455.359	157.207.576.503	0,05945%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QRO-QPM	4.738.635	20,405	96.691.847	157.207.576.503	0,06151%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QSI-QRO	612.798	19,722	12.085.602	157.207.576.503	0,00769%
MINÉRIO DE FERRO	MA, PA	BACABEIRA	EFC	12	MA, PA	EFC	QRO-QPM	612.798	20,405	12.504.143	157.207.576.503	0,00795%
MINÉRIO DE FERRO	MA, PA	BOM JARDIM	EFC	12	MA, PA	EFC	QNV-QSI	543.513	5,860	3.184.986	157.207.576.503	0,00203%
MINÉRIO DE FERRO	MA, PA	BOM JARDIM	EFC	12	MA, PA	EFC	QNV-QSI	74.006.486	5,860	433.678.008	157.207.576.503	0,27586%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MA, PA	BOM JARDIM	EFC	12	MA, PA	EFC	QNV-QSI	90.289.295	5,860	529.095.269	157.207.576.503	0,33656%
MINÉRIO DE FERRO	MA, PA	BOM JARDIM	EFC	12	MA, PA	EFC	QNV-QSI	4.738.635	5,860	27.768.401	157.207.576.503	0,01766%
MINÉRIO DE FERRO	MA, PA	BOM JARDIM	EFC	12	MA, PA	EFC	QNV-QSI	612.798	5,860	3.590.996	157.207.576.503	0,00228%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QAL-QNV	543.513	28,940	15.729.266	157.207.576.503	0,01001%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QNV-QSI	543.513	20,241	11.001.247	157.207.576.503	0,00700%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QAL-QNV	74.006.486	28,940	2.141.747.705	157.207.576.503	1,36237%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QNV-QSI	74.006.486	20,241	1.497.965.283	157.207.576.503	0,95286%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QAL-QNV	90.289.295	28,940	2.612.972.197	157.207.576.503	1,66212%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QNV-QSI	90.289.295	20,241	1.827.545.620	157.207.576.503	1,16250%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QAL-QNV	4.738.635	28,940	137.136.097	157.207.576.503	0,08723%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QNV-QSI	4.738.635	20,241	95.914.711	157.207.576.503	0,06101%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QAL-QNV	612.798	28,940	17.734.374	157.207.576.503	0,01128%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DAS SELVAS	EFC	12	MA, PA	EFC	QNV-QSI	612.798	20,241	12.403.644	157.207.576.503	0,00789%
MINÉRIO DE FERRO	MA, PA	BURITICUPU	EFC	12	MA, PA	EFC	QNV-QSI	543.513	28,360	15.414.029	157.207.576.503	0,00980%
MINÉRIO DE FERRO	MA, PA	BURITICUPU	EFC	12	MA, PA	EFC	QNV-QSI	74.006.486	28,360	2.098.823.943	157.207.576.503	1,33507%
MINÉRIO DE FERRO	MA, PA	BURITICUPU	EFC	12	MA, PA	EFC	QNV-QSI	90.289.295	28,360	2.560.604.406	157.207.576.503	1,62880%
MINÉRIO DE FERRO	MA, PA	BURITICUPU	EFC	12	MA, PA	EFC	QNV-QSI	4.738.635	28,360	134.387.689	157.207.576.503	0,08548%
MINÉRIO DE FERRO	MA, PA	BURITICUPU	EFC	12	MA, PA	EFC	QNV-QSI	612.798	28,360	17.378.951	157.207.576.503	0,01105%
MINÉRIO DE FERRO	MA, PA	CIDELANDIA	EFC	12	MA, PA	EFC	QMA-QAL	543.513	46,879	25.479.346	157.207.576.503	0,01621%
MINÉRIO DE FERRO	MA, PA	CIDELANDIA	EFC	12	MA, PA	EFC	QMA-QAL	74.006.486	46,879	3.469.350.057	157.207.576.503	2,20686%
MINÉRIO DE FERRO	MA, PA	CIDELANDIA	EFC	12	MA, PA	EFC	QMA-QAL	90.289.295	46,879	4.232.671.860	157.207.576.503	2,69241%
MINÉRIO DE FERRO	MA, PA	CIDELANDIA	EFC	12	MA, PA	EFC	QMA-QAL	4.738.635	46,879	222.142.470	157.207.576.503	0,14131%
MINÉRIO DE FERRO	MA, PA	CIDELANDIA	EFC	12	MA, PA	EFC	QMA-QAL	1.588.131	46,879	74.449.993	157.207.576.503	0,04736%
MINÉRIO DE FERRO	MA, PA	IGARAPE DO MEIO	EFC	12	MA, PA	EFC	QSI-QRO	543.513	26,165	14.221.018	157.207.576.503	0,00905%
MINÉRIO DE FERRO	MA, PA	IGARAPE DO MEIO	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	26,165	1.936.379.706	157.207.576.503	1,23173%
MINÉRIO DE FERRO	MA, PA	IGARAPE DO MEIO	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	26,165	2.362.419.404	157.207.576.503	1,50274%
MINÉRIO DE FERRO	MA, PA	IGARAPE DO MEIO	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	26,165	123.986.385	157.207.576.503	0,07887%
MINÉRIO DE FERRO	MA, PA	IGARAPE DO MEIO	EFC	12	MA, PA	EFC	QSI-QRO	612.798	26,165	16.033.860	157.207.576.503	0,01020%
MINÉRIO DE FERRO	MA, PA	ITAPECURU MIRIM	EFC	12	MA, PA	EFC	QSI-QRO	543.513	13,156	7.150.457	157.207.576.503	0,00455%
MINÉRIO DE FERRO	MA, PA	ITAPECURU MIRIM	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	13,156	973.629.330	157.207.576.503	0,61933%
MINÉRIO DE FERRO	MA, PA	ITAPECURU MIRIM	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	13,156	1.187.845.965	157.207.576.503	0,75559%
MINÉRIO DE FERRO	MA, PA	ITAPECURU MIRIM	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	13,156	62.341.482	157.207.576.503	0,03966%
MINÉRIO DE FERRO	MA, PA	ITAPECURU MIRIM	EFC	12	MA, PA	EFC	QSI-QRO	612.798	13,156	8.061.970	157.207.576.503	0,00513%
MINÉRIO DE FERRO	MA, PA	ITINGA DO MARANHAO	EFC	12	MA, PA	EFC	QAL-QNV	543.513	7,583	4.121.459	157.207.576.503	0,00262%
MINÉRIO DE FERRO	MA, PA	ITINGA DO MARANHAO	EFC	12	MA, PA	EFC	QAL-QNV	74.006.486	7,583	561.191.183	157.207.576.503	0,35697%
MINÉRIO DE FERRO	MA, PA	ITINGA DO MARANHAO	EFC	12	MA, PA	EFC	QAL-QNV	90.289.295	7,583	684.663.724	157.207.576.503	0,43552%
MINÉRIO DE FERRO	MA, PA	ITINGA DO MARANHAO	EFC	12	MA, PA	EFC	QAL-QNV	4.738.635	7,583	35.933.069	157.207.576.503	0,02286%
MINÉRIO DE FERRO	MA, PA	ITINGA DO MARANHAO	EFC	12	MA, PA	EFC	QAL-QNV	612.798	7,583	4.646.847	157.207.576.503	0,00296%
MINÉRIO DE FERRO	MA, PA	MIRANDA DO NORTE	EFC	12	MA, PA	EFC	QSI-QRO	543.513	8,322	4.523.115	157.207.576.503	0,00288%
MINÉRIO DE FERRO	MA, PA	MIRANDA DO NORTE	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	8,322	615.881.976	157.207.576.503	0,39176%
MINÉRIO DE FERRO	MA, PA	MIRANDA DO NORTE	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	8,322	751.387.513	157.207.576.503	0,47796%
MINÉRIO DE FERRO	MA, PA	MIRANDA DO NORTE	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	8,322	39.434.920	157.207.576.503	0,02508%
MINÉRIO DE FERRO	MA, PA	MIRANDA DO NORTE	EFC	12	MA, PA	EFC	QSI-QRO	612.798	8,322	5.099.705	157.207.576.503	0,00324%
MINÉRIO DE FERRO	MA, PA	MONCAO	EFC	12	MA, PA	EFC	QSI-QRO	543.513	12,915	7.019.470	157.207.576.503	0,00447%
MINÉRIO DE FERRO	MA, PA	MONCAO	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	12,915	955.793.767	157.207.576.503	0,60798%
MINÉRIO DE FERRO	MA, PA	MONCAO	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	12,915	1.166.086.245	157.207.576.503	0,74175%
MINÉRIO DE FERRO	MA, PA	MONCAO	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	12,915	61.199.471	157.207.576.503	0,03893%
MINÉRIO DE FERRO	MA, PA	MONCAO	EFC	12	MA, PA	EFC	QSI-QRO	612.798	12,915	7.914.286	157.207.576.503	0,00503%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MA, PA	PINDARE-MIRIM	EFC	12	MA, PA	EFC	QNV-QSI	543.513	12,708	6.906.963	157.207.576.503	0,00439%
MINÉRIO DE FERRO	MA, PA	PINDARE-MIRIM	EFC	12	MA, PA	EFC	QNV-QSI	74.006.486	12,708	940.474.424	157.207.576.503	0,59824%
MINÉRIO DE FERRO	MA, PA	PINDARE-MIRIM	EFC	12	MA, PA	EFC	QNV-QSI	90.289.295	12,708	1.147.396.361	157.207.576.503	0,72986%
MINÉRIO DE FERRO	MA, PA	PINDARE-MIRIM	EFC	12	MA, PA	EFC	QNV-QSI	4.738.635	12,708	60.218.574	157.207.576.503	0,03831%
MINÉRIO DE FERRO	MA, PA	PINDARE-MIRIM	EFC	12	MA, PA	EFC	QNV-QSI	612.798	12,708	7.787.437	157.207.576.503	0,00495%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QNV-QSI	543.513	1,614	877.230	157.207.576.503	0,00056%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QSI-QRO	543.513	9,590	5.212.290	157.207.576.503	0,00332%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QNV-QSI	74.006.486	1,614	119.446.468	157.207.576.503	0,07598%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	9,590	709.722.201	157.207.576.503	0,45146%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QNV-QSI	90.289.295	1,614	145.726.922	157.207.576.503	0,09270%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	9,590	865.874.339	157.207.576.503	0,55078%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QNV-QSI	4.738.635	1,614	7.648.157	157.207.576.503	0,00487%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	9,590	45.443.510	157.207.576.503	0,02891%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QNV-QSI	612.798	1,614	989.056	157.207.576.503	0,00063%
MINÉRIO DE FERRO	MA, PA	SANTA INES	EFC	12	MA, PA	EFC	QSI-QRO	612.798	9,590	5.876.733	157.207.576.503	0,00374%
MINÉRIO DE FERRO	MA, PA	SANTA LUZIA	EFC	12	MA, PA	EFC	QNV-QSI	543.513	4,290	2.331.671	157.207.576.503	0,00148%
MINÉRIO DE FERRO	MA, PA	SANTA LUZIA	EFC	12	MA, PA	EFC	QNV-QSI	74.006.486	4,290	317.487.825	157.207.576.503	0,20195%
MINÉRIO DE FERRO	MA, PA	SANTA LUZIA	EFC	12	MA, PA	EFC	QNV-QSI	90.289.295	4,290	387.341.076	157.207.576.503	0,24639%
MINÉRIO DE FERRO	MA, PA	SANTA LUZIA	EFC	12	MA, PA	EFC	QNV-QSI	4.738.635	4,290	20.328.744	157.207.576.503	0,01293%
MINÉRIO DE FERRO	MA, PA	SANTA LUZIA	EFC	12	MA, PA	EFC	QNV-QSI	612.798	4,290	2.628.903	157.207.576.503	0,00167%
MINÉRIO DE FERRO	MA, PA	SANTA RITA	EFC	12	MA, PA	EFC	QSI-QRO	543.513	14,855	8.073.886	157.207.576.503	0,00514%
MINÉRIO DE FERRO	MA, PA	SANTA RITA	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	14,855	1.099.366.350	157.207.576.503	0,69931%
MINÉRIO DE FERRO	MA, PA	SANTA RITA	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	14,855	1.341.247.477	157.207.576.503	0,85317%
MINÉRIO DE FERRO	MA, PA	SANTA RITA	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	14,855	70.392.423	157.207.576.503	0,04478%
MINÉRIO DE FERRO	MA, PA	SANTA RITA	EFC	12	MA, PA	EFC	QSI-QRO	612.798	14,855	9.103.114	157.207.576.503	0,00579%
MINÉRIO DE FERRO	MA, PA	SAO FRANCISCO DO BREJAO	EFC	12	MA, PA	EFC	QMA-QAL	543.513	5,042	2.740.393	157.207.576.503	0,00174%
MINÉRIO DE FERRO	MA, PA	SAO FRANCISCO DO BREJAO	EFC	12	MA, PA	EFC	QMA-QAL	74.006.486	5,042	373.140.702	157.207.576.503	0,23736%
MINÉRIO DE FERRO	MA, PA	SAO FRANCISCO DO BREJAO	EFC	12	MA, PA	EFC	QMA-QAL	90.289.295	5,042	455.238.625	157.207.576.503	0,28958%
MINÉRIO DE FERRO	MA, PA	SAO FRANCISCO DO BREJAO	EFC	12	MA, PA	EFC	QMA-QAL	4.738.635	5,042	23.892.198	157.207.576.503	0,01520%
MINÉRIO DE FERRO	MA, PA	SAO FRANCISCO DO BREJAO	EFC	12	MA, PA	EFC	QMA-QAL	1.588.131	5,042	8.007.357	157.207.576.503	0,00509%
MINÉRIO DE FERRO	MA, PA	SAO LUIS	EFC	12	MA, PA	EFC	QRO-QPM	543.513	18,639	10.130.539	157.207.576.503	0,00644%
MINÉRIO DE FERRO	MA, PA	SAO LUIS	EFC	12	MA, PA	EFC	QRO-QPM	74.006.486	18,639	1.379.406.893	157.207.576.503	0,87744%
MINÉRIO DE FERRO	MA, PA	SAO LUIS	EFC	12	MA, PA	EFC	QRO-QPM	90.289.295	18,639	1.682.902.170	157.207.576.503	1,07050%
MINÉRIO DE FERRO	MA, PA	SAO LUIS	EFC	12	MA, PA	EFC	QRO-QPM	4.738.635	18,639	88.323.418	157.207.576.503	0,05618%
MINÉRIO DE FERRO	MA, PA	SAO LUIS	EFC	12	MA, PA	EFC	QRO-QPM	612.798	18,639	11.421.942	157.207.576.503	0,00727%
MINÉRIO DE FERRO	MA, PA	SAO PEDRO DA AGUA BRANCA	EFC	12	MA, PA	EFC	QMA-QAL	543.513	48,422	26.317.986	157.207.576.503	0,01674%
MINÉRIO DE FERRO	MA, PA	SAO PEDRO DA AGUA BRANCA	EFC	12	MA, PA	EFC	QMA-QAL	74.006.486	48,422	3.583.542.065	157.207.576.503	2,27950%
MINÉRIO DE FERRO	MA, PA	SAO PEDRO DA AGUA BRANCA	EFC	12	MA, PA	EFC	QMA-QAL	90.289.295	48,422	4.371.988.242	157.207.576.503	2,78103%
MINÉRIO DE FERRO	MA, PA	SAO PEDRO DA AGUA BRANCA	EFC	12	MA, PA	EFC	QMA-QAL	4.738.635	48,422	229.454.184	157.207.576.503	0,14596%
MINÉRIO DE FERRO	MA, PA	SAO PEDRO DA AGUA BRANCA	EFC	12	MA, PA	EFC	QMA-QAL	1.588.131	48,422	76.900.479	157.207.576.503	0,04892%
MINÉRIO DE FERRO	MA, PA	TUFILANDIA	EFC	12	MA, PA	EFC	QNV-QSI	543.513	14,416	7.835.283	157.207.576.503	0,00498%
MINÉRIO DE FERRO	MA, PA	TUFILANDIA	EFC	12	MA, PA	EFC	QNV-QSI	74.006.486	14,416	1.066.877.502	157.207.576.503	0,67864%
MINÉRIO DE FERRO	MA, PA	TUFILANDIA	EFC	12	MA, PA	EFC	QNV-QSI	90.289.295	14,416	1.301.610.477	157.207.576.503	0,82796%
MINÉRIO DE FERRO	MA, PA	TUFILANDIA	EFC	12	MA, PA	EFC	QNV-QSI	4.738.635	14,416	68.312.162	157.207.576.503	0,04345%
MINÉRIO DE FERRO	MA, PA	TUFILANDIA	EFC	12	MA, PA	EFC	QNV-QSI	612.798	14,416	8.834.096	157.207.576.503	0,00562%
MINÉRIO DE FERRO	MA, PA	VILA NOVA DOS MARTIRIOS	EFC	12	MA, PA	EFC	QMA-QAL	543.513	34,957	18.999.584	157.207.576.503	0,01209%
MINÉRIO DE FERRO	MA, PA	VILA NOVA DOS MARTIRIOS	EFC	12	MA, PA	EFC	QMA-QAL	74.006.486	34,957	2.587.044.731	157.207.576.503	1,64562%
MINÉRIO DE FERRO	MA, PA	VILA NOVA DOS MARTIRIOS	EFC	12	MA, PA	EFC	QMA-QAL	90.289.295	34,957	3.156.242.885	157.207.576.503	2,00769%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MA, PA	VILA NOVA DOS MARTIRIOS	EFC	12	MA, PA	EFC	QMA-QAL	4.738.635	34,957	165.648.464	157.207.576.503	0,10537%
MINÉRIO DE FERRO	MA, PA	VILA NOVA DOS MARTIRIOS	EFC	12	MA, PA	EFC	QMA-QAL	1.588.131	34,957	55.516.295	157.207.576.503	0,03531%
MINÉRIO DE FERRO	MA, PA	VITORIA DO MEARIM	EFC	12	MA, PA	EFC	QSI-QRO	543.513	21,479	11.674.116	157.207.576.503	0,00743%
MINÉRIO DE FERRO	MA, PA	VITORIA DO MEARIM	EFC	12	MA, PA	EFC	QSI-QRO	74.006.486	21,479	1.589.585.313	157.207.576.503	1,01114%
MINÉRIO DE FERRO	MA, PA	VITORIA DO MEARIM	EFC	12	MA, PA	EFC	QSI-QRO	90.289.295	21,479	1.939.323.767	157.207.576.503	1,23361%
MINÉRIO DE FERRO	MA, PA	VITORIA DO MEARIM	EFC	12	MA, PA	EFC	QSI-QRO	4.738.635	21,479	101.781.141	157.207.576.503	0,06474%
MINÉRIO DE FERRO	MA, PA	VITORIA DO MEARIM	EFC	12	MA, PA	EFC	QSI-QRO	612.798	21,479	13.162.288	157.207.576.503	0,00837%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VAY	9.877	1,607	15.872	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VIU	9.877	13,209	130.465	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	1.702.127	13,209	22.483.396	109.087.901.658	0,02061%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	1.702.127	1,607	2.735.318	109.087.901.658	0,00251%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	18.062.495	13,209	238.587.496	109.087.901.658	0,21871%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	18.062.495	1,607	29.026.429	109.087.901.658	0,02661%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	21.380.399	13,209	282.413.690	109.087.901.658	0,25889%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	21.380.399	1,607	34.358.301	109.087.901.658	0,03150%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	10.601.866	13,209	140.040.048	109.087.901.658	0,12837%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	10.601.866	1,607	17.037.199	109.087.901.658	0,01562%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	7.831.444	13,209	103.445.544	109.087.901.658	0,09483%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	7.831.444	1,607	12.585.131	109.087.901.658	0,01154%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	4.554.324	13,209	60.158.066	109.087.901.658	0,05515%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	4.554.324	1,607	7.318.799	109.087.901.658	0,00671%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	22.613	13,209	298.695	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	22.613	1,607	36.339	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	12.308.312	13,209	162.580.493	109.087.901.658	0,14904%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	12.308.312	1,607	19.779.457	109.087.901.658	0,01813%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	277.740	13,209	3.668.668	109.087.901.658	0,00336%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	277.740	1,607	446.328	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VAY	314.966	1,607	506.150	109.087.901.658	0,00046%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VIU	314.966	13,209	4.160.386	109.087.901.658	0,00381%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	2.254.606	13,209	29.781.091	109.087.901.658	0,02730%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	2.254.606	1,607	3.623.152	109.087.901.658	0,00332%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	175.611	13,209	2.319.646	109.087.901.658	0,00213%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	175.611	1,607	282.207	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	5.767	13,209	76.176	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	AIMORES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	5.767	1,607	9.268	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	ALFREDO VASCONCELOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDB-FCH	28.449	7,980	227.023	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	ALFREDO VASCONCELOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCH-FEV	28.449	6,370	181.220	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	ALFREDO VASCONCELOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEV-FET	28.449	4,432	126.086	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ALFREDO VASCONCELOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FEV	231.735	4,432	1.027.050	109.087.901.658	0,00094%
MINÉRIO DE FERRO	BA, ES, MG	ALFREDO VASCONCELOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEV-FCH	231.735	6,370	1.476.152	109.087.901.658	0,00135%
MINÉRIO DE FERRO	BA, ES, MG	ALFREDO VASCONCELOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCH-FDB	231.735	7,980	1.849.245	109.087.901.658	0,00170%
MINÉRIO DE FERRO	BA, ES, MG	ALFREDO VASCONCELOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FEV	6.249	4,432	27.696	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	ALFREDO VASCONCELOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEV-FCH	6.249	6,370	39.806	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	ALFREDO VASCONCELOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCH-FDB	6.249	7,980	49.867	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	452.578	8,687	3.931.545	109.087.901.658	0,00360%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	452.578	11,287	5.108.248	109.087.901.658	0,00468%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	452.578	5,642	2.553.445	109.087.901.658	0,00234%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	452.578	7,546	3.415.154	109.087.901.658	0,00313%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	452.578	4,068	1.841.087	109.087.901.658	0,00169%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	471.355	8,687	4.094.661	109.087.901.658	0,00375%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	471.355	11,287	5.320.184	109.087.901.658	0,00488%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	471.355	5,642	2.659.385	109.087.901.658	0,00244%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	471.355	7,546	3.556.845	109.087.901.658	0,00326%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	471.355	4,068	1.917.472	109.087.901.658	0,00176%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	9.636.141	8,687	83.709.157	109.087.901.658	0,07674%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	9.636.141	11,287	108.763.123	109.087.901.658	0,09970%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	9.636.141	5,642	54.367.108	109.087.901.658	0,04984%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	9.636.141	7,546	72.714.320	109.087.901.658	0,06666%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	9.636.141	4,068	39.199.822	109.087.901.658	0,03593%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.040.246	8,687	9.036.617	109.087.901.658	0,00828%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.040.246	11,287	11.741.257	109.087.901.658	0,01076%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	1.040.246	5,642	5.869.068	109.087.901.658	0,00538%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	1.040.246	7,546	7.849.696	109.087.901.658	0,00720%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.040.246	4,068	4.231.721	109.087.901.658	0,00388%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	175.991	8,687	1.528.834	109.087.901.658	0,00140%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	175.991	11,287	1.986.410	109.087.901.658	0,00182%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	175.991	5,642	992.941	109.087.901.658	0,00091%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	175.991	7,546	1.328.028	109.087.901.658	0,00122%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	175.991	4,068	715.931	109.087.901.658	0,00066%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	16.754.022	8,687	145.542.189	109.087.901.658	0,13342%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	16.754.022	11,287	189.102.646	109.087.901.658	0,17335%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	16.754.022	5,642	94.526.192	109.087.901.658	0,08665%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	16.754.022	7,546	126.425.850	109.087.901.658	0,11589%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	16.754.022	4,068	68.155.361	109.087.901.658	0,06248%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	5.195.905	8,687	45.136.827	109.087.901.658	0,04138%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	5.195.905	11,287	58.646.180	109.087.901.658	0,05376%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	5.195.905	5,642	29.315.296	109.087.901.658	0,02687%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	5.195.905	7,546	39.208.299	109.087.901.658	0,03594%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	5.195.905	4,068	21.136.942	109.087.901.658	0,01938%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	9.694.113	8,687	84.212.760	109.087.901.658	0,07720%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	9.694.113	11,287	109.417.453	109.087.901.658	0,10030%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	9.694.113	5,642	54.694.186	109.087.901.658	0,05014%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	9.694.113	7,546	73.151.777	109.087.901.658	0,06706%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	9.694.113	4,068	39.435.652	109.087.901.658	0,03615%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	753.441	8,687	6.545.142	109.087.901.658	0,00600%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	753.441	11,287	8.504.089	109.087.901.658	0,00780%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	753.441	5,642	4.250.914	109.087.901.658	0,00390%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	753.441	7,546	5.685.466	109.087.901.658	0,00521%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	753.441	4,068	3.064.998	109.087.901.658	0,00281%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.632.345	8,687	22.867.181	109.087.901.658	0,02096%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.632.345	11,287	29.711.278	109.087.901.658	0,02724%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	2.632.345	5,642	14.851.690	109.087.901.658	0,01361%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	2.632.345	7,546	19.863.675	109.087.901.658	0,01821%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.632.345	4,068	10.708.379	109.087.901.658	0,00982%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.225.523	8,687	28.020.118	109.087.901.658	0,02569%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	3.225.523	11,287	36.406.478	109.087.901.658	0,03337%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	3.225.523	5,642	18.198.401	109.087.901.658	0,01668%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	3.225.523	7,546	24.339.797	109.087.901.658	0,02231%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.225.523	4,068	13.121.428	109.087.901.658	0,01203%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	11.042.972	8,687	95.930.298	109.087.901.658	0,08794%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	11.042.972	11,287	124.642.025	109.087.901.658	0,11426%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	11.042.972	5,642	62.304.448	109.087.901.658	0,05711%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	11.042.972	7,546	83.330.267	109.087.901.658	0,07639%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	11.042.972	4,068	44.922.810	109.087.901.658	0,04118%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.360.110	8,687	11.815.276	109.087.901.658	0,01083%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.360.110	11,287	15.351.562	109.087.901.658	0,01407%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	1.360.110	5,642	7.673.741	109.087.901.658	0,00703%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	1.360.110	7,546	10.263.390	109.087.901.658	0,00941%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.360.110	4,068	5.532.927	109.087.901.658	0,00507%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.915.189	8,687	25.324.247	109.087.901.658	0,02321%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.915.189	11,287	32.903.738	109.087.901.658	0,03016%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	2.915.189	5,642	16.447.496	109.087.901.658	0,01508%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	2.915.189	7,546	21.998.016	109.087.901.658	0,02017%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.915.189	4,068	11.858.989	109.087.901.658	0,01087%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.208.569	8,687	19.185.839	109.087.901.658	0,01759%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.208.569	11,287	24.928.118	109.087.901.658	0,02285%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	2.208.569	5,642	12.460.746	109.087.901.658	0,01142%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	2.208.569	7,546	16.665.862	109.087.901.658	0,01528%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.208.569	4,068	8.984.459	109.087.901.658	0,00824%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	140.317	8,687	1.218.934	109.087.901.658	0,00112%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	140.317	11,287	1.583.758	109.087.901.658	0,00145%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	140.317	5,642	791.669	109.087.901.658	0,00073%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	140.317	7,546	1.058.832	109.087.901.658	0,00097%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	140.317	4,068	570.810	109.087.901.658	0,00052%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	16.481.129	8,687	143.171.568	109.087.901.658	0,13124%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	16.481.129	11,287	186.022.503	109.087.901.658	0,17053%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	16.481.129	5,642	92.986.530	109.087.901.658	0,08524%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	16.481.129	7,546	124.366.599	109.087.901.658	0,11401%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	16.481.129	4,068	67.045.233	109.087.901.658	0,06146%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.218.053	8,687	27.955.226	109.087.901.658	0,02563%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	3.218.053	11,287	36.322.164	109.087.901.658	0,03330%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	3.218.053	5,642	18.156.255	109.087.901.658	0,01664%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	3.218.053	7,546	24.283.428	109.087.901.658	0,02226%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.218.053	4,068	13.091.040	109.087.901.658	0,01200%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.928.832	8,687	16.755.764	109.087.901.658	0,01536%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.928.832	11,287	21.770.727	109.087.901.658	0,01996%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	1.928.832	5,642	10.882.470	109.087.901.658	0,00998%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	1.928.832	7,546	14.554.966	109.087.901.658	0,01334%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.928.832	4,068	7.846.489	109.087.901.658	0,00719%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	4.306.483	8,687	37.410.418	109.087.901.658	0,03429%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	4.306.483	11,287	48.607.274	109.087.901.658	0,04456%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	4.306.483	5,642	24.297.177	109.087.901.658	0,02227%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	4.306.483	7,546	32.496.721	109.087.901.658	0,02979%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	4.306.483	4,068	17.518.773	109.087.901.658	0,01606%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.246.693	8,687	19.517.022	109.087.901.658	0,01789%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.246.693	11,287	25.358.424	109.087.901.658	0,02325%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	2.246.693	5,642	12.675.842	109.087.901.658	0,01162%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	2.246.693	7,546	16.953.545	109.087.901.658	0,01554%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.246.693	4,068	9.139.547	109.087.901.658	0,00838%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.899.329	8,687	16.499.471	109.087.901.658	0,01512%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.899.329	11,287	21.437.726	109.087.901.658	0,01965%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	1.899.329	5,642	10.716.014	109.087.901.658	0,00982%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	1.899.329	7,546	14.332.337	109.087.901.658	0,01314%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.899.329	4,068	7.726.470	109.087.901.658	0,00708%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	598.315	8,687	5.197.562	109.087.901.658	0,00476%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	598.315	11,287	6.753.181	109.087.901.658	0,00619%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	598.315	5,642	3.375.693	109.087.901.658	0,00309%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	598.315	7,546	4.514.885	109.087.901.658	0,00414%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	598.315	4,068	2.433.945	109.087.901.658	0,00223%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.373.361	8,687	29.304.387	109.087.901.658	0,02686%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	3.373.361	11,287	38.075.126	109.087.901.658	0,03490%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	3.373.361	5,642	19.032.503	109.087.901.658	0,01745%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	3.373.361	7,546	25.455.382	109.087.901.658	0,02333%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.373.361	4,068	13.722.833	109.087.901.658	0,01258%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.518.020	8,687	30.561.040	109.087.901.658	0,02802%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	3.518.020	11,287	39.707.892	109.087.901.658	0,03640%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	3.518.020	5,642	19.848.669	109.087.901.658	0,01820%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	3.518.020	7,546	26.546.979	109.087.901.658	0,02434%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.518.020	4,068	14.311.305	109.087.901.658	0,01312%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	37.363	8,687	324.572	109.087.901.658	0,00030%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	37.363	11,287	421.716	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	37.363	5,642	210.802	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	37.363	7,546	281.941	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	37.363	4,068	151.993	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.054.657	8,687	17.848.805	109.087.901.658	0,01636%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.054.657	11,287	23.190.914	109.087.901.658	0,02126%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	2.054.657	5,642	11.592.375	109.087.901.658	0,01063%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	2.054.657	7,546	15.504.442	109.087.901.658	0,01421%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.054.657	4,068	8.358.345	109.087.901.658	0,00766%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	472.702	8,687	4.106.362	109.087.901.658	0,00376%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	472.702	11,287	5.335.387	109.087.901.658	0,00489%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	472.702	5,642	2.666.985	109.087.901.658	0,00244%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	472.702	7,546	3.567.009	109.087.901.658	0,00327%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	472.702	4,068	1.922.952	109.087.901.658	0,00176%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.357.294	8,687	20.477.813	109.087.901.658	0,01877%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.357.294	11,287	26.606.777	109.087.901.658	0,02439%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	2.357.294	5,642	13.299.853	109.087.901.658	0,01219%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	2.357.294	7,546	17.788.141	109.087.901.658	0,01631%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.357.294	4,068	9.589.472	109.087.901.658	0,00879%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	809.514	8,687	7.032.248	109.087.901.658	0,00645%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	809.514	11,287	9.136.985	109.087.901.658	0,00838%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	809.514	5,642	4.567.278	109.087.901.658	0,00419%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	809.514	7,546	6.108.593	109.087.901.658	0,00560%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	809.514	4,068	3.293.103	109.087.901.658	0,00302%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.400.010	8,687	12.161.887	109.087.901.658	0,01115%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.400.010	11,287	15.801.913	109.087.901.658	0,01449%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	1.400.010	5,642	7.898.856	109.087.901.658	0,00724%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	1.400.010	7,546	10.564.475	109.087.901.658	0,00968%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.400.010	4,068	5.695.241	109.087.901.658	0,00522%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.077.672	8,687	9.361.737	109.087.901.658	0,00858%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.077.672	11,287	12.163.684	109.087.901.658	0,01115%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	1.077.672	5,642	6.080.225	109.087.901.658	0,00557%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	1.077.672	7,546	8.132.113	109.087.901.658	0,00745%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.077.672	4,068	4.383.970	109.087.901.658	0,00402%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	972.896	8,687	8.451.548	109.087.901.658	0,00775%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	972.896	11,287	10.981.077	109.087.901.658	0,01007%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	972.896	5,642	5.489.079	109.087.901.658	0,00503%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	972.896	7,546	7.341.473	109.087.901.658	0,00673%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	972.896	4,068	3.957.741	109.087.901.658	0,00363%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.044.080	8,687	9.069.923	109.087.901.658	0,00831%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.044.080	11,287	11.784.531	109.087.901.658	0,01080%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	1.044.080	5,642	5.890.699	109.087.901.658	0,00540%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	1.044.080	7,546	7.878.628	109.087.901.658	0,00722%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.044.080	4,068	4.247.317	109.087.901.658	0,00389%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	855.456	8,687	7.431.346	109.087.901.658	0,00681%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	855.456	11,287	9.655.532	109.087.901.658	0,00885%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	855.456	5,642	4.826.483	109.087.901.658	0,00442%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	855.456	7,546	6.455.271	109.087.901.658	0,00592%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	855.456	4,068	3.479.995	109.087.901.658	0,00319%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	14.457	8,687	125.588	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	14.457	11,287	163.176	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	14.457	5,642	81.566	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	14.457	7,546	109.093	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	14.457	4,068	58.811	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	190.241	8,687	1.652.624	109.087.901.658	0,00151%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	190.241	11,287	2.147.250	109.087.901.658	0,00197%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	190.241	5,642	1.073.340	109.087.901.658	0,00098%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	190.241	7,546	1.435.559	109.087.901.658	0,00132%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	190.241	4,068	773.900	109.087.901.658	0,00071%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	14.817	8,687	128.715	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	14.817	11,287	167.239	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	14.817	5,642	83.598	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	14.817	7,546	111.809	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	14.817	4,068	60.276	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.085.334	8,687	9.428.296	109.087.901.658	0,00864%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.085.334	11,287	12.250.165	109.087.901.658	0,01123%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	1.085.334	5,642	6.123.454	109.087.901.658	0,00561%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	1.085.334	7,546	8.189.930	109.087.901.658	0,00751%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.085.334	4,068	4.415.139	109.087.901.658	0,00405%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	233.772	8,687	2.030.777	109.087.901.658	0,00186%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	233.772	11,287	2.638.585	109.087.901.658	0,00242%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	233.772	5,642	1.318.942	109.087.901.658	0,00121%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	233.772	7,546	1.764.044	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	233.772	4,068	950.984	109.087.901.658	0,00087%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	269.202	8,687	2.338.558	109.087.901.658	0,00214%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	269.202	11,287	3.038.483	109.087.901.658	0,00279%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	269.202	5,642	1.518.838	109.087.901.658	0,00139%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	269.202	7,546	2.031.398	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	269.202	4,068	1.095.114	109.087.901.658	0,00100%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FIR	346.347	4,068	1.408.940	109.087.901.658	0,00129%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FIN	346.347	7,546	2.613.534	109.087.901.658	0,00240%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FFR	346.347	5,642	1.954.090	109.087.901.658	0,00179%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FAU	346.347	11,287	3.909.219	109.087.901.658	0,00358%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FGO	346.347	8,687	3.008.716	109.087.901.658	0,00276%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	174.123	8,687	1.512.607	109.087.901.658	0,00139%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	174.123	11,287	1.965.326	109.087.901.658	0,00180%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	174.123	5,642	982.402	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	174.123	7,546	1.313.932	109.087.901.658	0,00120%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	174.123	4,068	708.332	109.087.901.658	0,00065%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	24.259	8,687	210.738	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	24.259	11,287	273.811	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	24.259	5,642	136.869	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	24.259	7,546	183.058	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	ANDRELANDIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	24.259	4,068	98.686	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQT-FJA	28.449	0,597	16.984	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJA-FLJ	28.449	3,865	109.955	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLJ-FAS	28.449	7,487	212.998	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAS-FSF	28.449	4,731	134.592	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSF-FTT	28.449	0,180	5.121	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTT-FSF	231.735	0,180	41.712	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSF-FAS	231.735	4,731	1.096.338	109.087.901.658	0,00101%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAS-FLJ	231.735	7,487	1.735.000	109.087.901.658	0,00159%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLJ-FJA	231.735	3,865	895.656	109.087.901.658	0,00082%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJA-FQT	231.735	0,597	138.346	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTT-FSF	6.249	0,180	1.125	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSF-FAS	6.249	4,731	29.564	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAS-FLJ	6.249	7,487	46.786	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLJ-FJA	6.249	3,865	24.152	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO CARLOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJA-FQT	6.249	0,597	3.731	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	24.446	14,826	362.436	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	24.446	29,768	727.709	109.087.901.658	0,00067%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	1.392.627	14,826	20.647.088	109.087.901.658	0,01893%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	1.392.627	29,768	41.455.721	109.087.901.658	0,03800%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	621.896	14,826	9.220.230	109.087.901.658	0,00845%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	621.896	29,768	18.512.600	109.087.901.658	0,01697%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	18.062.495	14,826	267.794.551	109.087.901.658	0,24549%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	18.062.495	29,768	537.684.351	109.087.901.658	0,49289%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	21.380.399	14,826	316.985.796	109.087.901.658	0,29058%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	21.380.399	29,768	636.451.717	109.087.901.658	0,58343%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	10.601.866	14,826	157.183.265	109.087.901.658	0,14409%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	10.601.866	29,768	315.596.347	109.087.901.658	0,28930%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	7.831.444	14,826	116.108.989	109.087.901.658	0,10644%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	7.831.444	29,768	233.126.425	109.087.901.658	0,21371%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	4.554.324	14,826	67.522.408	109.087.901.658	0,06190%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	4.554.324	29,768	135.573.117	109.087.901.658	0,12428%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	22.613	14,826	335.260	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	22.613	29,768	673.144	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	12.308.312	14,826	182.483.034	109.087.901.658	0,16728%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	12.308.312	29,768	366.393.832	109.087.901.658	0,33587%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	277.740	14,826	4.117.773	109.087.901.658	0,00377%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	277.740	29,768	8.267.764	109.087.901.658	0,00758%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	2.254.606	14,826	33.426.789	109.087.901.658	0,03064%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	2.254.606	29,768	67.115.111	109.087.901.658	0,06152%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	175.611	14,826	2.603.609	109.087.901.658	0,00239%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	175.611	29,768	5.227.588	109.087.901.658	0,00479%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	181.628	14,826	2.692.817	109.087.901.658	0,00247%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	181.628	29,768	5.406.702	109.087.901.658	0,00496%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	5.767	14,826	85.502	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	ANTONIO DIAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	5.767	29,768	171.672	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	ARACAI	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EOR-EAI	20.854	5,018	104.645	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	ARACAI	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAI-ESX	20.854	17,607	367.176	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	452.578	3,459	1.565.467	109.087.901.658	0,00144%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	471.355	3,459	1.630.417	109.087.901.658	0,00149%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	9.636.141	3,459	33.331.412	109.087.901.658	0,03055%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.040.246	3,459	3.598.211	109.087.901.658	0,00330%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	175.991	3,459	608.753	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	16.754.022	3,459	57.952.162	109.087.901.658	0,05312%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	5.195.905	3,459	17.972.635	109.087.901.658	0,01648%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	9.694.113	3,459	33.531.937	109.087.901.658	0,03074%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	753.441	3,459	2.606.152	109.087.901.658	0,00239%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.632.345	3,459	9.105.281	109.087.901.658	0,00835%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.225.523	3,459	11.157.084	109.087.901.658	0,01023%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	11.042.972	3,459	38.197.640	109.087.901.658	0,03502%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.360.110	3,459	4.704.620	109.087.901.658	0,00431%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.915.189	3,459	10.083.639	109.087.901.658	0,00924%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.208.569	3,459	7.639.440	109.087.901.658	0,00700%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	140.317	3,459	485.357	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	16.481.129	3,459	57.008.225	109.087.901.658	0,05226%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.218.053	3,459	11.131.245	109.087.901.658	0,01020%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.928.832	3,459	6.671.830	109.087.901.658	0,00612%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	4.306.483	3,459	14.896.125	109.087.901.658	0,01366%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.246.693	3,459	7.771.311	109.087.901.658	0,00712%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.899.329	3,459	6.569.779	109.087.901.658	0,00602%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	598.315	3,459	2.069.572	109.087.901.658	0,00190%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.373.361	3,459	11.668.456	109.087.901.658	0,01070%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.518.020	3,459	12.168.831	109.087.901.658	0,01116%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	37.363	3,459	129.239	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.054.657	3,459	7.107.059	109.087.901.658	0,00651%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	472.702	3,459	1.635.076	109.087.901.658	0,00150%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.357.294	3,459	8.153.880	109.087.901.658	0,00747%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	809.514	3,459	2.800.109	109.087.901.658	0,00257%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.400.010	3,459	4.842.635	109.087.901.658	0,00444%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.077.672	3,459	3.727.667	109.087.901.658	0,00342%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	972.896	3,459	3.365.247	109.087.901.658	0,00308%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.044.080	3,459	3.611.473	109.087.901.658	0,00331%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	855.456	3,459	2.959.022	109.087.901.658	0,00271%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	14.457	3,459	50.007	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	190.241	3,459	658.044	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	14.817	3,459	51.252	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.085.334	3,459	3.754.170	109.087.901.658	0,00344%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	233.772	3,459	808.617	109.087.901.658	0,00074%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	269.202	3,459	931.170	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FIR	346.347	3,459	1.198.014	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	174.123	3,459	602.291	109.087.901.658	0,00055%
MINÉRIO DE FERRO	BA, ES, MG	ARANTINA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	24.259	3,459	83.912	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	ARAXA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EPK-ETM	5.067.826	16,160	81.896.068	109.087.901.658	0,07507%
MINÉRIO DE FERRO	BA, ES, MG	ARAXA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ETM-EAX	5.067.826	28,432	144.088.429	109.087.901.658	0,13208%
MINÉRIO DE FERRO	BA, ES, MG	ARAXA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAX-EYF	5.067.826	7,867	39.868.587	109.087.901.658	0,03655%
MINÉRIO DE FERRO	BA, ES, MG	ARAXA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYF-ETF	5.067.826	9,820	49.766.051	109.087.901.658	0,04562%
MINÉRIO DE FERRO	BA, ES, MG	AUGUSTO DE LIMA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBL-EAL	20.854	18,477	385.319	109.087.901.658	0,00035%
MINÉRIO DE FERRO	BA, ES, MG	AUGUSTO DE LIMA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAL-EAA	20.854	19,606	408.864	109.087.901.658	0,00037%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	24.446	3,666	89.619	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGS-VME	24.446	9,806	239.717	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VME-VDI	24.446	6,992	170.926	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	24.446	5,503	134.526	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	1.392.627	3,666	5.105.371	109.087.901.658	0,00468%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGS-VME	1.392.627	9,806	13.656.100	109.087.901.658	0,01252%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VME-VDI	1.392.627	6,992	9.737.248	109.087.901.658	0,00893%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	1.392.627	5,503	7.663.626	109.087.901.658	0,00703%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	621.896	3,666	2.279.871	109.087.901.658	0,00209%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGS-VME	621.896	9,806	6.098.312	109.087.901.658	0,00559%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VME-VDI	621.896	6,992	4.348.297	109.087.901.658	0,00399%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	621.896	5,503	3.422.294	109.087.901.658	0,00314%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VME-VDI	2.254.606	6,992	15.764.205	109.087.901.658	0,01445%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	2.254.606	5,503	12.407.097	109.087.901.658	0,01137%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	175.611	3,666	643.790	109.087.901.658	0,00059%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGS-VME	175.611	9,806	1.722.041	109.087.901.658	0,00158%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VME-VDI	175.611	6,992	1.227.872	109.087.901.658	0,00113%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	175.611	5,503	966.387	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	181.628	3,666	665.848	109.087.901.658	0,00061%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGS-VME	181.628	9,806	1.781.044	109.087.901.658	0,00163%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VME-VDI	181.628	6,992	1.269.943	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	181.628	5,503	999.499	109.087.901.658	0,00092%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	5.767	3,666	21.142	109.087.901.658	0,00002%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGS-VME	5.767	9,806	56.551	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VME-VDI	5.767	6,992	40.323	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	BARAO DE COCAIS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	5.767	5,503	31.736	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSF-FTT	28.449	4,177	118.831	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTT-FBC	28.449	5,653	160.822	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBC-FDB	28.449	6,586	187.365	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDB-FCH	28.449	0,696	19.801	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCH-FDB	231.735	0,696	161.288	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDB-FBC	231.735	6,586	1.526.207	109.087.901.658	0,00140%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBC-FTT	231.735	5,653	1.309.998	109.087.901.658	0,00120%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTT-FSF	231.735	4,177	967.957	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCH-FDB	6.249	0,696	4.349	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDB-FBC	6.249	6,586	41.156	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBC-FTT	6.249	5,653	35.326	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	BARBACENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTT-FSF	6.249	4,177	26.102	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	24.446	5,127	125.335	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	1.392.627	5,127	7.139.999	109.087.901.658	0,00655%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	621.896	5,127	3.188.461	109.087.901.658	0,00292%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	21.380.399	5,127	109.617.306	109.087.901.658	0,10049%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	7.831.444	5,127	40.151.813	109.087.901.658	0,03681%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	4.554.324	5,127	23.350.019	109.087.901.658	0,02140%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	22.613	5,127	115.937	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	12.308.312	5,127	63.104.716	109.087.901.658	0,05785%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	277.740	5,127	1.423.973	109.087.901.658	0,00131%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	2.254.606	5,127	11.559.365	109.087.901.658	0,01060%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	175.611	5,127	900.358	109.087.901.658	0,00083%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	181.628	5,127	931.207	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	BELA VISTA DE MINAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	5.767	5,127	29.567	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	BELMIRO BRAGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAA-FDD	28.449	0,454	12.916	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	BELMIRO BRAGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDD-FSI	28.449	8,086	230.039	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	BELMIRO BRAGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSI-FOT	28.449	0,649	18.463	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	BELMIRO BRAGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAA-FDD	22.579	0,454	10.251	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	BELMIRO BRAGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDD-FSI	22.579	8,086	182.574	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	BELMIRO BRAGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSI-FOT	22.579	0,649	14.654	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEL-ECL	24.446	6,836	167.113	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECL-EBH	24.446	6,472	158.215	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBH-EHF	24.446	2,862	69.964	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHF-OCR	24.446	4,122	100.766	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEL-ECL	1.392.627	6,836	9.519.998	109.087.901.658	0,00873%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECL-EBH	1.392.627	6,472	9.013.082	109.087.901.658	0,00826%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBH-EHF	1.392.627	2,862	3.985.698	109.087.901.658	0,00365%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHF-OCR	1.392.627	4,122	5.740.408	109.087.901.658	0,00526%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	621.896	7,037	4.376.282	109.087.901.658	0,00401%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLH-FIE	5.195.905	7,456	38.740.668	109.087.901.658	0,03551%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLH-FIE	753.441	7,456	5.617.656	109.087.901.658	0,00515%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEL-ECL	169.754	6,836	1.160.438	109.087.901.658	0,00106%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECL-EBH	169.754	6,472	1.098.648	109.087.901.658	0,00101%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBH-EHF	169.754	2,862	485.836	109.087.901.658	0,00045%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHF-OCR	169.754	4,122	699.726	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	181.628	7,037	1.278.116	109.087.901.658	0,00117%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLH-FIE	50.456	7,456	376.200	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	BELO HORIZONTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	5.767	7,037	40.582	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	9.877	11,832	116.865	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VJC	9.877	6,784	67.006	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	1.702.127	6,784	11.547.230	109.087.901.658	0,01059%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	1.702.127	11,832	20.139.567	109.087.901.658	0,01846%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	18.062.495	6,784	122.535.966	109.087.901.658	0,11233%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	18.062.495	11,832	213.715.441	109.087.901.658	0,19591%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	21.380.399	6,784	145.044.627	109.087.901.658	0,13296%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	21.380.399	11,832	252.972.881	109.087.901.658	0,23190%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	10.601.866	6,784	71.923.059	109.087.901.658	0,06593%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	10.601.866	11,832	125.441.279	109.087.901.658	0,11499%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	7.831.444	6,784	53.128.516	109.087.901.658	0,04870%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	7.831.444	11,832	92.661.645	109.087.901.658	0,08494%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	4.554.324	6,784	30.896.534	109.087.901.658	0,02832%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	4.554.324	11,832	53.886.762	109.087.901.658	0,04940%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	22.613	6,784	153.407	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	22.613	11,832	267.557	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	12.308.312	6,784	83.499.589	109.087.901.658	0,07654%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	12.308.312	11,832	145.631.948	109.087.901.658	0,13350%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	277.740	6,784	1.884.188	109.087.901.658	0,00173%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	277.740	11,832	3.286.220	109.087.901.658	0,00301%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	314.966	11,832	3.726.678	109.087.901.658	0,00342%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VJC	314.966	6,784	2.136.729	109.087.901.658	0,00196%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	2.254.606	6,784	15.295.247	109.087.901.658	0,01402%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	2.254.606	11,832	26.676.498	109.087.901.658	0,02445%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	175.611	6,784	1.191.345	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	175.611	11,832	2.077.829	109.087.901.658	0,00190%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	5.767	6,784	39.123	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	BELO ORIENTE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	5.767	11,832	68.235	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	471.355	4,753	2.240.350	109.087.901.658	0,00205%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	471.355	6,641	3.130.269	109.087.901.658	0,00287%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	471.355	2,625	1.237.307	109.087.901.658	0,00113%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	471.355	5,602	2.640.531	109.087.901.658	0,00242%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	471.355	6,946	3.274.032	109.087.901.658	0,00300%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	471.355	5,204	2.452.931	109.087.901.658	0,00225%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	9.636.141	4,753	45.800.578	109.087.901.658	0,04199%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	9.636.141	6,641	63.993.612	109.087.901.658	0,05866%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	9.636.141	2,625	25.294.870	109.087.901.658	0,02319%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	9.636.141	5,602	53.981.662	109.087.901.658	0,04948%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	9.636.141	6,946	66.932.635	109.087.901.658	0,06136%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	9.636.141	5,204	50.146.478	109.087.901.658	0,04597%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.040.246	4,753	4.944.289	109.087.901.658	0,00453%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	1.040.246	6,641	6.908.274	109.087.901.658	0,00633%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	1.040.246	2,625	2.730.646	109.087.901.658	0,00250%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	1.040.246	5,602	5.827.458	109.087.901.658	0,00534%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	1.040.246	6,946	7.225.549	109.087.901.658	0,00662%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.040.246	5,204	5.413.440	109.087.901.658	0,00496%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	5.195.905	4,753	24.696.136	109.087.901.658	0,02264%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	5.195.905	6,641	34.506.005	109.087.901.658	0,03163%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	5.195.905	2,625	13.639.251	109.087.901.658	0,01250%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	5.195.905	5,602	29.107.460	109.087.901.658	0,02668%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	5.195.905	6,946	36.090.756	109.087.901.658	0,03308%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	5.195.905	5,204	27.039.490	109.087.901.658	0,02479%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	753.441	4,753	3.581.105	109.087.901.658	0,00328%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	753.441	6,641	5.003.602	109.087.901.658	0,00459%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	753.441	2,625	1.977.783	109.087.901.658	0,00181%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	753.441	5,602	4.220.776	109.087.901.658	0,00387%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	753.441	6,946	5.233.401	109.087.901.658	0,00480%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	753.441	5,204	3.920.907	109.087.901.658	0,00359%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.928.832	4,753	9.167.738	109.087.901.658	0,00840%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	1.928.832	6,641	12.809.373	109.087.901.658	0,01174%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	1.928.832	2,625	5.063.184	109.087.901.658	0,00464%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	1.928.832	5,602	10.805.317	109.087.901.658	0,00991%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	1.928.832	6,946	13.397.667	109.087.901.658	0,01228%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.928.832	5,204	10.037.642	109.087.901.658	0,00920%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	4.306.483	4,753	20.468.714	109.087.901.658	0,01876%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	4.306.483	6,641	28.599.354	109.087.901.658	0,02622%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	4.306.483	2,625	11.304.518	109.087.901.658	0,01036%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	4.306.483	5,602	24.124.918	109.087.901.658	0,02212%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	4.306.483	6,946	29.912.831	109.087.901.658	0,02742%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	4.306.483	5,204	22.410.938	109.087.901.658	0,02054%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	2.246.693	4,753	10.678.532	109.087.901.658	0,00979%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	2.246.693	6,641	14.920.288	109.087.901.658	0,01368%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	2.246.693	2,625	5.897.569	109.087.901.658	0,00541%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	2.246.693	5,602	12.585.974	109.087.901.658	0,01154%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	2.246.693	6,946	15.605.530	109.087.901.658	0,01431%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	2.246.693	5,204	11.691.790	109.087.901.658	0,01072%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.899.329	4,753	9.027.511	109.087.901.658	0,00828%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	1.899.329	6,641	12.613.444	109.087.901.658	0,01156%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	1.899.329	2,625	4.985.739	109.087.901.658	0,00457%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	1.899.329	5,602	10.640.041	109.087.901.658	0,00975%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	1.899.329	6,946	13.192.739	109.087.901.658	0,01209%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.899.329	5,204	9.884.108	109.087.901.658	0,00906%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	598.315	4,753	2.843.791	109.087.901.658	0,00261%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	598.315	6,641	3.973.410	109.087.901.658	0,00364%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	598.315	2,625	1.570.577	109.087.901.658	0,00144%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	598.315	5,602	3.351.761	109.087.901.658	0,00307%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	598.315	6,946	4.155.896	109.087.901.658	0,00381%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	598.315	5,204	3.113.631	109.087.901.658	0,00285%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	3.373.361	4,753	16.033.585	109.087.901.658	0,01470%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	3.373.361	6,641	22.402.490	109.087.901.658	0,02054%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	3.373.361	2,625	8.855.073	109.087.901.658	0,00812%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	3.373.361	5,602	18.897.568	109.087.901.658	0,01732%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	3.373.361	6,946	23.431.366	109.087.901.658	0,02148%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	3.373.361	5,204	17.554.971	109.087.901.658	0,01609%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.400.010	4,753	6.654.248	109.087.901.658	0,00610%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	1.400.010	6,641	9.297.466	109.087.901.658	0,00852%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	1.400.010	2,625	3.675.026	109.087.901.658	0,00337%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	1.400.010	5,602	7.842.856	109.087.901.658	0,00719%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	1.400.010	6,946	9.724.469	109.087.901.658	0,00891%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.400.010	5,204	7.285.652	109.087.901.658	0,00668%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.077.672	4,753	5.122.175	109.087.901.658	0,00470%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	1.077.672	6,641	7.156.820	109.087.901.658	0,00656%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	1.077.672	2,625	2.828.889	109.087.901.658	0,00259%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	1.077.672	5,602	6.037.119	109.087.901.658	0,00553%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	1.077.672	6,946	7.485.510	109.087.901.658	0,00686%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.077.672	5,204	5.608.205	109.087.901.658	0,00514%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.044.080	4,753	4.962.512	109.087.901.658	0,00455%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	1.044.080	6,641	6.933.735	109.087.901.658	0,00636%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	1.044.080	2,625	2.740.710	109.087.901.658	0,00251%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	1.044.080	5,602	5.848.936	109.087.901.658	0,00536%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	1.044.080	6,946	7.252.180	109.087.901.658	0,00665%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.044.080	5,204	5.433.392	109.087.901.658	0,00498%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	855.456	4,753	4.065.982	109.087.901.658	0,00373%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	855.456	6,641	5.681.083	109.087.901.658	0,00521%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	855.456	2,625	2.245.572	109.087.901.658	0,00206%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	855.456	5,602	4.792.265	109.087.901.658	0,00439%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	855.456	6,946	5.941.997	109.087.901.658	0,00545%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	855.456	5,204	4.451.793	109.087.901.658	0,00408%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	14.817	4,753	70.425	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	14.817	6,641	98.400	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	14.817	2,625	38.895	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	14.817	5,602	83.005	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQZ-FAL	14.817	6,946	102.919	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	BELO VALE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	14.817	5,204	77.108	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	24.446	6,177	151.003	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EVN-ECN	24.446	11,026	269.542	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECN-EYB	24.446	8,376	204.760	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYB-EYU	24.446	3,938	96.268	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYU-EBO	24.446	4,785	116.974	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	1.392.627	6,177	8.602.257	109.087.901.658	0,00789%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EVN-ECN	1.392.627	11,026	15.355.105	109.087.901.658	0,01408%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECN-EYB	1.392.627	8,376	11.664.644	109.087.901.658	0,01069%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYB-EYU	1.392.627	3,938	5.484.165	109.087.901.658	0,00503%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYU-EBO	1.392.627	4,785	6.663.720	109.087.901.658	0,00611%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	169.754	6,177	1.048.570	109.087.901.658	0,00096%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EVN-ECN	169.754	11,026	1.871.708	109.087.901.658	0,00172%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECN-EYB	169.754	8,376	1.421.860	109.087.901.658	0,00130%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYB-EYU	169.754	3,938	668.491	109.087.901.658	0,00061%
MINÉRIO DE FERRO	BA, ES, MG	BETIM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYU-EBO	169.754	4,785	812.273	109.087.901.658	0,00074%
MINÉRIO DE FERRO	BA, ES, MG	BOCAIUVA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGU-EEA	20.854	14,821	309.077	109.087.901.658	0,00028%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BOCAIUVA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEA-EBV	20.854	25,161	524.707	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	BOCAIUVA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBV-EEN	20.854	18,853	393.160	109.087.901.658	0,00036%
MINÉRIO DE FERRO	BA, ES, MG	BOCAIUVA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEN-EEO	20.854	12,394	258.464	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	BOCAIUVA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEO-EBP	20.854	3,182	66.357	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	452.578	3,748	1.696.262	109.087.901.658	0,00155%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	452.578	8,398	3.800.750	109.087.901.658	0,00348%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	471.355	3,748	1.766.639	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	471.355	8,398	3.958.439	109.087.901.658	0,00363%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	9.636.141	3,748	36.116.256	109.087.901.658	0,03311%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	9.636.141	8,398	80.924.312	109.087.901.658	0,07418%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.040.246	3,748	3.898.842	109.087.901.658	0,00357%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.040.246	8,398	8.735.986	109.087.901.658	0,00801%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	175.991	3,748	659.614	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	175.991	8,398	1.477.972	109.087.901.658	0,00135%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	16.754.022	3,748	62.794.074	109.087.901.658	0,05756%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	16.754.022	8,398	140.700.277	109.087.901.658	0,12898%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	5.195.905	3,748	19.474.252	109.087.901.658	0,01785%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	5.195.905	8,398	43.635.210	109.087.901.658	0,04000%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	9.694.113	3,748	36.333.536	109.087.901.658	0,03331%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	9.694.113	8,398	81.411.161	109.087.901.658	0,07463%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	753.441	3,748	2.823.897	109.087.901.658	0,00259%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	753.441	8,398	6.327.398	109.087.901.658	0,00580%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.632.345	3,748	9.866.029	109.087.901.658	0,00904%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.632.345	8,398	22.106.433	109.087.901.658	0,02026%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.225.523	3,748	12.089.260	109.087.901.658	0,01108%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	3.225.523	8,398	27.087.942	109.087.901.658	0,02483%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	11.042.972	3,748	41.389.059	109.087.901.658	0,03794%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	11.042.972	8,398	92.738.879	109.087.901.658	0,08501%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.360.110	3,748	5.097.692	109.087.901.658	0,00467%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.360.110	8,398	11.422.204	109.087.901.658	0,01047%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.915.189	3,748	10.926.128	109.087.901.658	0,01002%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.915.189	8,398	24.481.757	109.087.901.658	0,02244%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.208.569	3,748	8.277.717	109.087.901.658	0,00759%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.208.569	8,398	18.547.562	109.087.901.658	0,01700%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	140.317	3,748	525.908	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	140.317	8,398	1.178.382	109.087.901.658	0,00108%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	16.481.129	3,748	61.771.271	109.087.901.658	0,05663%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	16.481.129	8,398	138.408.521	109.087.901.658	0,12688%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.218.053	3,748	12.061.263	109.087.901.658	0,01106%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	3.218.053	8,398	27.025.209	109.087.901.658	0,02477%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.928.832	3,748	7.229.262	109.087.901.658	0,00663%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.928.832	8,398	16.198.331	109.087.901.658	0,01485%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	4.306.483	3,748	16.140.698	109.087.901.658	0,01480%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	4.306.483	8,398	36.165.844	109.087.901.658	0,03315%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.246.693	3,748	8.420.605	109.087.901.658	0,00772%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.246.693	8,398	18.867.728	109.087.901.658	0,01730%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.899.329	3,748	7.118.685	109.087.901.658	0,00653%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.899.329	8,398	15.950.565	109.087.901.658	0,01462%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	598.315	3,748	2.242.485	109.087.901.658	0,00206%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	598.315	8,398	5.024.649	109.087.901.658	0,00461%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.373.361	3,748	12.643.357	109.087.901.658	0,01159%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	3.373.361	8,398	28.329.486	109.087.901.658	0,02597%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	3.518.020	3,748	13.185.539	109.087.901.658	0,01209%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	3.518.020	8,398	29.544.332	109.087.901.658	0,02708%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	37.363	3,748	140.037	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	37.363	8,398	313.774	109.087.901.658	0,00029%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.054.657	3,748	7.700.854	109.087.901.658	0,00706%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.054.657	8,398	17.255.009	109.087.901.658	0,01582%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	472.702	3,748	1.771.687	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	472.702	8,398	3.969.751	109.087.901.658	0,00364%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	2.357.294	3,748	8.835.138	109.087.901.658	0,00810%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.357.294	8,398	19.796.555	109.087.901.658	0,01815%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	809.514	3,748	3.034.058	109.087.901.658	0,00278%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	809.514	8,398	6.798.299	109.087.901.658	0,00623%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.400.010	3,748	5.247.237	109.087.901.658	0,00481%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.400.010	8,398	11.757.284	109.087.901.658	0,01078%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.077.672	3,748	4.039.115	109.087.901.658	0,00370%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.077.672	8,398	9.050.289	109.087.901.658	0,00830%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	972.896	3,748	3.646.414	109.087.901.658	0,00334%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	972.896	8,398	8.170.381	109.087.901.658	0,00749%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.044.080	3,748	3.913.212	109.087.901.658	0,00359%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.044.080	8,398	8.768.184	109.087.901.658	0,00804%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	855.456	3,748	3.206.249	109.087.901.658	0,00294%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	855.456	8,398	7.184.119	109.087.901.658	0,00659%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	14.457	3,748	54.185	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	14.457	8,398	121.410	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	190.241	3,748	713.023	109.087.901.658	0,00065%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	190.241	8,398	1.597.644	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	14.817	3,748	55.534	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	14.817	8,398	124.433	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	1.085.334	3,748	4.067.832	109.087.901.658	0,00373%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.085.334	8,398	9.114.635	109.087.901.658	0,00836%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	233.772	3,748	876.177	109.087.901.658	0,00080%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	233.772	8,398	1.963.217	109.087.901.658	0,00180%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	269.202	3,748	1.008.969	109.087.901.658	0,00092%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	269.202	8,398	2.260.758	109.087.901.658	0,00207%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FOJ	346.347	8,398	2.908.622	109.087.901.658	0,00267%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FIR	346.347	3,748	1.298.109	109.087.901.658	0,00119%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	174.123	3,748	652.613	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	174.123	8,398	1.462.285	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	24.259	3,748	90.923	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BOM JARDIM DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	24.259	8,398	203.727	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	471.355	1,180	556.199	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	471.355	5,540	2.611.307	109.087.901.658	0,00239%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	471.355	5,015	2.363.845	109.087.901.658	0,00217%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	471.355	1,195	563.269	109.087.901.658	0,00052%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	471.355	6,988	3.293.829	109.087.901.658	0,00302%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	471.355	6,475	3.052.024	109.087.901.658	0,00280%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	471.355	6,139	2.893.648	109.087.901.658	0,00265%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	471.355	7,305	3.443.248	109.087.901.658	0,00316%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	9.636.141	1,180	11.370.646	109.087.901.658	0,01042%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	9.636.141	5,540	53.384.221	109.087.901.658	0,04894%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	9.636.141	5,015	48.325.247	109.087.901.658	0,04430%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	9.636.141	1,195	11.515.188	109.087.901.658	0,01056%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	9.636.141	6,988	67.337.353	109.087.901.658	0,06173%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	9.636.141	6,475	62.394.013	109.087.901.658	0,05720%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	9.636.141	6,139	59.156.270	109.087.901.658	0,05423%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	9.636.141	7,305	70.392.010	109.087.901.658	0,06453%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	1.040.246	5,540	5.762.963	109.087.901.658	0,00528%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	1.040.246	5,015	5.216.834	109.087.901.658	0,00478%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	1.040.246	1,195	1.243.094	109.087.901.658	0,00114%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	1.040.246	6,988	7.269.239	109.087.901.658	0,00666%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	1.040.246	6,475	6.735.593	109.087.901.658	0,00617%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	1.040.246	6,139	6.386.070	109.087.901.658	0,00585%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.040.246	7,305	7.598.997	109.087.901.658	0,00697%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	5.195.905	1,180	6.131.168	109.087.901.658	0,00562%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	5.195.905	5,540	28.785.314	109.087.901.658	0,02639%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	5.195.905	5,015	26.057.464	109.087.901.658	0,02389%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	5.195.905	1,195	6.209.106	109.087.901.658	0,00569%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	5.195.905	6,988	36.308.984	109.087.901.658	0,03328%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	5.195.905	6,475	33.643.485	109.087.901.658	0,03084%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	5.195.905	6,139	31.897.661	109.087.901.658	0,02924%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	5.195.905	7,305	37.956.086	109.087.901.658	0,03479%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	753.441	1,180	889.060	109.087.901.658	0,00081%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	753.441	5,540	4.174.063	109.087.901.658	0,00383%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	753.441	5,015	3.778.507	109.087.901.658	0,00346%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	753.441	1,195	900.362	109.087.901.658	0,00083%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	753.441	6,988	5.265.046	109.087.901.658	0,00483%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	753.441	6,475	4.878.530	109.087.901.658	0,00447%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	753.441	6,139	4.625.374	109.087.901.658	0,00424%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	753.441	7,305	5.503.887	109.087.901.658	0,00505%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	1.928.832	1,180	2.276.022	109.087.901.658	0,00209%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	1.928.832	5,540	10.685.729	109.087.901.658	0,00980%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	1.928.832	5,015	9.673.092	109.087.901.658	0,00887%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	1.928.832	1,195	2.304.954	109.087.901.658	0,00211%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	1.928.832	6,988	13.478.678	109.087.901.658	0,01236%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	1.928.832	6,475	12.489.187	109.087.901.658	0,01145%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	1.928.832	6,139	11.841.100	109.087.901.658	0,01085%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.928.832	7,305	14.090.118	109.087.901.658	0,01292%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	4.306.483	1,180	5.081.650	109.087.901.658	0,00466%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	4.306.483	5,540	23.857.916	109.087.901.658	0,02187%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	4.306.483	5,015	21.597.012	109.087.901.658	0,01980%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	4.306.483	1,195	5.146.247	109.087.901.658	0,00472%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	4.306.483	6,988	30.093.703	109.087.901.658	0,02759%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	4.306.483	6,475	27.884.477	109.087.901.658	0,02556%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	4.306.483	6,139	26.437.499	109.087.901.658	0,02424%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	4.306.483	7,305	31.458.858	109.087.901.658	0,02884%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	2.246.693	5,540	12.446.679	109.087.901.658	0,01141%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	2.246.693	5,015	11.267.165	109.087.901.658	0,01033%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	2.246.693	1,195	2.684.798	109.087.901.658	0,00246%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	2.246.693	6,988	15.699.891	109.087.901.658	0,01439%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	2.246.693	6,475	14.547.337	109.087.901.658	0,01334%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	2.246.693	6,139	13.792.448	109.087.901.658	0,01264%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	2.246.693	7,305	16.412.092	109.087.901.658	0,01504%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	1.899.329	1,180	2.241.208	109.087.901.658	0,00205%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	1.899.329	5,540	10.522.283	109.087.901.658	0,00965%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	1.899.329	5,015	9.525.135	109.087.901.658	0,00873%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	1.899.329	1,195	2.269.698	109.087.901.658	0,00208%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	1.899.329	6,988	13.272.511	109.087.901.658	0,01217%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	1.899.329	6,475	12.298.155	109.087.901.658	0,01127%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	1.899.329	6,139	11.659.981	109.087.901.658	0,01069%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.899.329	7,305	13.874.598	109.087.901.658	0,01272%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	598.315	1,180	706.012	109.087.901.658	0,00065%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	598.315	5,540	3.314.665	109.087.901.658	0,00304%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	598.315	5,015	3.000.550	109.087.901.658	0,00275%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	598.315	1,195	714.986	109.087.901.658	0,00066%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	598.315	6,988	4.181.025	109.087.901.658	0,00383%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	598.315	6,475	3.874.090	109.087.901.658	0,00355%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	598.315	6,139	3.673.056	109.087.901.658	0,00337%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	598.315	7,305	4.370.691	109.087.901.658	0,00401%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	3.373.361	5,540	18.688.420	109.087.901.658	0,01713%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	3.373.361	5,015	16.917.405	109.087.901.658	0,01551%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	3.373.361	1,195	4.031.166	109.087.901.658	0,00370%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	3.373.361	6,988	23.573.047	109.087.901.658	0,02161%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	3.373.361	6,475	21.842.512	109.087.901.658	0,02002%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	3.373.361	6,139	20.709.063	109.087.901.658	0,01898%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	3.373.361	7,305	24.642.402	109.087.901.658	0,02259%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	1.400.010	5,540	7.756.055	109.087.901.658	0,00711%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	1.400.010	5,015	7.021.050	109.087.901.658	0,00644%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	1.400.010	1,195	1.673.012	109.087.901.658	0,00153%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	1.400.010	6,988	9.783.270	109.087.901.658	0,00897%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	1.400.010	6,475	9.065.065	109.087.901.658	0,00831%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	1.400.010	6,139	8.594.661	109.087.901.658	0,00788%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.400.010	7,305	10.227.073	109.087.901.658	0,00938%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	1.077.672	5,540	5.970.303	109.087.901.658	0,00547%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	1.077.672	5,015	5.404.525	109.087.901.658	0,00495%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	1.077.672	1,195	1.287.818	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	1.077.672	6,988	7.530.772	109.087.901.658	0,00690%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	1.077.672	6,475	6.977.926	109.087.901.658	0,00640%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	1.077.672	6,139	6.615.828	109.087.901.658	0,00606%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.077.672	7,305	7.872.394	109.087.901.658	0,00722%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	1.044.080	1,180	1.232.014	109.087.901.658	0,00113%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	1.044.080	5,540	5.784.203	109.087.901.658	0,00530%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	1.044.080	5,015	5.236.061	109.087.901.658	0,00480%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	1.044.080	1,195	1.247.676	109.087.901.658	0,00114%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	1.044.080	6,988	7.296.031	109.087.901.658	0,00669%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	1.044.080	6,475	6.760.418	109.087.901.658	0,00620%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	1.044.080	6,139	6.409.607	109.087.901.658	0,00588%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.044.080	7,305	7.627.004	109.087.901.658	0,00699%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	855.456	1,180	1.009.438	109.087.901.658	0,00093%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	855.456	5,540	4.739.226	109.087.901.658	0,00434%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	855.456	5,015	4.290.112	109.087.901.658	0,00393%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	855.456	1,195	1.022.270	109.087.901.658	0,00094%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	855.456	6,988	5.977.927	109.087.901.658	0,00548%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	855.456	6,475	5.539.078	109.087.901.658	0,00508%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	855.456	6,139	5.251.644	109.087.901.658	0,00481%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	855.456	7,305	6.249.106	109.087.901.658	0,00573%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	14.817	1,180	17.484	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	14.817	5,540	82.086	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	14.817	5,015	74.307	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	14.817	1,195	17.706	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	14.817	6,988	103.541	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	14.817	6,475	95.940	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	14.817	6,139	90.962	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BRUMADINHO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	14.817	7,305	108.238	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	BUENOPOLIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJF-EBL	20.854	7,641	159.345	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	BUENOPOLIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBL-EAL	20.854	13,262	276.566	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VJC	9.877	1,000	9.877	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	1.702.127	1,000	1.702.127	109.087.901.658	0,00156%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	18.062.495	1,000	18.062.495	109.087.901.658	0,01656%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	21.380.399	1,000	21.380.399	109.087.901.658	0,01960%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	10.601.866	1,000	10.601.866	109.087.901.658	0,00972%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	7.831.444	1,000	7.831.444	109.087.901.658	0,00718%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	4.554.324	1,000	4.554.324	109.087.901.658	0,00417%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	22.613	1,000	22.613	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	12.308.312	1,000	12.308.312	109.087.901.658	0,01128%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	277.740	1,000	277.740	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VJC	314.966	1,000	314.966	109.087.901.658	0,00029%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	2.254.606	1,000	2.254.606	109.087.901.658	0,00207%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	175.611	1,000	175.611	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	BUGRE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	5.767	1,000	5.767	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	24.446	4,754	116.216	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTE-VQT	24.446	9,556	233.606	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	24.446	4,751	116.143	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	1.392.627	4,754	6.620.549	109.087.901.658	0,00607%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTE-VQT	1.392.627	9,556	13.307.944	109.087.901.658	0,01220%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	1.392.627	4,751	6.616.371	109.087.901.658	0,00607%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	621.896	4,754	2.956.494	109.087.901.658	0,00271%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTE-VQT	621.896	9,556	5.942.838	109.087.901.658	0,00545%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	621.896	4,751	2.954.628	109.087.901.658	0,00271%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	175.611	4,754	834.855	109.087.901.658	0,00077%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTE-VQT	175.611	9,556	1.678.139	109.087.901.658	0,00154%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	175.611	4,751	834.328	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	181.628	4,754	863.460	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTE-VQT	181.628	9,556	1.735.637	109.087.901.658	0,00159%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	181.628	4,751	862.915	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	5.767	4,754	27.416	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTE-VQT	5.767	9,556	55.109	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CAETE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	5.767	4,751	27.399	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CAPITAO ENEAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJN-EEM	20.854	2,878	60.018	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	CAPITAO ENEAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEM-EON	20.854	20,733	432.366	109.087.901.658	0,00040%
MINÉRIO DE FERRO	BA, ES, MG	CAPITAO ENEAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EON-EEZ	20.854	20,479	427.069	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	CAPITAO ENEAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEZ-ENA	20.854	11,714	244.284	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	CARANAIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHP-FPE	28.449	0,124	3.528	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	CARANAIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FQC	28.449	2,993	85.148	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CARANAIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	231.735	2,993	693.583	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	CARANAIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FHP	231.735	0,124	28.735	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CARANAIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	6.249	2,993	18.703	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CARANAIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FHP	6.249	0,124	775	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCN-FCM	28.449	2,844	80.909	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FPC	28.449	1,762	50.127	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPC-FIL	28.449	2,746	78.121	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIL-FCY	28.449	7,491	213.111	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCY-FHP	28.449	4,337	123.383	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHP-FPE	28.449	4,746	135.019	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FQC	28.449	2,065	58.747	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	231.735	2,065	478.533	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FHP	231.735	4,746	1.099.814	109.087.901.658	0,00101%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHP-FCY	231.735	4,337	1.005.035	109.087.901.658	0,00092%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCY-FIL	231.735	7,491	1.735.927	109.087.901.658	0,00159%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIL-FPC	231.735	2,746	636.344	109.087.901.658	0,00058%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPC-FCM	231.735	1,762	408.317	109.087.901.658	0,00037%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FCN	231.735	2,844	659.054	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	6.249	2,065	12.904	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FHP	6.249	4,746	29.658	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHP-FCY	6.249	4,337	27.102	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCY-FIL	6.249	7,491	46.811	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIL-FPC	6.249	2,746	17.160	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPC-FCM	6.249	1,762	11.011	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CARANDAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FCN	6.249	2,844	17.772	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CARMO DO CAJURU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHT-ECJ	24.446	2,672	65.320	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	CARMO DO CAJURU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECJ-EYE	24.446	7,180	175.522	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	CARMO DO CAJURU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYE-EAG	24.446	8,412	205.640	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	CARMO DO CAJURU	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAG-EGD	24.446	0,501	12.247	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	24.446	0,130	3.178	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	1.392.627	0,130	181.042	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	621.896	0,130	80.846	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	21.380.399	0,130	2.779.452	109.087.901.658	0,00255%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	7.831.444	11,885	93.076.712	109.087.901.658	0,08532%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBT-VAG	7.831.444	10,032	78.565.046	109.087.901.658	0,07202%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	7.831.444	4,005	31.364.933	109.087.901.658	0,02875%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	4.554.324	11,885	54.128.141	109.087.901.658	0,04962%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBT-VAG	4.554.324	10,032	45.688.978	109.087.901.658	0,04188%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	4.554.324	4,005	18.240.068	109.087.901.658	0,01672%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	22.613	11,885	268.756	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBT-VAG	22.613	10,032	226.854	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	22.613	4,005	90.565	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	12.308.312	11,885	146.284.288	109.087.901.658	0,13410%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBT-VAG	12.308.312	10,032	123.476.986	109.087.901.658	0,11319%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	12.308.312	4,005	49.294.790	109.087.901.658	0,04519%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	277.740	11,885	3.300.940	109.087.901.658	0,00303%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBT-VAG	277.740	10,032	2.786.288	109.087.901.658	0,00255%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	277.740	4,005	1.112.349	109.087.901.658	0,00102%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	2.254.606	0,130	293.099	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	175.611	0,130	22.829	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	181.628	0,130	23.612	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CATAS ALTAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	5.767	0,130	750	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	CATUTI	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EMA-EEW	20.854	2,283	47.610	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	CATUTI	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEW-EYP	20.854	2,032	42.375	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	452.578	2,343	1.060.603	109.087.901.658	0,00097%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	452.578	2,497	1.130.087	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	471.355	2,343	1.104.606	109.087.901.658	0,00101%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	471.355	2,497	1.176.973	109.087.901.658	0,00108%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.636.141	2,343	22.582.007	109.087.901.658	0,02070%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	9.636.141	2,497	24.061.444	109.087.901.658	0,02206%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.040.246	2,343	2.437.785	109.087.901.658	0,00223%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.040.246	2,497	2.597.494	109.087.901.658	0,00238%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	175.991	2,343	412.430	109.087.901.658	0,00038%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	175.991	2,497	439.450	109.087.901.658	0,00040%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.754.022	2,343	39.262.548	109.087.901.658	0,03599%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	16.754.022	2,497	41.834.793	109.087.901.658	0,03835%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	5.195.905	2,343	12.176.447	109.087.901.658	0,01116%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	5.195.905	2,497	12.974.175	109.087.901.658	0,01189%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.694.113	2,343	22.717.863	109.087.901.658	0,02083%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	9.694.113	2,497	24.206.200	109.087.901.658	0,02219%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	753.441	2,343	1.765.666	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	753.441	2,497	1.881.342	109.087.901.658	0,00172%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.632.345	2,343	6.168.822	109.087.901.658	0,00565%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.632.345	2,497	6.572.965	109.087.901.658	0,00603%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.225.523	2,343	7.558.916	109.087.901.658	0,00693%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.225.523	2,497	8.054.131	109.087.901.658	0,00738%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	11.042.972	2,343	25.878.874	109.087.901.658	0,02372%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	11.042.972	2,497	27.574.301	109.087.901.658	0,02528%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.360.110	2,343	3.187.377	109.087.901.658	0,00292%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.360.110	2,497	3.396.195	109.087.901.658	0,00311%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.915.189	2,343	6.831.658	109.087.901.658	0,00626%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.915.189	2,497	7.279.227	109.087.901.658	0,00667%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.208.569	2,343	5.175.715	109.087.901.658	0,00474%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.208.569	2,497	5.514.797	109.087.901.658	0,00506%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	140.317	2,343	328.829	109.087.901.658	0,00030%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	140.317	2,497	350.372	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.481.129	2,343	38.623.031	109.087.901.658	0,03541%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	16.481.129	2,497	41.153.379	109.087.901.658	0,03772%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.218.053	2,343	7.541.411	109.087.901.658	0,00691%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.218.053	2,497	8.035.478	109.087.901.658	0,00737%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.928.832	2,343	4.520.160	109.087.901.658	0,00414%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.928.832	2,497	4.816.294	109.087.901.658	0,00442%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	4.306.483	2,343	10.092.114	109.087.901.658	0,00925%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	4.306.483	2,497	10.753.288	109.087.901.658	0,00986%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.246.693	2,343	5.265.058	109.087.901.658	0,00483%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.246.693	2,497	5.609.992	109.087.901.658	0,00514%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.899.329	2,343	4.451.021	109.087.901.658	0,00408%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.899.329	2,497	4.742.625	109.087.901.658	0,00435%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	598.315	2,343	1.402.133	109.087.901.658	0,00129%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	598.315	2,497	1.493.993	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.373.361	2,343	7.905.370	109.087.901.658	0,00725%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.373.361	2,497	8.423.282	109.087.901.658	0,00772%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.518.020	2,343	8.244.374	109.087.901.658	0,00756%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.518.020	2,497	8.784.496	109.087.901.658	0,00805%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	37.363	2,343	87.559	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	37.363	2,497	93.295	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.054.657	2,343	4.815.027	109.087.901.658	0,00441%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.054.657	2,497	5.130.479	109.087.901.658	0,00470%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	472.702	2,343	1.107.763	109.087.901.658	0,00102%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	472.702	2,497	1.180.337	109.087.901.658	0,00108%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.357.294	2,343	5.524.248	109.087.901.658	0,00506%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.357.294	2,497	5.886.163	109.087.901.658	0,00540%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	809.514	2,343	1.897.072	109.087.901.658	0,00174%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	809.514	2,497	2.021.356	109.087.901.658	0,00185%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.400.010	2,343	3.280.881	109.087.901.658	0,00301%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.400.010	2,497	3.495.825	109.087.901.658	0,00320%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.077.672	2,343	2.525.492	109.087.901.658	0,00232%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.077.672	2,497	2.690.947	109.087.901.658	0,00247%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	972.896	2,343	2.279.953	109.087.901.658	0,00209%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	972.896	2,497	2.429.321	109.087.901.658	0,00223%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.044.080	2,343	2.446.770	109.087.901.658	0,00224%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.044.080	2,497	2.607.068	109.087.901.658	0,00239%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	855.456	2,343	2.004.735	109.087.901.658	0,00184%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	855.456	2,497	2.136.074	109.087.901.658	0,00196%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.457	2,343	33.880	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	14.457	2,497	36.099	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.817	2,343	34.723	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	14.817	2,497	36.998	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.085.334	2,343	2.543.448	109.087.901.658	0,00233%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.085.334	2,497	2.710.079	109.087.901.658	0,00248%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	233.772	2,343	547.838	109.087.901.658	0,00050%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	233.772	2,497	583.729	109.087.901.658	0,00054%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FDE	346.347	2,497	864.828	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	24.259	2,343	56.850	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CONCEICAO DA BARRA DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	24.259	2,497	60.575	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	38.120	1,323	50.433	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FQN	38.120	2,836	108.108	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCO	38.120	3,515	133.992	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQD	38.120	4,505	171.731	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	38.120	3,769	143.674	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-VOB	38.120	3,470	132.276	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGE-FDM	28.449	0,511	14.537	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	28.449	3,769	107.224	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FCO	28.449	4,505	128.163	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQN	28.449	3,515	99.998	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCR	28.449	2,836	80.681	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	28.449	1,323	37.638	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	28.449	3,522	100.197	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FLM	28.449	7,350	209.100	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FHC	28.449	13,000	369.837	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FPY	28.449	1,099	31.265	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	452.578	3,769	1.705.766	109.087.901.658	0,00156%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FCO	452.578	4,505	2.038.864	109.087.901.658	0,00187%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQN	452.578	3,515	1.590.812	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCR	452.578	2,836	1.283.511	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	452.578	1,323	598.761	109.087.901.658	0,00055%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	452.578	3,522	1.593.980	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	280.277	1,099	308.024	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	280.277	13,000	3.643.601	109.087.901.658	0,00334%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	280.277	7,350	2.060.036	109.087.901.658	0,00189%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FFV	280.277	3,522	987.136	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	280.277	1,323	370.806	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FQN	280.277	2,836	794.866	109.087.901.658	0,00073%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCO	280.277	3,515	985.174	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQD	280.277	4,505	1.262.648	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	280.277	3,769	1.056.364	109.087.901.658	0,00097%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-VOB	280.277	3,470	972.561	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FFV	231.735	3,522	816.171	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	231.735	1,323	306.585	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FQN	231.735	2,836	657.200	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCO	231.735	3,515	814.549	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQD	231.735	4,505	1.043.966	109.087.901.658	0,00096%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	231.735	3,769	873.409	109.087.901.658	0,00080%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FGE	231.735	0,511	118.417	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	16.754.022	1,099	18.412.670	109.087.901.658	0,01688%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	16.754.022	13,000	217.802.286	109.087.901.658	0,19966%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	16.754.022	7,350	123.142.062	109.087.901.658	0,11288%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	6.249	1,099	6.868	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	6.249	13,000	81.237	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	6.249	7,350	45.930	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FFV	6.249	3,522	22.009	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	6.249	1,323	8.267	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FQN	6.249	2,836	17.722	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCO	6.249	3,515	21.965	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQD	6.249	4,505	28.152	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	6.249	3,769	23.552	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FGE	6.249	0,511	3.193	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	9.694.113	1,099	10.653.830	109.087.901.658	0,00977%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	9.694.113	13,000	126.023.469	109.087.901.658	0,11552%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	9.694.113	7,350	71.251.731	109.087.901.658	0,06532%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	2.632.345	1,099	2.892.947	109.087.901.658	0,00265%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	2.632.345	13,000	34.220.485	109.087.901.658	0,03137%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	2.632.345	7,350	19.347.736	109.087.901.658	0,01774%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	3.225.523	1,323	4.267.367	109.087.901.658	0,00391%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	3.225.523	3,522	11.360.292	109.087.901.658	0,01041%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	11.042.972	1,099	12.136.226	109.087.901.658	0,01113%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	11.042.972	13,000	143.558.636	109.087.901.658	0,13160%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	11.042.972	7,350	81.165.844	109.087.901.658	0,07440%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	1.360.110	1,099	1.494.761	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	1.360.110	13,000	17.681.430	109.087.901.658	0,01621%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	1.360.110	7,350	9.996.809	109.087.901.658	0,00916%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	2.915.189	1,099	3.203.793	109.087.901.658	0,00294%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	2.915.189	13,000	37.897.457	109.087.901.658	0,03474%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	2.915.189	7,350	21.426.639	109.087.901.658	0,01964%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	2.208.569	1,099	2.427.217	109.087.901.658	0,00223%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	2.208.569	13,000	28.711.397	109.087.901.658	0,02632%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	2.208.569	7,350	16.232.982	109.087.901.658	0,01488%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-ELF	4.554.324	0,949	4.322.053	109.087.901.658	0,00396%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	16.481.129	1,323	21.804.534	109.087.901.658	0,01999%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	16.481.129	3,522	58.046.536	109.087.901.658	0,05321%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	3.218.053	3,769	12.128.842	109.087.901.658	0,01112%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FCO	3.218.053	4,505	14.497.329	109.087.901.658	0,01329%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQN	3.218.053	3,515	11.311.456	109.087.901.658	0,01037%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCR	3.218.053	2,836	9.126.398	109.087.901.658	0,00837%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	3.218.053	1,323	4.257.484	109.087.901.658	0,00390%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	3.218.053	3,522	11.333.983	109.087.901.658	0,01039%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	3.518.020	3,769	13.259.417	109.087.901.658	0,01215%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FCO	3.518.020	4,505	15.848.680	109.087.901.658	0,01453%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQN	3.518.020	3,515	12.365.840	109.087.901.658	0,01134%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCR	3.518.020	2,836	9.977.105	109.087.901.658	0,00915%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	3.518.020	1,323	4.654.340	109.087.901.658	0,00427%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	3.518.020	3,522	12.390.466	109.087.901.658	0,01136%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	37.363	3,769	140.821	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FCO	37.363	4,505	168.320	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQN	37.363	3,515	131.331	109.087.901.658	0,00012%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCR	37.363	2,836	105.961	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	37.363	1,323	49.431	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	37.363	3,522	131.592	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	472.702	1,323	625.385	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	472.702	3,522	1.664.856	109.087.901.658	0,00153%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	2.357.294	1,099	2.590.666	109.087.901.658	0,00237%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	2.357.294	13,000	30.644.822	109.087.901.658	0,02809%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	2.357.294	7,350	17.326.111	109.087.901.658	0,01588%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-ELF	22.613	0,949	21.460	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	10.182	1,099	11.190	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	10.182	13,000	132.366	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FHC	10.182	13,000	132.366	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FPY	10.182	1,099	11.190	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	972.896	3,769	3.666.845	109.087.901.658	0,00336%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FCO	972.896	4,505	4.382.896	109.087.901.658	0,00402%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQN	972.896	3,515	3.419.729	109.087.901.658	0,00313%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCR	972.896	2,836	2.759.133	109.087.901.658	0,00253%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	972.896	1,323	1.287.141	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	972.896	3,522	3.426.540	109.087.901.658	0,00314%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	1.085.334	3,522	3.822.546	109.087.901.658	0,00350%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	233.772	3,522	823.345	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FLM	346.347	7,350	2.545.650	109.087.901.658	0,00233%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FHC	346.347	13,000	4.502.511	109.087.901.658	0,00413%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FPY	346.347	1,099	380.635	109.087.901.658	0,00035%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-FDM	24.259	3,470	84.179	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	24.259	3,769	91.432	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FCO	24.259	4,505	109.287	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQN	24.259	3,515	85.270	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCR	24.259	2,836	68.799	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	24.259	1,323	32.095	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONGONHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	24.259	3,522	85.440	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	38.120	0,279	10.635	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-VOB	38.120	2,451	93.432	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FQC	28.449	1,232	35.049	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FBQ	28.449	4,448	126.541	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBQ-FBS	28.449	4,261	121.221	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBS-FPK	28.449	4,399	125.147	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPK-FCL	28.449	3,730	106.115	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCL-FMO	28.449	5,197	147.849	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMO-FGE	28.449	5,288	150.438	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGE-FDM	28.449	3,354	95.418	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	28.449	0,279	7.937	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	452.578	0,279	126.269	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	280.277	0,279	78.197	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-VOB	280.277	2,451	686.959	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	231.735	0,279	64.654	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FGE	231.735	3,354	777.239	109.087.901.658	0,00071%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGE-FMO	231.735	5,288	1.225.415	109.087.901.658	0,00112%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMO-FCL	231.735	5,197	1.204.327	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCL-FPK	231.735	3,730	864.372	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPK-FBS	231.735	4,399	1.019.402	109.087.901.658	0,00093%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBS-FBQ	231.735	4,261	987.423	109.087.901.658	0,00091%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBQ-FQC	231.735	4,448	1.030.757	109.087.901.658	0,00094%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	231.735	1,232	285.498	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	6.249	0,279	1.743	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FGE	6.249	3,354	20.959	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGE-FMO	6.249	5,288	33.045	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMO-FCL	6.249	5,197	32.476	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCL-FPK	6.249	3,730	23.309	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPK-FBS	6.249	4,399	27.489	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBS-FBQ	6.249	4,261	26.627	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBQ-FQC	6.249	4,448	27.796	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	6.249	1,232	7.699	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	3.218.053	0,279	897.837	109.087.901.658	0,00082%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	3.518.020	0,279	981.528	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	37.363	0,279	10.424	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	972.896	0,279	271.438	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-FDM	24.259	2,451	59.459	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO LAFAIETE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	24.259	0,279	6.768	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VCP	9.877	15,801	156.066	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VBC	9.877	13,098	129.369	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VST	9.877	0,713	7.042	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	1.702.127	0,713	1.213.617	109.087.901.658	0,00111%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	1.702.127	13,098	22.294.459	109.087.901.658	0,02044%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	1.702.127	15,801	26.895.309	109.087.901.658	0,02465%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	18.062.495	0,713	12.878.559	109.087.901.658	0,01181%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	18.062.495	13,098	236.582.560	109.087.901.658	0,21687%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	18.062.495	15,801	285.405.483	109.087.901.658	0,26163%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	21.380.399	0,713	15.244.224	109.087.901.658	0,01397%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	21.380.399	13,098	280.040.466	109.087.901.658	0,25671%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	21.380.399	15,801	337.831.685	109.087.901.658	0,30969%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	10.601.866	0,713	7.559.130	109.087.901.658	0,00693%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	10.601.866	13,098	138.863.241	109.087.901.658	0,12729%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	10.601.866	15,801	167.520.085	109.087.901.658	0,15356%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	7.831.444	0,713	5.583.820	109.087.901.658	0,00512%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	7.831.444	13,098	102.576.254	109.087.901.658	0,09403%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	7.831.444	15,801	123.744.647	109.087.901.658	0,11344%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	4.554.324	0,713	3.247.233	109.087.901.658	0,00298%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	4.554.324	13,098	59.652.536	109.087.901.658	0,05468%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	4.554.324	15,801	71.962.874	109.087.901.658	0,06597%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	22.613	0,713	16.123	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	22.613	13,098	296.185	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	22.613	15,801	357.308	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	12.308.312	0,713	8.775.826	109.087.901.658	0,00804%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	12.308.312	13,098	161.214.271	109.087.901.658	0,14778%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	12.308.312	15,801	194.483.638	109.087.901.658	0,17828%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	277.740	0,713	198.029	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	277.740	13,098	3.637.839	109.087.901.658	0,00333%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	277.740	15,801	4.388.570	109.087.901.658	0,00402%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VCP	314.966	15,801	4.976.778	109.087.901.658	0,00456%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VBC	314.966	13,098	4.125.425	109.087.901.658	0,00378%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VST	314.966	0,713	224.571	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	2.254.606	0,713	1.607.534	109.087.901.658	0,00147%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	2.254.606	13,098	29.530.829	109.087.901.658	0,02707%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	2.254.606	15,801	35.625.029	109.087.901.658	0,03266%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	175.611	0,713	125.211	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	175.611	13,098	2.300.153	109.087.901.658	0,00211%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	175.611	15,801	2.774.829	109.087.901.658	0,00254%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	5.767	0,713	4.112	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	5.767	13,098	75.536	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	CONSELHEIRO PENA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	5.767	15,801	91.124	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CONTAGEM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYU-EBO	24.446	0,540	13.201	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CONTAGEM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBO-EEL	24.446	6,596	161.246	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	CONTAGEM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEL-ECL	24.446	0,696	17.014	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CONTAGEM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYU-EBO	1.392.627	0,540	752.019	109.087.901.658	0,00069%
MINÉRIO DE FERRO	BA, ES, MG	CONTAGEM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBO-EEL	1.392.627	6,596	9.185.768	109.087.901.658	0,00842%
MINÉRIO DE FERRO	BA, ES, MG	CONTAGEM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEL-ECL	1.392.627	0,696	969.268	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	CONTAGEM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYU-EBO	169.754	0,540	91.667	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	CONTAGEM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBO-EEL	169.754	6,596	1.119.697	109.087.901.658	0,00103%
MINÉRIO DE FERRO	BA, ES, MG	CONTAGEM	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEL-ECL	169.754	0,696	118.149	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CORDISBURGO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EMX-EOR	20.854	9,623	200.678	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	CORDISBURGO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EOR-EAI	20.854	10,092	210.459	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	CORINTO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAL-EAA	20.854	8,187	170.732	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	CORINTO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAA-ECO	20.854	13,488	281.279	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	CORINTO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECO-EOA	20.854	23,530	490.695	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	CORINTO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EOA-ECV	20.854	1,924	40.123	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	24.446	0,685	16.746	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	24.446	1,318	32.220	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	24.446	4,737	115.801	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	1.392.627	0,685	953.949	109.087.901.658	0,00087%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	1.392.627	1,318	1.835.482	109.087.901.658	0,00168%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	1.392.627	4,737	6.596.874	109.087.901.658	0,00605%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	621.896	0,685	425.999	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	621.896	1,318	819.659	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	621.896	4,737	2.945.921	109.087.901.658	0,00270%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	1.702.127	4,737	8.062.976	109.087.901.658	0,00739%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	18.062.495	0,685	12.372.809	109.087.901.658	0,01134%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	18.062.495	1,318	23.806.368	109.087.901.658	0,02182%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	18.062.495	4,737	85.562.039	109.087.901.658	0,07843%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	53.135	4,737	251.700	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	21.380.399	0,685	14.645.573	109.087.901.658	0,01343%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	21.380.399	1,318	28.179.366	109.087.901.658	0,02583%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	21.380.399	4,737	101.278.950	109.087.901.658	0,09284%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	10.601.866	0,685	7.262.278	109.087.901.658	0,00666%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	10.601.866	1,318	13.973.259	109.087.901.658	0,01281%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	10.601.866	4,737	50.221.039	109.087.901.658	0,04604%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	7.831.444	0,685	5.364.539	109.087.901.658	0,00492%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	7.831.444	1,318	10.321.843	109.087.901.658	0,00946%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	7.831.444	4,737	37.097.550	109.087.901.658	0,03401%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	4.554.324	0,685	3.119.712	109.087.901.658	0,00286%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	4.554.324	1,318	6.002.599	109.087.901.658	0,00550%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	4.554.324	4,737	21.573.833	109.087.901.658	0,01978%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	22.613	0,685	15.490	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	22.613	1,318	29.804	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	22.613	4,737	107.118	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	12.308.312	0,685	8.431.194	109.087.901.658	0,00773%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	12.308.312	1,318	16.222.355	109.087.901.658	0,01487%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	12.308.312	4,737	58.304.474	109.087.901.658	0,05345%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	277.740	0,685	190.252	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	277.740	1,318	366.061	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	277.740	4,737	1.315.654	109.087.901.658	0,00121%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	2.254.606	0,685	1.544.405	109.087.901.658	0,00142%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	2.254.606	1,318	2.971.571	109.087.901.658	0,00272%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	2.254.606	4,737	10.680.069	109.087.901.658	0,00979%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	175.611	0,685	120.294	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	175.611	1,318	231.455	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	175.611	4,737	831.869	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	181.628	0,685	124.415	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	181.628	1,318	239.386	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	5.767	0,685	3.950	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	5.767	1,318	7.601	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL FABRICIANO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	5.767	4,737	27.318	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	452.578	3,969	1.796.282	109.087.901.658	0,00165%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	452.578	3,984	1.802.962	109.087.901.658	0,00165%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	471.355	3,969	1.870.808	109.087.901.658	0,00171%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	471.355	3,984	1.877.765	109.087.901.658	0,00172%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	9.636.141	3,969	38.245.844	109.087.901.658	0,03506%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.636.141	3,984	38.388.073	109.087.901.658	0,03519%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.040.246	3,969	4.128.736	109.087.901.658	0,00378%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.040.246	3,984	4.144.090	109.087.901.658	0,00380%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	175.991	3,969	698.508	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	175.991	3,984	701.106	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	16.754.022	3,969	66.496.713	109.087.901.658	0,06096%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.754.022	3,984	66.744.003	109.087.901.658	0,06118%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	5.195.905	3,969	20.622.547	109.087.901.658	0,01890%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	5.195.905	3,984	20.699.239	109.087.901.658	0,01897%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	9.694.113	3,969	38.475.934	109.087.901.658	0,03527%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.694.113	3,984	38.619.020	109.087.901.658	0,03540%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	753.441	3,969	2.990.407	109.087.901.658	0,00274%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	753.441	3,984	3.001.528	109.087.901.658	0,00275%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.632.345	3,969	10.447.777	109.087.901.658	0,00958%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.632.345	3,984	10.486.631	109.087.901.658	0,00961%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	3.225.523	3,969	12.802.101	109.087.901.658	0,01174%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.225.523	3,984	12.849.710	109.087.901.658	0,01178%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	11.042.972	3,969	43.829.556	109.087.901.658	0,04018%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	11.042.972	3,984	43.992.550	109.087.901.658	0,04033%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.360.110	3,969	5.398.277	109.087.901.658	0,00495%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.360.110	3,984	5.418.352	109.087.901.658	0,00497%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.915.189	3,969	11.570.385	109.087.901.658	0,01061%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.915.189	3,984	11.613.413	109.087.901.658	0,01065%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.208.569	3,969	8.765.810	109.087.901.658	0,00804%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.208.569	3,984	8.798.409	109.087.901.658	0,00807%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	140.317	3,969	556.918	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	140.317	3,984	558.989	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	16.481.129	3,969	65.413.601	109.087.901.658	0,05996%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.481.129	3,984	65.656.862	109.087.901.658	0,06019%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	3.218.053	3,969	12.772.452	109.087.901.658	0,01171%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.218.053	3,984	12.819.951	109.087.901.658	0,01175%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.928.832	3,969	7.655.534	109.087.901.658	0,00702%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.928.832	3,984	7.684.004	109.087.901.658	0,00704%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	4.306.483	3,969	17.092.431	109.087.901.658	0,01567%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	4.306.483	3,984	17.155.995	109.087.901.658	0,01573%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.246.693	3,969	8.917.125	109.087.901.658	0,00817%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.246.693	3,984	8.950.286	109.087.901.658	0,00820%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.899.329	3,969	7.538.437	109.087.901.658	0,00691%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.899.329	3,984	7.566.471	109.087.901.658	0,00694%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	598.315	3,969	2.374.712	109.087.901.658	0,00218%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	598.315	3,984	2.383.543	109.087.901.658	0,00218%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	3.373.361	3,969	13.388.870	109.087.901.658	0,01227%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.373.361	3,984	13.438.661	109.087.901.658	0,01232%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	3.518.020	3,969	13.963.021	109.087.901.658	0,01280%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.518.020	3,984	14.014.947	109.087.901.658	0,01285%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	37.363	3,969	148.294	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	37.363	3,984	148.845	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.054.657	3,969	8.154.934	109.087.901.658	0,00748%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.054.657	3,984	8.185.260	109.087.901.658	0,00750%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	472.702	3,969	1.876.154	109.087.901.658	0,00172%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	472.702	3,984	1.883.131	109.087.901.658	0,00173%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.357.294	3,969	9.356.100	109.087.901.658	0,00858%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.357.294	3,984	9.390.894	109.087.901.658	0,00861%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	809.514	3,969	3.212.961	109.087.901.658	0,00295%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	809.514	3,984	3.224.909	109.087.901.658	0,00296%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.400.010	3,969	5.556.640	109.087.901.658	0,00509%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.400.010	3,984	5.577.304	109.087.901.658	0,00511%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.077.672	3,969	4.277.280	109.087.901.658	0,00392%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.077.672	3,984	4.293.187	109.087.901.658	0,00394%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	972.896	3,969	3.861.424	109.087.901.658	0,00354%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	972.896	3,984	3.875.784	109.087.901.658	0,00355%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.044.080	3,969	4.143.954	109.087.901.658	0,00380%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.044.080	3,984	4.159.364	109.087.901.658	0,00381%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	855.456	3,969	3.395.305	109.087.901.658	0,00311%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	855.456	3,984	3.407.931	109.087.901.658	0,00312%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	14.457	3,969	57.380	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.457	3,984	57.593	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	14.817	3,969	58.809	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.817	3,984	59.027	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.085.334	3,969	4.307.691	109.087.901.658	0,00395%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.085.334	3,984	4.323.710	109.087.901.658	0,00396%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	233.772	3,969	927.841	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	233.772	3,984	931.292	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBU-FXA	346.347	4,221	1.461.931	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FIC	346.347	3,969	1.374.651	109.087.901.658	0,00126%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	24.259	3,969	96.284	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	CORONEL XAVIER CHAVES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	24.259	3,984	96.642	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	CRISTIANO OTONI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FQC	28.449	10,155	288.900	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	CRISTIANO OTONI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	231.735	10,155	2.353.269	109.087.901.658	0,00216%
MINÉRIO DE FERRO	BA, ES, MG	CRISTIANO OTONI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	6.249	10,155	63.459	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	CURVELO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECO-EOA	20.854	2,951	61.540	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	CURVELO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EOA-ECV	20.854	31,359	653.961	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	CURVELO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECV-EMX	20.854	7,019	146.374	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	CURVELO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EMX-EOR	20.854	34,069	710.475	109.087.901.658	0,00065%
MINÉRIO DE FERRO	BA, ES, MG	DIVINOPOLIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EDW-EDV	24.446	10,603	259.201	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	DIVINOPOLIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EDV-EHT	24.446	9,409	230.012	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	DIVINOPOLIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHT-ECJ	24.446	6,304	154.108	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO NAVARRO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBV-EEN	20.854	11,385	237.423	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO NAVARRO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEN-EEO	20.854	13,547	282.509	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	452.578	9,575	4.333.434	109.087.901.658	0,00397%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	452.578	9,056	4.098.546	109.087.901.658	0,00376%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	452.578	0,277	125.364	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	471.355	9,575	4.513.224	109.087.901.658	0,00414%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	471.355	9,056	4.268.591	109.087.901.658	0,00391%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	471.355	0,277	130.565	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	9.636.141	9,575	92.266.050	109.087.901.658	0,08458%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	9.636.141	9,056	87.264.893	109.087.901.658	0,08000%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	9.636.141	0,277	2.669.211	109.087.901.658	0,00245%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.040.246	9,575	9.960.355	109.087.901.658	0,00913%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	1.040.246	9,056	9.420.468	109.087.901.658	0,00864%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.040.246	0,277	288.148	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	175.991	9,575	1.685.114	109.087.901.658	0,00154%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	175.991	9,056	1.593.774	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	175.991	0,277	48.750	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	16.754.022	9,575	160.419.761	109.087.901.658	0,14706%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	16.754.022	9,056	151.724.423	109.087.901.658	0,13908%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	16.754.022	0,277	4.640.864	109.087.901.658	0,00425%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	5.195.905	9,575	49.750.790	109.087.901.658	0,04561%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	5.195.905	9,056	47.054.116	109.087.901.658	0,04313%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	5.195.905	0,277	1.439.266	109.087.901.658	0,00132%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	9.694.113	9,575	92.821.132	109.087.901.658	0,08509%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	9.694.113	9,056	87.789.887	109.087.901.658	0,08048%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	9.694.113	0,277	2.685.269	109.087.901.658	0,00246%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	753.441	9,575	7.214.198	109.087.901.658	0,00661%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	753.441	9,056	6.823.162	109.087.901.658	0,00625%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	753.441	0,277	208.703	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.632.345	9,575	25.204.703	109.087.901.658	0,02310%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	2.632.345	9,056	23.838.516	109.087.901.658	0,02185%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.632.345	0,277	729.160	109.087.901.658	0,00067%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	3.225.523	9,575	30.884.383	109.087.901.658	0,02831%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	3.225.523	9,056	29.210.336	109.087.901.658	0,02678%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	3.225.523	0,277	893.470	109.087.901.658	0,00082%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	11.042.972	9,575	105.736.457	109.087.901.658	0,09693%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	11.042.972	9,056	100.005.154	109.087.901.658	0,09167%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	11.042.972	0,277	3.058.903	109.087.901.658	0,00280%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.360.110	9,575	13.023.053	109.087.901.658	0,01194%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	1.360.110	9,056	12.317.156	109.087.901.658	0,01129%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.360.110	0,277	376.750	109.087.901.658	0,00035%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.915.189	9,575	27.912.935	109.087.901.658	0,02559%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	2.915.189	9,056	26.399.952	109.087.901.658	0,02420%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.915.189	0,277	807.507	109.087.901.658	0,00074%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.208.569	9,575	21.147.048	109.087.901.658	0,01939%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	2.208.569	9,056	20.000.801	109.087.901.658	0,01833%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.208.569	0,277	611.774	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	140.317	9,575	1.343.535	109.087.901.658	0,00123%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	140.317	9,056	1.270.711	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	140.317	0,277	38.868	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	16.481.129	9,575	157.806.810	109.087.901.658	0,14466%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	16.481.129	9,056	149.253.104	109.087.901.658	0,13682%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	16.481.129	0,277	4.565.273	109.087.901.658	0,00418%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	3.218.053	9,575	30.812.857	109.087.901.658	0,02825%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	3.218.053	9,056	29.142.688	109.087.901.658	0,02671%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	3.218.053	0,277	891.401	109.087.901.658	0,00082%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.928.832	9,575	18.468.566	109.087.901.658	0,01693%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	1.928.832	9,056	17.467.503	109.087.901.658	0,01601%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.928.832	0,277	534.286	109.087.901.658	0,00049%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	4.306.483	9,575	41.234.575	109.087.901.658	0,03780%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	4.306.483	9,056	38.999.510	109.087.901.658	0,03575%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	4.306.483	0,277	1.192.896	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.246.693	9,575	21.512.085	109.087.901.658	0,01972%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	2.246.693	9,056	20.346.052	109.087.901.658	0,01865%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.246.693	0,277	622.334	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.899.329	9,575	18.186.075	109.087.901.658	0,01667%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	1.899.329	9,056	17.200.323	109.087.901.658	0,01577%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.899.329	0,277	526.114	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	598.315	9,575	5.728.866	109.087.901.658	0,00525%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	598.315	9,056	5.418.341	109.087.901.658	0,00497%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	598.315	0,277	165.733	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	3.373.361	9,575	32.299.932	109.087.901.658	0,02961%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	3.373.361	9,056	30.549.157	109.087.901.658	0,02800%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	3.373.361	0,277	934.421	109.087.901.658	0,00086%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	3.518.020	9,575	33.685.042	109.087.901.658	0,03088%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	3.518.020	9,056	31.859.189	109.087.901.658	0,02921%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	3.518.020	0,277	974.492	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	37.363	9,575	357.751	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	37.363	9,056	338.359	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	37.363	0,277	10.350	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.054.657	9,575	19.673.341	109.087.901.658	0,01803%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	2.054.657	9,056	18.606.974	109.087.901.658	0,01706%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.054.657	0,277	569.140	109.087.901.658	0,00052%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	472.702	9,575	4.526.122	109.087.901.658	0,00415%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	472.702	9,056	4.280.789	109.087.901.658	0,00392%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	472.702	0,277	130.938	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.357.294	9,575	22.571.090	109.087.901.658	0,02069%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	2.357.294	9,056	21.347.654	109.087.901.658	0,01957%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.357.294	0,277	652.970	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	809.514	9,575	7.751.097	109.087.901.658	0,00711%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	809.514	9,056	7.330.959	109.087.901.658	0,00672%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	809.514	0,277	224.235	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.400.010	9,575	13.405.096	109.087.901.658	0,01229%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	1.400.010	9,056	12.678.491	109.087.901.658	0,01162%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.400.010	0,277	387.803	109.087.901.658	0,00036%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.077.672	9,575	10.318.709	109.087.901.658	0,00946%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	1.077.672	9,056	9.759.398	109.087.901.658	0,00895%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.077.672	0,277	298.515	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	972.896	9,575	9.315.479	109.087.901.658	0,00854%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	972.896	9,056	8.810.546	109.087.901.658	0,00808%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	972.896	0,277	269.492	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.044.080	9,575	9.997.066	109.087.901.658	0,00916%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	1.044.080	9,056	9.455.188	109.087.901.658	0,00867%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.044.080	0,277	289.210	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	855.456	9,575	8.190.991	109.087.901.658	0,00751%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	855.456	9,056	7.747.010	109.087.901.658	0,00710%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	855.456	0,277	236.961	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	14.457	9,575	138.426	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	14.457	9,056	130.923	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	14.457	0,277	4.005	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	14.817	9,575	141.873	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	14.817	9,056	134.183	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	14.817	0,277	4.104	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.085.334	9,575	10.392.073	109.087.901.658	0,00953%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	1.085.334	9,056	9.828.785	109.087.901.658	0,00901%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.085.334	0,277	300.638	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	233.772	9,575	2.238.367	109.087.901.658	0,00205%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	233.772	9,056	2.117.039	109.087.901.658	0,00194%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	233.772	0,277	64.755	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FRL	346.347	0,277	95.938	109.087.901.658	0,00009%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FJO	346.347	9,056	3.136.518	109.087.901.658	0,00288%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FJC	346.347	9,575	3.316.273	109.087.901.658	0,00304%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	24.259	9,575	232.280	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	24.259	9,056	219.690	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	ENTRE RIOS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	24.259	0,277	6.720	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	ESMERALDAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	24.446	2,916	71.285	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	ESMERALDAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	1.392.627	2,916	4.060.900	109.087.901.658	0,00372%
MINÉRIO DE FERRO	BA, ES, MG	ESMERALDAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	169.754	2,916	495.003	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	ESPINOSA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUN-DEN	20.854	8,929	186.205	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	ESPINOSA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DEN-DMN	20.854	16,974	353.976	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	ESPINOSA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DMN-EMA	20.854	0,623	12.992	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	EWBANK DA CAMARA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCD-FEB	28.449	5,166	146.968	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	EWBANK DA CAMARA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEB-FSM	28.449	4,885	138.973	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	EWBANK DA CAMARA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSM-FEB	231.735	4,885	1.132.025	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	EWBANK DA CAMARA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEB-FCD	231.735	5,166	1.197.143	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	EWBANK DA CAMARA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSM-FEB	6.249	4,885	30.526	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	EWBANK DA CAMARA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEB-FCD	6.249	5,166	32.282	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	FRANCISCO SA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEZ-ENA	20.854	24,826	517.721	109.087.901.658	0,00047%
MINÉRIO DE FERRO	BA, ES, MG	FRANCISCO SA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ENA-EMC	20.854	0,541	11.282	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	GLAUCILANDIA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EMC-EGL	20.854	0,243	5.068	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	GLAUCILANDIA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGL-EEA	20.854	0,044	918	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VGV	9.877	30,774	303.955	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VPC	9.877	30,611	302.345	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	9.877	30,611	302.345	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	1.702.127	30,611	52.103.810	109.087.901.658	0,04776%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	1.702.127	30,611	52.103.810	109.087.901.658	0,04776%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	1.702.127	30,774	52.381.256	109.087.901.658	0,04802%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	18.062.495	30,611	552.911.034	109.087.901.658	0,50685%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	18.062.495	30,611	552.911.034	109.087.901.658	0,50685%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	18.062.495	30,774	555.855.221	109.087.901.658	0,50955%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	21.380.399	30,611	654.475.394	109.087.901.658	0,59995%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	21.380.399	30,611	654.475.394	109.087.901.658	0,59995%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	21.380.399	30,774	657.960.399	109.087.901.658	0,60315%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	10.601.866	30,611	324.533.720	109.087.901.658	0,29750%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	10.601.866	30,611	324.533.720	109.087.901.658	0,29750%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	10.601.866	30,774	326.261.824	109.087.901.658	0,29908%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	7.831.444	30,611	239.728.332	109.087.901.658	0,21976%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	7.831.444	30,611	239.728.332	109.087.901.658	0,21976%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	7.831.444	30,774	241.004.858	109.087.901.658	0,22093%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	4.554.324	30,611	139.412.412	109.087.901.658	0,12780%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	4.554.324	30,611	139.412.412	109.087.901.658	0,12780%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	4.554.324	30,774	140.154.767	109.087.901.658	0,12848%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	22.613	30,611	692.207	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	22.613	30,611	692.207	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	22.613	30,774	695.892	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	12.308.312	30,611	376.769.739	109.087.901.658	0,34538%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	12.308.312	30,611	376.769.739	109.087.901.658	0,34538%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	12.308.312	30,774	378.775.993	109.087.901.658	0,34722%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	277.740	30,611	8.501.899	109.087.901.658	0,00779%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	277.740	30,611	8.501.899	109.087.901.658	0,00779%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	277.740	30,774	8.547.171	109.087.901.658	0,00784%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VGV	314.966	30,774	9.692.764	109.087.901.658	0,00889%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VPC	314.966	30,611	9.641.424	109.087.901.658	0,00884%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	314.966	30,611	9.641.424	109.087.901.658	0,00884%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	2.254.606	30,611	69.015.744	109.087.901.658	0,06327%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	2.254.606	30,611	69.015.744	109.087.901.658	0,06327%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	2.254.606	30,774	69.383.245	109.087.901.658	0,06360%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	175.611	30,611	5.375.628	109.087.901.658	0,00493%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	175.611	30,611	5.375.628	109.087.901.658	0,00493%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	175.611	30,774	5.404.253	109.087.901.658	0,00495%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	5.767	30,611	176.534	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	5.767	30,611	176.534	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	GOVERNADOR VALADARES	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	5.767	30,774	177.474	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	IBIA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGB-EOM	5.067.826	15,958	80.872.367	109.087.901.658	0,07414%
MINÉRIO DE FERRO	BA, ES, MG	IBIA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EOM-EIA	5.067.826	13,798	69.925.863	109.087.901.658	0,06410%
MINÉRIO DE FERRO	BA, ES, MG	IBIA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EIA-EPK	5.067.826	34,041	172.513.865	109.087.901.658	0,15814%
MINÉRIO DE FERRO	BA, ES, MG	IBIA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EPK-ETM	5.067.826	8,241	41.763.954	109.087.901.658	0,03828%
MINÉRIO DE FERRO	BA, ES, MG	IBIRITE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLH-FIE	5.195.905	5,202	27.029.098	109.087.901.658	0,02478%
MINÉRIO DE FERRO	BA, ES, MG	IBIRITE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIE-FPO	5.195.905	4,751	24.685.745	109.087.901.658	0,02263%
MINÉRIO DE FERRO	BA, ES, MG	IBIRITE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLH-FIE	753.441	5,202	3.919.400	109.087.901.658	0,00359%
MINÉRIO DE FERRO	BA, ES, MG	IBIRITE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIE-FPO	753.441	4,751	3.579.598	109.087.901.658	0,00328%
MINÉRIO DE FERRO	BA, ES, MG	IBIRITE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLH-FIE	50.456	5,202	262.472	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	IBIRITE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIE-FPO	50.456	4,751	239.716	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	24.446	4,119	100.693	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	1.392.627	4,119	5.736.231	109.087.901.658	0,00526%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VIC	9.877	6,565	64.843	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	621.896	4,119	2.561.590	109.087.901.658	0,00235%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	1.702.127	4,119	7.011.061	109.087.901.658	0,00643%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	1.702.127	6,565	11.174.464	109.087.901.658	0,01024%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	18.062.495	4,119	74.399.417	109.087.901.658	0,06820%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	18.062.495	6,565	118.580.280	109.087.901.658	0,10870%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	53.135	4,119	218.863	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	21.380.399	4,119	88.065.863	109.087.901.658	0,08073%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	21.380.399	6,565	140.362.319	109.087.901.658	0,12867%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	10.601.866	4,119	43.669.086	109.087.901.658	0,04003%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	10.601.866	6,565	69.601.250	109.087.901.658	0,06380%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	7.831.444	4,119	32.257.718	109.087.901.658	0,02957%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	7.831.444	6,565	51.413.430	109.087.901.658	0,04713%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	4.554.324	4,119	18.759.261	109.087.901.658	0,01720%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	4.554.324	6,565	29.899.137	109.087.901.658	0,02741%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	22.613	4,119	93.143	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	22.613	6,565	148.454	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	12.308.312	4,119	50.697.937	109.087.901.658	0,04647%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	12.308.312	6,565	80.804.068	109.087.901.658	0,07407%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	277.740	4,119	1.144.011	109.087.901.658	0,00105%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	277.740	6,565	1.823.363	109.087.901.658	0,00167%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VIC	314.966	6,565	2.067.752	109.087.901.658	0,00190%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	2.254.606	4,119	9.286.722	109.087.901.658	0,00851%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	2.254.606	6,565	14.801.488	109.087.901.658	0,01357%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	175.611	4,119	723.342	109.087.901.658	0,00066%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	175.611	6,565	1.152.886	109.087.901.658	0,00106%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	5.767	4,119	23.754	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	IPATINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	5.767	6,565	37.860	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCE-VBF	18.062.495	7,952	143.632.960	109.087.901.658	0,13167%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBF-VLB	18.062.495	6,857	123.854.528	109.087.901.658	0,11354%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VLB-VDD	18.062.495	11,860	214.221.191	109.087.901.658	0,19637%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJP-VBF	10.601.866	6,530	69.230.185	109.087.901.658	0,06346%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBF-VLB	10.601.866	6,857	72.696.995	109.087.901.658	0,06664%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VLB-VDD	10.601.866	11,860	125.738.131	109.087.901.658	0,11526%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	280.277	3,678	1.030.859	109.087.901.658	0,00094%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIU-FBG	280.277	12,022	3.369.490	109.087.901.658	0,00309%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBG-FLO	280.277	8,431	2.363.015	109.087.901.658	0,00217%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	280.277	1,102	308.865	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	16.754.022	3,678	61.621.293	109.087.901.658	0,05649%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIU-FBG	16.754.022	12,022	201.416.852	109.087.901.658	0,18464%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBG-FLO	16.754.022	8,431	141.253.159	109.087.901.658	0,12949%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	16.754.022	1,102	18.462.932	109.087.901.658	0,01692%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	6.249	3,678	22.984	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIU-FBG	6.249	12,022	75.125	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBG-FLO	6.249	8,431	52.685	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	6.249	1,102	6.886	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	9.694.113	3,678	35.654.948	109.087.901.658	0,03268%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIU-FBG	9.694.113	12,022	116.542.626	109.087.901.658	0,10683%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBG-FLO	9.694.113	8,431	81.731.067	109.087.901.658	0,07492%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	9.694.113	1,102	10.682.913	109.087.901.658	0,00979%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	1.360.110	3,678	5.002.485	109.087.901.658	0,00459%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIU-FBG	1.360.110	12,022	16.351.242	109.087.901.658	0,01499%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBG-FLO	1.360.110	8,431	11.467.087	109.087.901.658	0,01051%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	1.360.110	1,102	1.498.841	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	2.915.189	3,678	10.722.065	109.087.901.658	0,00983%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIU-FBG	2.915.189	12,022	35.046.402	109.087.901.658	0,03213%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBG-FLO	2.915.189	8,431	24.577.958	109.087.901.658	0,02253%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	2.915.189	1,102	3.212.538	109.087.901.658	0,00294%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	10.182	3,678	37.449	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIU-FBG	10.182	12,022	122.408	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBG-FLO	10.182	8,431	85.844	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	ITABIRITO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	10.182	1,102	11.221	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	ITAUNA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAG-EGD	24.446	5,426	132.644	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ITAUNA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGD-ESS	24.446	11,597	283.500	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	ITAUNA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESS-EEQ	24.446	7,576	185.203	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	ITAUNA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEQ-ESQ	24.446	12,942	316.380	109.087.901.658	0,00029%
MINÉRIO DE FERRO	BA, ES, MG	ITAUNA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESQ-EZU	24.446	1,331	32.538	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	ITAUNA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESQ-EZU	1.392.627	1,331	1.853.587	109.087.901.658	0,00170%
MINÉRIO DE FERRO	BA, ES, MG	ITAUNA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESQ-EZU	169.754	1,331	225.943	109.087.901.658	0,00021%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VIU	9.877	7,197	71.085	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VRD	9.877	6,729	66.462	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	1.702.127	6,729	11.453.613	109.087.901.658	0,01050%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	1.702.127	7,197	12.250.208	109.087.901.658	0,01123%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	18.062.495	6,729	121.542.529	109.087.901.658	0,11142%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	18.062.495	7,197	129.995.777	109.087.901.658	0,11917%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	21.380.399	6,729	143.868.705	109.087.901.658	0,13188%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	21.380.399	7,197	153.874.732	109.087.901.658	0,14106%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	10.601.866	6,729	71.339.956	109.087.901.658	0,06540%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	10.601.866	7,197	76.301.630	109.087.901.658	0,06995%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	7.831.444	6,729	52.697.787	109.087.901.658	0,04831%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	7.831.444	7,197	56.362.902	109.087.901.658	0,05167%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	4.554.324	6,729	30.646.046	109.087.901.658	0,02809%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	4.554.324	7,197	32.777.470	109.087.901.658	0,03005%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	22.613	6,729	152.163	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	22.613	7,197	162.746	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	12.308.312	6,729	82.822.631	109.087.901.658	0,07592%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	12.308.312	7,197	88.582.921	109.087.901.658	0,08120%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	277.740	6,729	1.868.912	109.087.901.658	0,00171%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	277.740	7,197	1.998.895	109.087.901.658	0,00183%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VIU	314.966	7,197	2.266.810	109.087.901.658	0,00208%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VRD	314.966	6,729	2.119.406	109.087.901.658	0,00194%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	2.254.606	6,729	15.171.244	109.087.901.658	0,01391%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	2.254.606	7,197	16.226.399	109.087.901.658	0,01487%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	175.611	6,729	1.181.686	109.087.901.658	0,00108%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	175.611	7,197	1.263.872	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	5.767	6,729	38.806	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	ITUETA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	5.767	7,197	41.505	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	JANAUBA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ETO-EJN	20.854	2,080	43.376	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	JANAUBA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJN-EEM	20.854	39,414	821.940	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	38.120	0,993	37.853	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	28.449	0,993	28.250	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	28.449	2,960	84.209	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FLF	28.449	0,573	16.301	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FLM	28.449	1,403	39.914	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	452.578	0,993	449.410	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	452.578	2,960	1.339.631	109.087.901.658	0,00123%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	452.578	5,543	2.508.640	109.087.901.658	0,00230%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	471.355	5,481	2.583.497	109.087.901.658	0,00237%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	471.355	2,894	1.364.101	109.087.901.658	0,00125%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	471.355	5,543	2.612.721	109.087.901.658	0,00240%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	9.636.141	5,481	52.815.689	109.087.901.658	0,04842%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	9.636.141	2,894	27.886.992	109.087.901.658	0,02556%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	9.636.141	5,543	53.413.130	109.087.901.658	0,04896%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.040.246	5,481	5.701.588	109.087.901.658	0,00523%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	1.040.246	2,894	3.010.472	109.087.901.658	0,00276%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	1.040.246	5,543	5.766.084	109.087.901.658	0,00529%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	280.277	1,403	393.229	109.087.901.658	0,00036%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FLA	280.277	0,573	160.599	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FLP	280.277	2,960	829.620	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	280.277	0,993	278.315	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FLA	231.735	5,543	1.284.507	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FLP	231.735	2,960	685.936	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	231.735	0,993	230.113	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	16.754.022	1,403	23.505.893	109.087.901.658	0,02155%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	16.754.022	4,645	77.822.432	109.087.901.658	0,07134%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	5.195.905	5,481	28.478.755	109.087.901.658	0,02611%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	5.195.905	2,894	15.036.949	109.087.901.658	0,01378%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	5.195.905	5,543	28.800.901	109.087.901.658	0,02640%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	6.249	1,403	8.767	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FLA	6.249	0,573	3.581	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FLP	6.249	2,960	18.497	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	6.249	0,993	6.205	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	9.694.113	1,403	13.600.841	109.087.901.658	0,01247%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	9.694.113	4,645	45.029.155	109.087.901.658	0,04128%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	753.441	5,481	4.129.610	109.087.901.658	0,00379%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	753.441	2,894	2.180.458	109.087.901.658	0,00200%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	753.441	5,543	4.176.323	109.087.901.658	0,00383%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	2.632.345	1,403	3.693.180	109.087.901.658	0,00339%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	2.632.345	4,645	12.227.243	109.087.901.658	0,01121%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	3.225.523	0,993	3.202.944	109.087.901.658	0,00294%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	3.225.523	2,960	9.547.548	109.087.901.658	0,00875%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	3.225.523	5,543	17.879.074	109.087.901.658	0,01639%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	11.042.972	1,403	15.493.290	109.087.901.658	0,01420%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	11.042.972	4,645	51.294.605	109.087.901.658	0,04702%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	1.360.110	1,403	1.908.234	109.087.901.658	0,00175%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	1.360.110	4,645	6.317.711	109.087.901.658	0,00579%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	2.915.189	1,403	4.090.010	109.087.901.658	0,00375%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	2.915.189	4,645	13.541.053	109.087.901.658	0,01241%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	2.208.569	1,403	3.098.622	109.087.901.658	0,00284%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	2.208.569	4,645	10.258.803	109.087.901.658	0,00940%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	16.481.129	0,993	16.365.761	109.087.901.658	0,01500%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	16.481.129	2,960	48.784.142	109.087.901.658	0,04472%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	16.481.129	5,543	91.354.898	109.087.901.658	0,08374%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	3.218.053	0,993	3.195.527	109.087.901.658	0,00293%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	3.218.053	2,960	9.525.437	109.087.901.658	0,00873%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	3.218.053	5,543	17.837.668	109.087.901.658	0,01635%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.928.832	5,481	10.571.928	109.087.901.658	0,00969%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	1.928.832	2,894	5.582.040	109.087.901.658	0,00512%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	1.928.832	5,543	10.691.516	109.087.901.658	0,00980%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	4.306.483	5,481	23.603.833	109.087.901.658	0,02164%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	4.306.483	2,894	12.462.962	109.087.901.658	0,01142%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	4.306.483	5,543	23.870.835	109.087.901.658	0,02188%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	2.246.693	5,481	12.314.124	109.087.901.658	0,01129%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	2.246.693	2,894	6.501.930	109.087.901.658	0,00596%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	2.246.693	5,543	12.453.419	109.087.901.658	0,01142%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.899.329	5,481	10.410.222	109.087.901.658	0,00954%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	1.899.329	2,894	5.496.658	109.087.901.658	0,00504%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	1.899.329	5,543	10.527.981	109.087.901.658	0,00965%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	598.315	5,481	3.279.365	109.087.901.658	0,00301%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	598.315	2,894	1.731.524	109.087.901.658	0,00159%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	598.315	5,543	3.316.460	109.087.901.658	0,00304%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	3.373.361	5,481	18.489.392	109.087.901.658	0,01695%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	3.373.361	2,894	9.762.507	109.087.901.658	0,00895%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	3.373.361	5,543	18.698.540	109.087.901.658	0,01714%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	3.518.020	0,993	3.493.394	109.087.901.658	0,00320%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	3.518.020	2,960	10.413.339	109.087.901.658	0,00955%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	3.518.020	5,543	19.500.385	109.087.901.658	0,01788%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	37.363	0,993	37.101	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	37.363	2,960	110.594	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	37.363	5,543	207.103	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	472.702	0,993	469.393	109.087.901.658	0,00043%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	472.702	2,960	1.399.198	109.087.901.658	0,00128%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	472.702	5,543	2.620.187	109.087.901.658	0,00240%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	2.357.294	1,403	3.307.283	109.087.901.658	0,00303%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	2.357.294	4,645	10.949.631	109.087.901.658	0,01004%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.400.010	5,481	7.673.455	109.087.901.658	0,00703%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	1.400.010	2,894	4.051.629	109.087.901.658	0,00371%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	1.400.010	5,543	7.760.255	109.087.901.658	0,00711%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.077.672	5,481	5.906.720	109.087.901.658	0,00541%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	1.077.672	2,894	3.118.783	109.087.901.658	0,00286%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	1.077.672	5,543	5.973.536	109.087.901.658	0,00548%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	972.896	0,993	966.086	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	972.896	2,960	2.879.772	109.087.901.658	0,00264%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	972.896	5,543	5.392.763	109.087.901.658	0,00494%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	1.044.080	5,481	5.722.602	109.087.901.658	0,00525%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	1.044.080	2,894	3.021.568	109.087.901.658	0,00277%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	1.044.080	5,543	5.787.335	109.087.901.658	0,00531%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	855.456	5,481	4.688.754	109.087.901.658	0,00430%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	855.456	2,894	2.475.690	109.087.901.658	0,00227%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	855.456	5,543	4.741.793	109.087.901.658	0,00435%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	14.817	5,481	81.212	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	14.817	2,894	42.880	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	14.817	5,543	82.131	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	1.085.334	2,960	3.212.589	109.087.901.658	0,00294%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	1.085.334	5,543	6.016.006	109.087.901.658	0,00551%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	233.772	2,960	691.965	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	233.772	5,543	1.295.798	109.087.901.658	0,00119%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FLF	346.347	4,645	1.608.782	109.087.901.658	0,00147%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FLM	346.347	1,403	485.925	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	24.259	0,993	24.089	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	24.259	2,960	71.807	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	JECEABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	24.259	5,543	134.468	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	24.446	8,064	197.133	109.087.901.658	0,00018%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	24.446	2,614	63.902	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	24.446	2,366	57.839	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	1.392.627	8,064	11.230.144	109.087.901.658	0,01029%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	1.392.627	2,614	3.640.327	109.087.901.658	0,00334%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	1.392.627	2,366	3.294.955	109.087.901.658	0,00302%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	621.896	8,064	5.014.969	109.087.901.658	0,00460%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	621.896	2,614	1.625.636	109.087.901.658	0,00149%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	621.896	2,366	1.471.406	109.087.901.658	0,00135%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	21.380.399	8,064	172.411.538	109.087.901.658	0,15805%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	21.380.399	2,614	55.888.363	109.087.901.658	0,05123%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	21.380.399	2,366	50.586.024	109.087.901.658	0,04637%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	7.831.444	8,064	63.152.764	109.087.901.658	0,05789%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	7.831.444	2,614	20.471.395	109.087.901.658	0,01877%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	7.831.444	2,366	18.529.197	109.087.901.658	0,01699%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	4.554.324	8,064	36.726.069	109.087.901.658	0,03367%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	4.554.324	2,614	11.905.003	109.087.901.658	0,01091%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	4.554.324	2,366	10.775.531	109.087.901.658	0,00988%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	22.613	8,064	182.351	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	22.613	2,614	59.110	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	22.613	2,366	53.502	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	12.308.312	8,064	99.254.228	109.087.901.658	0,09099%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	12.308.312	2,614	32.173.928	109.087.901.658	0,02949%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	12.308.312	2,366	29.121.466	109.087.901.658	0,02670%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	277.740	8,064	2.239.695	109.087.901.658	0,00205%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	277.740	2,614	726.012	109.087.901.658	0,00067%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	277.740	2,366	657.133	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	2.254.606	8,064	18.181.143	109.087.901.658	0,01667%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	2.254.606	2,614	5.893.540	109.087.901.658	0,00540%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	2.254.606	2,366	5.334.398	109.087.901.658	0,00489%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	175.611	8,064	1.416.127	109.087.901.658	0,00130%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	175.611	2,614	459.047	109.087.901.658	0,00042%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	175.611	2,366	415.496	109.087.901.658	0,00038%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	181.628	8,064	1.464.648	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	181.628	2,614	474.776	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	181.628	2,366	429.732	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	5.767	8,064	46.505	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	5.767	2,614	15.075	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	JOAO MONLEVADE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	5.767	2,366	13.645	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	JOAQUIM FELICIO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEO-EBP	20.854	7,957	165.935	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	JOAQUIM FELICIO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBP-EKT	20.854	16,701	348.283	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	JOAQUIM FELICIO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EKT-EJF	20.854	16,291	339.733	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	JOAQUIM FELICIO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJF-EBL	20.854	8,717	181.784	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	JUATUBA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EML-EJU	24.446	5,625	137.509	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	JUATUBA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	24.446	2,661	65.051	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	JUATUBA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EML-EJU	1.392.627	5,625	7.833.527	109.087.901.658	0,00718%
MINÉRIO DE FERRO	BA, ES, MG	JUATUBA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	1.392.627	2,661	3.705.780	109.087.901.658	0,00340%
MINÉRIO DE FERRO	BA, ES, MG	JUATUBA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EML-EJU	169.754	5,625	954.866	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	JUATUBA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	169.754	2,661	451.715	109.087.901.658	0,00041%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCI-FDS	28.449	4,387	124.806	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDS-FRT	28.449	3,465	98.576	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRT-FDU	28.449	3,552	101.051	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDU-FJF	28.449	4,826	137.295	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJF-FMP	28.449	2,490	70.838	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMP-FFB	28.449	5,402	153.681	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFB-FBF	28.449	7,229	205.658	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBF-FDT	28.449	4,858	138.205	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDT-FDN	28.449	4,546	129.329	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDN-FCD	28.449	3,823	108.761	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCD-FEB	28.449	1,463	41.621	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEB-FCD	231.735	1,463	339.028	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCD-FDN	231.735	3,823	885.923	109.087.901.658	0,00081%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDN-FDT	231.735	4,546	1.053.467	109.087.901.658	0,00097%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEB-FCD	6.249	1,463	9.142	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCD-FDN	6.249	3,823	23.890	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDN-FDT	6.249	4,546	28.408	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCI-FDS	22.579	4,387	99.054	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDS-FRT	22.579	3,465	78.236	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRT-FDU	22.579	3,552	80.201	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDU-FJF	22.579	4,826	108.966	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJF-FMP	22.579	2,490	56.222	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMP-FFB	22.579	5,402	121.972	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFB-FBF	22.579	7,229	163.224	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	JUIZ DE FORA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBF-FDT	22.579	4,858	109.689	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	452.578	16,552	7.491.071	109.087.901.658	0,00687%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	452.578	3,088	1.397.561	109.087.901.658	0,00128%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	471.355	16,552	7.801.868	109.087.901.658	0,00715%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	471.355	3,088	1.455.544	109.087.901.658	0,00133%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	9.636.141	16,552	159.497.406	109.087.901.658	0,14621%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	9.636.141	3,088	29.756.403	109.087.901.658	0,02728%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.040.246	16,552	17.218.152	109.087.901.658	0,01578%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.040.246	3,088	3.212.280	109.087.901.658	0,00294%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	175.991	16,552	2.913.003	109.087.901.658	0,00267%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	175.991	3,088	543.460	109.087.901.658	0,00050%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	16.754.022	16,552	277.312.572	109.087.901.658	0,25421%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	16.754.022	3,088	51.736.420	109.087.901.658	0,04743%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	5.195.905	16,552	86.002.620	109.087.901.658	0,07884%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	5.195.905	3,088	16.044.955	109.087.901.658	0,01471%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	9.694.113	16,552	160.456.958	109.087.901.658	0,14709%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	9.694.113	3,088	29.935.421	109.087.901.658	0,02744%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	753.441	16,552	12.470.955	109.087.901.658	0,01143%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	753.441	3,088	2.326.626	109.087.901.658	0,00213%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.632.345	16,552	43.570.574	109.087.901.658	0,03994%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.632.345	3,088	8.128.681	109.087.901.658	0,00745%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	3.225.523	16,552	53.388.857	109.087.901.658	0,04894%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	3.225.523	3,088	9.960.415	109.087.901.658	0,00913%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	11.042.972	16,552	182.783.273	109.087.901.658	0,16756%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	11.042.972	3,088	34.100.698	109.087.901.658	0,03126%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.360.110	16,552	22.512.541	109.087.901.658	0,02064%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.360.110	3,088	4.200.020	109.087.901.658	0,00385%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.915.189	16,552	48.252.208	109.087.901.658	0,04423%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.915.189	3,088	9.002.104	109.087.901.658	0,00825%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.208.569	16,552	36.556.234	109.087.901.658	0,03351%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.208.569	3,088	6.820.061	109.087.901.658	0,00625%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	140.317	16,552	2.322.527	109.087.901.658	0,00213%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	140.317	3,088	433.299	109.087.901.658	0,00040%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	16.481.129	16,552	272.795.647	109.087.901.658	0,25007%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	16.481.129	3,088	50.893.726	109.087.901.658	0,04665%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	3.218.053	16,552	53.265.213	109.087.901.658	0,04883%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	3.218.053	3,088	9.937.348	109.087.901.658	0,00911%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.928.832	16,552	31.926.027	109.087.901.658	0,02927%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.928.832	3,088	5.956.233	109.087.901.658	0,00546%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	4.306.483	16,552	71.280.907	109.087.901.658	0,06534%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	4.306.483	3,088	13.298.420	109.087.901.658	0,01219%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.246.693	16,552	37.187.263	109.087.901.658	0,03409%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.246.693	3,088	6.937.788	109.087.901.658	0,00636%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.899.329	16,552	31.437.694	109.087.901.658	0,02882%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.899.329	3,088	5.865.128	109.087.901.658	0,00538%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	598.315	16,552	9.903.310	109.087.901.658	0,00908%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	598.315	3,088	1.847.597	109.087.901.658	0,00169%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	3.373.361	16,552	55.835.871	109.087.901.658	0,05118%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	3.373.361	3,088	10.416.939	109.087.901.658	0,00955%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	3.518.020	16,552	58.230.267	109.087.901.658	0,05338%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	3.518.020	3,088	10.863.646	109.087.901.658	0,00996%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	37.363	16,552	618.432	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	37.363	3,088	115.377	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.054.657	16,552	34.008.683	109.087.901.658	0,03118%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.054.657	3,088	6.344.781	109.087.901.658	0,00582%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	472.702	16,552	7.824.164	109.087.901.658	0,00717%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	472.702	3,088	1.459.704	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	2.357.294	16,552	39.017.930	109.087.901.658	0,03577%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.357.294	3,088	7.279.324	109.087.901.658	0,00667%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	809.514	16,552	13.399.076	109.087.901.658	0,01228%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	809.514	3,088	2.499.779	109.087.901.658	0,00229%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.400.010	16,552	23.172.966	109.087.901.658	0,02124%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.400.010	3,088	4.323.231	109.087.901.658	0,00396%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.077.672	16,552	17.837.627	109.087.901.658	0,01635%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.077.672	3,088	3.327.851	109.087.901.658	0,00305%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	972.896	16,552	16.103.375	109.087.901.658	0,01476%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	972.896	3,088	3.004.303	109.087.901.658	0,00275%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.044.080	16,552	17.281.612	109.087.901.658	0,01584%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.044.080	3,088	3.224.119	109.087.901.658	0,00296%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	855.456	16,552	14.159.508	109.087.901.658	0,01298%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	855.456	3,088	2.641.648	109.087.901.658	0,00242%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	14.457	16,552	239.292	109.087.901.658	0,00022%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	14.457	3,088	44.643	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	14.817	16,552	245.251	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	14.817	3,088	45.755	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	1.085.334	16,552	17.964.448	109.087.901.658	0,01647%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.085.334	3,088	3.351.511	109.087.901.658	0,00307%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	233.772	16,552	3.869.394	109.087.901.658	0,00355%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	233.772	3,088	721.888	109.087.901.658	0,00066%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FRC	346.347	3,088	1.069.520	109.087.901.658	0,00098%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FRL	346.347	16,552	5.732.736	109.087.901.658	0,00526%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	24.259	16,552	401.535	109.087.901.658	0,00037%
MINÉRIO DE FERRO	BA, ES, MG	LAGOA DOURADA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	24.259	3,088	74.912	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	452.578	5,229	2.366.530	109.087.901.658	0,00217%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	452.578	13,886	6.284.498	109.087.901.658	0,00576%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	452.578	3,390	1.534.239	109.087.901.658	0,00141%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	471.355	5,229	2.464.715	109.087.901.658	0,00226%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	471.355	13,886	6.545.236	109.087.901.658	0,00600%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	471.355	3,390	1.597.893	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	9.636.141	5,229	50.387.381	109.087.901.658	0,04619%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	9.636.141	13,886	133.807.454	109.087.901.658	0,12266%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	9.636.141	3,390	32.666.518	109.087.901.658	0,02995%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.040.246	5,229	5.439.446	109.087.901.658	0,00499%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	1.040.246	13,886	14.444.856	109.087.901.658	0,01324%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.040.246	3,390	3.526.434	109.087.901.658	0,00323%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	175.991	5,229	920.257	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	175.991	13,886	2.443.811	109.087.901.658	0,00224%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	175.991	3,390	596.609	109.087.901.658	0,00055%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	16.754.022	5,229	87.606.781	109.087.901.658	0,08031%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	16.754.022	13,886	232.646.349	109.087.901.658	0,21327%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	16.754.022	3,390	56.796.135	109.087.901.658	0,05206%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	5.195.905	5,229	27.169.387	109.087.901.658	0,02491%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	5.195.905	13,886	72.150.337	109.087.901.658	0,06614%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	5.195.905	3,390	17.614.118	109.087.901.658	0,01615%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	9.694.113	5,229	50.690.517	109.087.901.658	0,04647%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	9.694.113	13,886	134.612.453	109.087.901.658	0,12340%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	9.694.113	3,390	32.863.043	109.087.901.658	0,03013%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	753.441	5,229	3.939.743	109.087.901.658	0,00361%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	753.441	13,886	10.462.282	109.087.901.658	0,00959%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	753.441	3,390	2.554.165	109.087.901.658	0,00234%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.632.345	5,229	13.764.532	109.087.901.658	0,01262%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	2.632.345	13,886	36.552.743	109.087.901.658	0,03351%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.632.345	3,390	8.923.650	109.087.901.658	0,00818%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	3.225.523	5,229	16.866.260	109.087.901.658	0,01546%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	3.225.523	13,886	44.789.612	109.087.901.658	0,04106%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.225.523	3,390	10.934.523	109.087.901.658	0,01002%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	11.042.972	5,229	57.743.701	109.087.901.658	0,05293%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	11.042.972	13,886	153.342.709	109.087.901.658	0,14057%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	11.042.972	3,390	37.435.675	109.087.901.658	0,03432%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.360.110	5,229	7.112.015	109.087.901.658	0,00652%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	1.360.110	13,886	18.886.487	109.087.901.658	0,01731%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.360.110	3,390	4.610.773	109.087.901.658	0,00423%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.915.189	5,229	15.243.523	109.087.901.658	0,01397%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	2.915.189	13,886	40.480.314	109.087.901.658	0,03711%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.915.189	3,390	9.882.491	109.087.901.658	0,00906%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.208.569	5,229	11.548.607	109.087.901.658	0,01059%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	2.208.569	13,886	30.668.189	109.087.901.658	0,02811%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.208.569	3,390	7.487.049	109.087.901.658	0,00686%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	140.317	5,229	733.718	109.087.901.658	0,00067%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	140.317	13,886	1.948.442	109.087.901.658	0,00179%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	140.317	3,390	475.675	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	16.481.129	5,229	86.179.824	109.087.901.658	0,07900%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	16.481.129	13,886	228.856.957	109.087.901.658	0,20979%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	16.481.129	3,390	55.871.027	109.087.901.658	0,05122%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	3.218.053	5,229	16.827.199	109.087.901.658	0,01543%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	3.218.053	13,886	44.685.884	109.087.901.658	0,04096%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.218.053	3,390	10.909.200	109.087.901.658	0,01000%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.928.832	5,229	10.085.863	109.087.901.658	0,00925%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	1.928.832	13,886	26.783.761	109.087.901.658	0,02455%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.928.832	3,390	6.538.740	109.087.901.658	0,00599%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	4.306.483	5,229	22.518.600	109.087.901.658	0,02064%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	4.306.483	13,886	59.799.823	109.087.901.658	0,05482%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	4.306.483	3,390	14.598.977	109.087.901.658	0,01338%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.246.693	5,229	11.747.958	109.087.901.658	0,01077%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	2.246.693	13,886	31.197.579	109.087.901.658	0,02860%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.246.693	3,390	7.616.289	109.087.901.658	0,00698%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.899.329	5,229	9.931.591	109.087.901.658	0,00910%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	1.899.329	13,886	26.374.082	109.087.901.658	0,02418%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.899.329	3,390	6.438.725	109.087.901.658	0,00590%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	598.315	5,229	3.128.589	109.087.901.658	0,00287%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	598.315	13,886	8.308.202	109.087.901.658	0,00762%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	598.315	3,390	2.028.288	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	3.373.361	5,229	17.639.305	109.087.901.658	0,01617%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	3.373.361	13,886	46.842.491	109.087.901.658	0,04294%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.373.361	3,390	11.435.694	109.087.901.658	0,01048%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	3.518.020	5,229	18.395.727	109.087.901.658	0,01686%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	3.518.020	13,886	48.851.226	109.087.901.658	0,04478%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.518.020	3,390	11.926.088	109.087.901.658	0,01093%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	37.363	5,229	195.371	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	37.363	13,886	518.823	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	37.363	3,390	126.661	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.054.657	5,229	10.743.801	109.087.901.658	0,00985%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	2.054.657	13,886	28.530.967	109.087.901.658	0,02615%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.054.657	3,390	6.965.287	109.087.901.658	0,00639%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	472.702	5,229	2.471.759	109.087.901.658	0,00227%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	472.702	13,886	6.563.940	109.087.901.658	0,00602%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	472.702	3,390	1.602.460	109.087.901.658	0,00147%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.357.294	5,229	12.326.290	109.087.901.658	0,01130%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	2.357.294	13,886	32.733.384	109.087.901.658	0,03001%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.357.294	3,390	7.991.227	109.087.901.658	0,00733%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	809.514	5,229	4.232.949	109.087.901.658	0,00388%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	809.514	13,886	11.240.911	109.087.901.658	0,01030%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	809.514	3,390	2.744.252	109.087.901.658	0,00252%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.400.010	5,229	7.320.652	109.087.901.658	0,00671%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	1.400.010	13,886	19.440.539	109.087.901.658	0,01782%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.400.010	3,390	4.746.034	109.087.901.658	0,00435%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.077.672	5,229	5.635.147	109.087.901.658	0,00517%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	1.077.672	13,886	14.964.553	109.087.901.658	0,01372%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.077.672	3,390	3.653.308	109.087.901.658	0,00335%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	972.896	5,229	5.087.273	109.087.901.658	0,00466%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	972.896	13,886	13.509.634	109.087.901.658	0,01238%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	972.896	3,390	3.298.117	109.087.901.658	0,00302%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.044.080	5,229	5.459.494	109.087.901.658	0,00500%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	1.044.080	13,886	14.498.095	109.087.901.658	0,01329%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.044.080	3,390	3.539.431	109.087.901.658	0,00324%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	855.456	5,229	4.473.179	109.087.901.658	0,00410%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	855.456	13,886	11.878.862	109.087.901.658	0,01089%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	855.456	3,390	2.899.996	109.087.901.658	0,00266%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	14.457	5,229	75.596	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	14.457	13,886	200.750	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	14.457	3,390	49.009	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	190.241	5,229	994.770	109.087.901.658	0,00091%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	190.241	13,886	2.641.687	109.087.901.658	0,00242%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	190.241	3,390	644.917	109.087.901.658	0,00059%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	14.817	5,229	77.478	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	14.817	13,886	205.749	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	14.817	3,390	50.230	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.085.334	5,229	5.675.211	109.087.901.658	0,00520%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	1.085.334	13,886	15.070.948	109.087.901.658	0,01382%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.085.334	3,390	3.679.282	109.087.901.658	0,00337%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	233.772	5,229	1.222.394	109.087.901.658	0,00112%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	233.772	13,886	3.246.158	109.087.901.658	0,00298%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	233.772	3,390	792.487	109.087.901.658	0,00073%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	269.202	5,229	1.407.657	109.087.901.658	0,00129%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	269.202	13,886	3.738.139	109.087.901.658	0,00343%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	269.202	3,390	912.595	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FGO	346.347	3,390	1.174.116	109.087.901.658	0,00108%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FPZ	346.347	13,886	4.809.374	109.087.901.658	0,00441%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FRN	346.347	5,229	1.811.048	109.087.901.658	0,00166%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	174.123	5,229	910.489	109.087.901.658	0,00083%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	174.123	13,886	2.417.872	109.087.901.658	0,00222%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	174.123	3,390	590.277	109.087.901.658	0,00054%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	24.259	5,229	126.850	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	24.259	13,886	336.860	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	MADRE DE DEUS DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	24.259	3,390	82.238	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	7.831.444	5,887	46.103.711	109.087.901.658	0,04226%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAL-VFZ	7.831.444	8,177	64.037.718	109.087.901.658	0,05870%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	7.831.444	1,241	9.718.822	109.087.901.658	0,00891%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	4.554.324	5,887	26.811.305	109.087.901.658	0,02458%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAL-VFZ	4.554.324	8,177	37.240.707	109.087.901.658	0,03414%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	4.554.324	1,241	5.651.916	109.087.901.658	0,00518%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	22.613	5,887	133.123	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAL-VFZ	22.613	8,177	184.907	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	22.613	1,241	28.063	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFV-VBT	12.308.312	1,241	15.274.615	109.087.901.658	0,01400%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	277.740	5,887	1.635.055	109.087.901.658	0,00150%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAL-VFZ	277.740	8,177	2.271.080	109.087.901.658	0,00208%
MINÉRIO DE FERRO	BA, ES, MG	MARIANA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	277.740	1,241	344.675	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	471.355	2,410	1.135.966	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	471.355	5,098	2.402.968	109.087.901.658	0,00220%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	9.636.141	2,410	23.223.100	109.087.901.658	0,02129%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	9.636.141	5,098	49.125.047	109.087.901.658	0,04503%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	5.195.905	2,410	12.522.131	109.087.901.658	0,01148%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	5.195.905	5,098	26.488.724	109.087.901.658	0,02428%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	753.441	2,410	1.815.793	109.087.901.658	0,00166%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	753.441	5,098	3.841.042	109.087.901.658	0,00352%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	1.928.832	2,410	4.648.485	109.087.901.658	0,00426%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	1.928.832	5,098	9.833.186	109.087.901.658	0,00901%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	4.306.483	2,410	10.378.624	109.087.901.658	0,00951%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	4.306.483	5,098	21.954.450	109.087.901.658	0,02013%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	1.899.329	2,410	4.577.383	109.087.901.658	0,00420%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	1.899.329	5,098	9.682.779	109.087.901.658	0,00888%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	598.315	2,410	1.441.939	109.087.901.658	0,00132%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	598.315	5,098	3.050.210	109.087.901.658	0,00280%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	1.044.080	2,410	2.516.233	109.087.901.658	0,00231%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	1.044.080	5,098	5.322.720	109.087.901.658	0,00488%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	855.456	2,410	2.061.649	109.087.901.658	0,00189%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	855.456	5,098	4.361.115	109.087.901.658	0,00400%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	14.817	2,410	35.709	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	MARIO CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	14.817	5,098	75.537	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MATEUS LEME	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESQ-EZU	24.446	5,036	123.110	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	MATEUS LEME	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EZU-EML	24.446	5,759	140.785	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	MATEUS LEME	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EML-EJU	24.446	5,888	143.938	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	MATEUS LEME	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESQ-EZU	1.392.627	5,036	7.013.270	109.087.901.658	0,00643%
MINÉRIO DE FERRO	BA, ES, MG	MATEUS LEME	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EZU-EML	1.392.627	5,759	8.020.139	109.087.901.658	0,00735%
MINÉRIO DE FERRO	BA, ES, MG	MATEUS LEME	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EML-EJU	1.392.627	5,888	8.199.788	109.087.901.658	0,00752%
MINÉRIO DE FERRO	BA, ES, MG	MATEUS LEME	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESQ-EZU	169.754	5,036	854.881	109.087.901.658	0,00078%
MINÉRIO DE FERRO	BA, ES, MG	MATEUS LEME	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EZU-EML	169.754	5,759	977.613	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	MATEUS LEME	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EML-EJU	169.754	5,888	999.512	109.087.901.658	0,00092%
MINÉRIO DE FERRO	BA, ES, MG	MATIAS BARBOSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOT-FDC	28.449	3,985	113.369	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	MATIAS BARBOSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDC-FMT	28.449	2,748	78.178	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MATIAS BARBOSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMT-FCI	28.449	4,478	127.395	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	MATIAS BARBOSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCI-FDS	28.449	1,773	50.440	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MATIAS BARBOSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOT-FDC	22.579	3,985	89.977	109.087.901.658	0,00008%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MATIAS BARBOSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDC-FMT	22.579	2,748	62.047	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	MATIAS BARBOSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMT-FCI	22.579	4,478	101.109	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	MATIAS BARBOSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCI-FDS	22.579	1,773	40.033	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	MATO VERDE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EMA-EEW	20.854	2,051	42.772	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	MATO VERDE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEW-EYP	20.854	4,600	95.928	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	471.355	2,725	1.284.442	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	471.355	1,948	918.200	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	9.636.141	2,725	26.258.484	109.087.901.658	0,02407%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	9.636.141	1,948	18.771.203	109.087.901.658	0,01721%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.040.246	2,725	2.834.670	109.087.901.658	0,00260%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.040.246	1,948	2.026.399	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	5.195.905	2,725	14.158.841	109.087.901.658	0,01298%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	5.195.905	1,948	10.121.623	109.087.901.658	0,00928%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	753.441	2,725	2.053.127	109.087.901.658	0,00188%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	753.441	1,948	1.467.703	109.087.901.658	0,00135%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.928.832	2,725	5.256.067	109.087.901.658	0,00482%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.928.832	1,948	3.757.365	109.087.901.658	0,00344%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	4.306.483	2,725	11.735.166	109.087.901.658	0,01076%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	4.306.483	1,948	8.389.029	109.087.901.658	0,00769%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	2.246.693	2,725	6.122.238	109.087.901.658	0,00561%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	2.246.693	1,948	4.376.558	109.087.901.658	0,00401%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.899.329	2,725	5.175.672	109.087.901.658	0,00474%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.899.329	1,948	3.699.893	109.087.901.658	0,00339%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	598.315	2,725	1.630.408	109.087.901.658	0,00149%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	598.315	1,948	1.165.518	109.087.901.658	0,00107%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	3.373.361	2,725	9.192.409	109.087.901.658	0,00843%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	3.373.361	1,948	6.571.307	109.087.901.658	0,00602%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.400.010	2,725	3.815.027	109.087.901.658	0,00350%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.400.010	1,948	2.727.219	109.087.901.658	0,00250%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.077.672	2,725	2.936.656	109.087.901.658	0,00269%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.077.672	1,948	2.099.305	109.087.901.658	0,00192%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	1.044.080	2,725	2.845.118	109.087.901.658	0,00261%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	1.044.080	1,948	2.033.868	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	855.456	2,725	2.331.118	109.087.901.658	0,00214%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	855.456	1,948	1.666.428	109.087.901.658	0,00153%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	14.817	2,725	40.376	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	MOEDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	14.817	1,948	28.864	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	MONTE AZUL	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DMN-EMA	20.854	23,583	491.800	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	MONTE AZUL	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EMA-EEW	20.854	20,655	430.739	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	MONTES CLAROS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ENA-EMC	20.854	23,291	485.711	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	MONTES CLAROS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EMC-EGL	20.854	28,726	599.052	109.087.901.658	0,00055%
MINÉRIO DE FERRO	BA, ES, MG	MONTES CLAROS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGL-EEA	20.854	1,892	39.456	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	9.877	11,326	111.867	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	1.702.127	11,326	19.278.290	109.087.901.658	0,01767%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	18.062.495	11,326	204.575.818	109.087.901.658	0,18753%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	21.380.399	11,326	242.154.399	109.087.901.658	0,22198%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	10.601.866	11,326	120.076.734	109.087.901.658	0,11007%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	7.831.444	11,326	88.698.935	109.087.901.658	0,08131%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	4.554.324	11,326	51.582.274	109.087.901.658	0,04729%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	22.613	11,326	256.115	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	12.308.312	11,326	139.403.942	109.087.901.658	0,12779%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	277.740	11,326	3.145.683	109.087.901.658	0,00288%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	314.966	11,326	3.567.305	109.087.901.658	0,00327%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	2.254.606	11,326	25.535.668	109.087.901.658	0,02341%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	175.611	11,326	1.988.970	109.087.901.658	0,00182%
MINÉRIO DE FERRO	BA, ES, MG	NAQUE	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	5.767	11,326	65.317	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	452.578	1,392	629.771	109.087.901.658	0,00058%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	452.578	1,397	632.251	109.087.901.658	0,00058%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	452.578	1,432	648.092	109.087.901.658	0,00059%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	471.355	1,392	655.900	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	471.355	1,397	658.483	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	471.355	1,432	674.980	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.636.141	1,392	13.408.883	109.087.901.658	0,01229%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	9.636.141	1,397	13.461.689	109.087.901.658	0,01234%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	9.636.141	1,432	13.798.954	109.087.901.658	0,01265%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.040.246	1,392	1.447.523	109.087.901.658	0,00133%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.040.246	1,397	1.453.224	109.087.901.658	0,00133%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.040.246	1,432	1.489.632	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	175.991	1,392	244.895	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	175.991	1,397	245.859	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	175.991	1,432	252.019	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.754.022	1,392	23.313.557	109.087.901.658	0,02137%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	16.754.022	1,397	23.405.369	109.087.901.658	0,02146%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	16.754.022	1,432	23.991.760	109.087.901.658	0,02199%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	5.195.905	1,392	7.230.206	109.087.901.658	0,00663%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	5.195.905	1,397	7.258.679	109.087.901.658	0,00665%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	5.195.905	1,432	7.440.536	109.087.901.658	0,00682%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.694.113	1,392	13.489.552	109.087.901.658	0,01237%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	9.694.113	1,397	13.542.676	109.087.901.658	0,01241%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	9.694.113	1,432	13.881.970	109.087.901.658	0,01273%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	753.441	1,392	1.048.428	109.087.901.658	0,00096%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	753.441	1,397	1.052.557	109.087.901.658	0,00096%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	753.441	1,432	1.078.928	109.087.901.658	0,00099%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.632.345	1,392	3.662.961	109.087.901.658	0,00336%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.632.345	1,397	3.677.386	109.087.901.658	0,00337%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.632.345	1,432	3.769.518	109.087.901.658	0,00346%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.225.523	1,392	4.488.380	109.087.901.658	0,00411%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.225.523	1,397	4.506.056	109.087.901.658	0,00413%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	3.225.523	1,432	4.618.949	109.087.901.658	0,00423%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	11.042.972	1,392	15.366.516	109.087.901.658	0,01409%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	11.042.972	1,397	15.427.032	109.087.901.658	0,01414%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	11.042.972	1,432	15.813.536	109.087.901.658	0,01450%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.360.110	1,392	1.892.620	109.087.901.658	0,00173%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.360.110	1,397	1.900.074	109.087.901.658	0,00174%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.360.110	1,432	1.947.678	109.087.901.658	0,00179%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.915.189	1,392	4.056.544	109.087.901.658	0,00372%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.915.189	1,397	4.072.519	109.087.901.658	0,00373%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.915.189	1,432	4.174.551	109.087.901.658	0,00383%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.208.569	1,392	3.073.268	109.087.901.658	0,00282%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.208.569	1,397	3.085.371	109.087.901.658	0,00283%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.208.569	1,432	3.162.671	109.087.901.658	0,00290%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	140.317	1,392	195.254	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	140.317	1,397	196.023	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	140.317	1,432	200.934	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.481.129	1,392	22.933.821	109.087.901.658	0,02102%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	16.481.129	1,397	23.024.137	109.087.901.658	0,02111%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	16.481.129	1,432	23.600.977	109.087.901.658	0,02163%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.218.053	1,392	4.477.985	109.087.901.658	0,00410%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.218.053	1,397	4.495.620	109.087.901.658	0,00412%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	3.218.053	1,432	4.608.252	109.087.901.658	0,00422%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.928.832	1,392	2.684.008	109.087.901.658	0,00246%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.928.832	1,397	2.694.578	109.087.901.658	0,00247%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.928.832	1,432	2.762.087	109.087.901.658	0,00253%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	4.306.483	1,392	5.992.557	109.087.901.658	0,00549%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	4.306.483	1,397	6.016.157	109.087.901.658	0,00551%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	4.306.483	1,432	6.166.884	109.087.901.658	0,00565%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.246.693	1,392	3.126.318	109.087.901.658	0,00287%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.246.693	1,397	3.138.630	109.087.901.658	0,00288%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.246.693	1,432	3.217.264	109.087.901.658	0,00295%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.899.329	1,392	2.642.954	109.087.901.658	0,00242%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.899.329	1,397	2.653.363	109.087.901.658	0,00243%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.899.329	1,432	2.719.839	109.087.901.658	0,00249%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	598.315	1,392	832.567	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	598.315	1,397	835.846	109.087.901.658	0,00077%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	598.315	1,432	856.787	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.373.361	1,392	4.694.099	109.087.901.658	0,00430%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.373.361	1,397	4.712.585	109.087.901.658	0,00432%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	3.373.361	1,432	4.830.653	109.087.901.658	0,00443%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.518.020	1,392	4.895.395	109.087.901.658	0,00449%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.518.020	1,397	4.914.674	109.087.901.658	0,00451%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	3.518.020	1,432	5.037.805	109.087.901.658	0,00462%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	37.363	1,392	51.991	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	37.363	1,397	52.196	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	37.363	1,432	53.504	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.054.657	1,392	2.859.096	109.087.901.658	0,00262%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.054.657	1,397	2.870.356	109.087.901.658	0,00263%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.054.657	1,432	2.942.269	109.087.901.658	0,00270%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	472.702	1,392	657.774	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	472.702	1,397	660.365	109.087.901.658	0,00061%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	472.702	1,432	676.909	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.357.294	1,392	3.280.222	109.087.901.658	0,00301%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.357.294	1,397	3.293.140	109.087.901.658	0,00302%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.357.294	1,432	3.375.645	109.087.901.658	0,00309%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	809.514	1,392	1.126.455	109.087.901.658	0,00103%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	809.514	1,397	1.130.891	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	809.514	1,432	1.159.224	109.087.901.658	0,00106%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.400.010	1,392	1.948.142	109.087.901.658	0,00179%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.400.010	1,397	1.955.814	109.087.901.658	0,00179%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.400.010	1,432	2.004.814	109.087.901.658	0,00184%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.077.672	1,392	1.499.602	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.077.672	1,397	1.505.508	109.087.901.658	0,00138%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.077.672	1,432	1.543.226	109.087.901.658	0,00141%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	972.896	1,392	1.353.804	109.087.901.658	0,00124%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	972.896	1,397	1.359.136	109.087.901.658	0,00125%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	972.896	1,432	1.393.187	109.087.901.658	0,00128%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.044.080	1,392	1.452.858	109.087.901.658	0,00133%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.044.080	1,397	1.458.580	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.044.080	1,432	1.495.123	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	855.456	1,392	1.190.384	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	855.456	1,397	1.195.072	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	855.456	1,432	1.225.013	109.087.901.658	0,00112%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.457	1,392	20.117	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	14.457	1,397	20.196	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	14.457	1,432	20.702	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	190.241	1,432	272.425	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.817	1,392	20.618	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	14.817	1,397	20.699	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	14.817	1,432	21.218	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.085.334	1,392	1.510.264	109.087.901.658	0,00138%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.085.334	1,397	1.516.212	109.087.901.658	0,00139%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.085.334	1,432	1.554.198	109.087.901.658	0,00142%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	233.772	1,392	325.298	109.087.901.658	0,00030%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	233.772	1,397	326.579	109.087.901.658	0,00030%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	233.772	1,432	334.762	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	269.202	1,432	385.497	109.087.901.658	0,00035%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FGT	346.347	1,432	495.969	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FDE	346.347	1,397	483.847	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	174.123	1,432	249.344	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	24.259	1,392	33.757	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	24.259	1,397	33.890	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	NAZARENO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	24.259	1,432	34.739	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	24.446	11,440	279.662	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	24.446	3,282	80.232	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	24.446	7,168	175.229	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	1.392.627	11,440	15.931.653	109.087.901.658	0,01460%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	1.392.627	3,282	4.570.602	109.087.901.658	0,00419%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	1.392.627	7,168	9.982.350	109.087.901.658	0,00915%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	621.896	11,440	7.114.490	109.087.901.658	0,00652%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	621.896	3,282	2.041.063	109.087.901.658	0,00187%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	621.896	7,168	4.457.751	109.087.901.658	0,00409%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VLB-VDD	18.062.495	14,051	253.796.117	109.087.901.658	0,23265%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	18.062.495	3,282	59.281.109	109.087.901.658	0,05434%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	18.062.495	7,168	129.471.964	109.087.901.658	0,11869%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	21.380.399	11,440	244.591.765	109.087.901.658	0,22422%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	21.380.399	3,282	70.170.470	109.087.901.658	0,06432%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	21.380.399	7,168	153.254.700	109.087.901.658	0,14049%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VLB-VDD	10.601.866	14,051	148.966.819	109.087.901.658	0,13656%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	10.601.866	3,282	34.795.324	109.087.901.658	0,03190%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	10.601.866	7,168	75.994.175	109.087.901.658	0,06966%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	7.831.444	11,440	89.591.719	109.087.901.658	0,08213%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	7.831.444	3,282	25.702.799	109.087.901.658	0,02356%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	7.831.444	7,168	56.135.791	109.087.901.658	0,05146%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	4.554.324	11,440	52.101.467	109.087.901.658	0,04776%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	4.554.324	3,282	14.947.291	109.087.901.658	0,01370%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	4.554.324	7,168	32.645.394	109.087.901.658	0,02993%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	22.613	11,440	258.693	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	22.613	3,282	74.216	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	22.613	7,168	162.090	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	12.308.312	11,440	140.807.089	109.087.901.658	0,12908%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	12.308.312	3,282	40.395.880	109.087.901.658	0,03703%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	12.308.312	7,168	88.225.980	109.087.901.658	0,08088%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	277.740	11,440	3.177.346	109.087.901.658	0,00291%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	277.740	3,282	911.543	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	277.740	7,168	1.990.840	109.087.901.658	0,00182%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	2.254.606	11,440	25.792.693	109.087.901.658	0,02364%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	2.254.606	3,282	7.399.617	109.087.901.658	0,00678%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	2.254.606	7,168	16.161.016	109.087.901.658	0,01481%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	175.611	11,440	2.008.990	109.087.901.658	0,00184%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	175.611	3,282	576.355	109.087.901.658	0,00053%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	175.611	7,168	1.258.780	109.087.901.658	0,00115%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	181.628	11,440	2.077.824	109.087.901.658	0,00190%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	181.628	3,282	596.103	109.087.901.658	0,00055%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	181.628	7,168	1.301.910	109.087.901.658	0,00119%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	5.767	11,440	65.974	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	5.767	3,282	18.927	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	NOVA ERA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	5.767	7,168	41.338	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	NOVA PORTEIRINHA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ETO-EJN	20.854	13,164	274.522	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	OURO BRANCO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-VOB	38.120	0,250	9.530	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	OURO BRANCO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-VOB	280.277	0,250	70.069	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	OURO BRANCO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-FDM	24.259	0,250	6.065	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FPY	28.449	5,340	151.918	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	280.277	2,691	754.225	109.087.901.658	0,00069%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	280.277	5,340	1.496.679	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	16.754.022	2,691	45.085.073	109.087.901.658	0,04133%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	16.754.022	5,340	89.466.477	109.087.901.658	0,08201%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	6.249	2,691	16.816	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	6.249	5,340	33.370	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	9.694.113	2,691	26.086.858	109.087.901.658	0,02391%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	9.694.113	5,340	51.766.563	109.087.901.658	0,04745%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	2.632.345	5,340	14.056.722	109.087.901.658	0,01289%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	11.042.972	5,340	58.969.470	109.087.901.658	0,05406%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	1.360.110	2,691	3.660.056	109.087.901.658	0,00336%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	1.360.110	5,340	7.262.987	109.087.901.658	0,00666%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	2.915.189	2,691	7.844.774	109.087.901.658	0,00719%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	2.915.189	5,340	15.567.109	109.087.901.658	0,01427%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	2.208.569	5,340	11.793.758	109.087.901.658	0,01081%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	7.831.444	2,392	18.732.814	109.087.901.658	0,01717%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-ELF	4.554.324	11,721	53.381.232	109.087.901.658	0,04893%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ELF-VCB	4.554.324	9,881	45.001.275	109.087.901.658	0,04125%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCB-VFU	4.554.324	7,855	35.774.215	109.087.901.658	0,03279%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFU-VRV	4.554.324	17,211	78.384.470	109.087.901.658	0,07185%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRV-VTO	4.554.324	10,717	48.808.690	109.087.901.658	0,04474%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	4.554.324	2,392	10.893.943	109.087.901.658	0,00999%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	2.357.294	5,340	12.587.950	109.087.901.658	0,01154%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-ELF	22.613	11,721	265.047	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ELF-VCB	22.613	9,881	223.439	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCB-VFU	22.613	7,855	177.625	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFU-VRV	22.613	17,211	389.192	109.087.901.658	0,00036%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRV-VTO	22.613	10,717	242.344	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	22.613	2,392	54.090	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	10.182	2,691	27.400	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	10.182	5,340	54.372	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FPY	10.182	5,340	54.372	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	277.740	2,392	664.354	109.087.901.658	0,00061%
MINÉRIO DE FERRO	BA, ES, MG	OURO PRETO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FPY	346.347	5,340	1.849.493	109.087.901.658	0,00170%
MINÉRIO DE FERRO	BA, ES, MG	PAI PEDRO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEW-EYP	20.854	15,723	327.887	109.087.901.658	0,00030%
MINÉRIO DE FERRO	BA, ES, MG	PAI PEDRO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYP-ETO	20.854	10,556	220.135	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	452.578	6,385	2.889.711	109.087.901.658	0,00265%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	452.578	12,279	5.557.205	109.087.901.658	0,00509%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	452.578	3,696	1.672.728	109.087.901.658	0,00153%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	471.355	6,385	3.009.602	109.087.901.658	0,00276%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	471.355	12,279	5.787.768	109.087.901.658	0,00531%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	471.355	3,696	1.742.128	109.087.901.658	0,00160%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	9.636.141	6,385	61.526.760	109.087.901.658	0,05640%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	9.636.141	12,279	118.322.175	109.087.901.658	0,10846%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	9.636.141	3,696	35.615.177	109.087.901.658	0,03265%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.040.246	6,385	6.641.971	109.087.901.658	0,00609%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	1.040.246	12,279	12.773.181	109.087.901.658	0,01171%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.040.246	3,696	3.844.749	109.087.901.658	0,00352%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	175.991	6,385	1.123.703	109.087.901.658	0,00103%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	175.991	12,279	2.160.993	109.087.901.658	0,00198%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	175.991	3,696	650.463	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	16.754.022	6,385	106.974.430	109.087.901.658	0,09806%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	16.754.022	12,279	205.722.636	109.087.901.658	0,18858%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	16.754.022	3,696	61.922.865	109.087.901.658	0,05676%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	5.195.905	6,385	33.175.853	109.087.901.658	0,03041%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	5.195.905	12,279	63.800.517	109.087.901.658	0,05849%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	5.195.905	3,696	19.204.065	109.087.901.658	0,01760%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	9.694.113	6,385	61.896.912	109.087.901.658	0,05674%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	9.694.113	12,279	119.034.014	109.087.901.658	0,10912%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	9.694.113	3,696	35.829.442	109.087.901.658	0,03284%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	753.441	6,385	4.810.721	109.087.901.658	0,00441%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	753.441	12,279	9.251.502	109.087.901.658	0,00848%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	753.441	3,696	2.784.718	109.087.901.658	0,00255%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.632.345	6,385	16.807.523	109.087.901.658	0,01541%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	2.632.345	12,279	32.322.564	109.087.901.658	0,02963%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.632.345	3,696	9.729.147	109.087.901.658	0,00892%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	3.225.523	6,385	20.594.964	109.087.901.658	0,01888%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	3.225.523	12,279	39.606.197	109.087.901.658	0,03631%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	3.225.523	3,696	11.921.533	109.087.901.658	0,01093%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	11.042.972	6,385	70.509.376	109.087.901.658	0,06464%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	11.042.972	12,279	135.596.653	109.087.901.658	0,12430%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	11.042.972	3,696	40.814.825	109.087.901.658	0,03741%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.360.110	6,385	8.684.302	109.087.901.658	0,00796%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	1.360.110	12,279	16.700.791	109.087.901.658	0,01531%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.360.110	3,696	5.026.967	109.087.901.658	0,00461%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.915.189	6,385	18.613.482	109.087.901.658	0,01706%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	2.915.189	12,279	35.795.606	109.087.901.658	0,03281%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.915.189	3,696	10.774.539	109.087.901.658	0,00988%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.208.569	6,385	14.101.713	109.087.901.658	0,01293%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	2.208.569	12,279	27.119.019	109.087.901.658	0,02486%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.208.569	3,696	8.162.871	109.087.901.658	0,00748%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	140.317	6,385	895.924	109.087.901.658	0,00082%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	140.317	12,279	1.722.952	109.087.901.658	0,00158%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	140.317	3,696	518.612	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	16.481.129	6,385	105.232.009	109.087.901.658	0,09647%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	16.481.129	12,279	202.371.783	109.087.901.658	0,18551%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	16.481.129	3,696	60.914.253	109.087.901.658	0,05584%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	3.218.053	6,385	20.547.268	109.087.901.658	0,01884%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	3.218.053	12,279	39.514.473	109.087.901.658	0,03622%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	3.218.053	3,696	11.893.924	109.087.901.658	0,01090%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.928.832	6,385	12.315.592	109.087.901.658	0,01129%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	1.928.832	12,279	23.684.128	109.087.901.658	0,02171%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.928.832	3,696	7.128.963	109.087.901.658	0,00654%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	4.306.483	6,385	27.496.894	109.087.901.658	0,02521%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	4.306.483	12,279	52.879.305	109.087.901.658	0,04847%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	4.306.483	3,696	15.916.761	109.087.901.658	0,01459%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.246.693	6,385	14.345.135	109.087.901.658	0,01315%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	2.246.693	12,279	27.587.143	109.087.901.658	0,02529%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.246.693	3,696	8.303.777	109.087.901.658	0,00761%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.899.329	6,385	12.127.216	109.087.901.658	0,01112%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	1.899.329	12,279	23.321.861	109.087.901.658	0,02138%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.899.329	3,696	7.019.920	109.087.901.658	0,00644%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	598.315	6,385	3.820.241	109.087.901.658	0,00350%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	598.315	12,279	7.346.710	109.087.901.658	0,00673%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	598.315	3,696	2.211.372	109.087.901.658	0,00203%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	3.373.361	6,385	21.538.910	109.087.901.658	0,01974%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	3.373.361	12,279	41.421.500	109.087.901.658	0,03797%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	3.373.361	3,696	12.467.942	109.087.901.658	0,01143%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	3.518.020	6,385	22.462.558	109.087.901.658	0,02059%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	3.518.020	12,279	43.197.768	109.087.901.658	0,03960%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	3.518.020	3,696	13.002.602	109.087.901.658	0,01192%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	37.363	6,385	238.563	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	37.363	12,279	458.780	109.087.901.658	0,00042%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	37.363	3,696	138.094	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.054.657	6,385	13.118.985	109.087.901.658	0,01203%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	2.054.657	12,279	25.229.133	109.087.901.658	0,02313%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.054.657	3,696	7.594.012	109.087.901.658	0,00696%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	472.702	6,385	3.018.202	109.087.901.658	0,00277%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	472.702	12,279	5.804.308	109.087.901.658	0,00532%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	472.702	3,696	1.747.107	109.087.901.658	0,00160%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.357.294	6,385	15.051.322	109.087.901.658	0,01380%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	2.357.294	12,279	28.945.213	109.087.901.658	0,02653%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.357.294	3,696	8.712.559	109.087.901.658	0,00799%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	809.514	6,385	5.168.747	109.087.901.658	0,00474%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	809.514	12,279	9.940.022	109.087.901.658	0,00911%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	809.514	3,696	2.991.964	109.087.901.658	0,00274%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.400.010	6,385	8.939.064	109.087.901.658	0,00819%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	1.400.010	12,279	17.190.723	109.087.901.658	0,01576%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.400.010	3,696	5.174.437	109.087.901.658	0,00474%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.077.672	6,385	6.880.936	109.087.901.658	0,00631%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	1.077.672	12,279	13.232.734	109.087.901.658	0,01213%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.077.672	3,696	3.983.076	109.087.901.658	0,00365%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	972.896	6,385	6.211.941	109.087.901.658	0,00569%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	972.896	12,279	11.946.190	109.087.901.658	0,01095%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	972.896	3,696	3.595.824	109.087.901.658	0,00330%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.044.080	6,385	6.666.451	109.087.901.658	0,00611%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	1.044.080	12,279	12.820.258	109.087.901.658	0,01175%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.044.080	3,696	3.858.920	109.087.901.658	0,00354%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	855.456	6,385	5.462.087	109.087.901.658	0,00501%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	855.456	12,279	10.504.144	109.087.901.658	0,00963%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	855.456	3,696	3.161.765	109.087.901.658	0,00290%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	14.457	6,385	92.308	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	14.457	12,279	177.518	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	14.457	3,696	53.433	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	190.241	6,385	1.214.689	109.087.901.658	0,00111%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	190.241	12,279	2.335.969	109.087.901.658	0,00214%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	190.241	3,696	703.131	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	14.817	6,385	94.607	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	14.817	12,279	181.938	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	14.817	3,696	54.764	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.085.334	6,385	6.929.858	109.087.901.658	0,00635%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	1.085.334	12,279	13.326.816	109.087.901.658	0,01222%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.085.334	3,696	4.011.394	109.087.901.658	0,00368%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	233.772	6,385	1.492.634	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	233.772	12,279	2.870.486	109.087.901.658	0,00263%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	233.772	3,696	864.021	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	269.202	6,385	1.718.855	109.087.901.658	0,00158%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	269.202	12,279	3.305.531	109.087.901.658	0,00303%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	269.202	3,696	994.971	109.087.901.658	0,00091%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FRP	346.347	3,696	1.280.099	109.087.901.658	0,00117%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FSH	346.347	12,279	4.252.795	109.087.901.658	0,00390%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FJT	346.347	6,385	2.211.426	109.087.901.658	0,00203%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	174.123	6,385	1.111.775	109.087.901.658	0,00102%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	174.123	12,279	2.138.056	109.087.901.658	0,00196%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	174.123	3,696	643.559	109.087.901.658	0,00059%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	24.259	6,385	154.894	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	24.259	12,279	297.876	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	PASSA-VINTE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	24.259	3,696	89.661	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	PATROCINIO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ETP-ELI	5.067.826	5,050	25.592.521	109.087.901.658	0,02346%
MINÉRIO DE FERRO	BA, ES, MG	PATROCINIO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ELI-EDZ	5.067.826	6,633	33.614.890	109.087.901.658	0,03081%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VPC	9.877	5,486	54.185	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	9.877	19,905	196.602	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	1.702.127	19,905	33.880.838	109.087.901.658	0,03106%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	1.702.127	5,486	9.337.869	109.087.901.658	0,00856%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	18.062.495	19,905	359.533.963	109.087.901.658	0,32958%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	18.062.495	5,486	99.090.848	109.087.901.658	0,09084%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	21.380.399	19,905	425.576.842	109.087.901.658	0,39012%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	21.380.399	5,486	117.292.869	109.087.901.658	0,10752%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	10.601.866	19,905	211.030.143	109.087.901.658	0,19345%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	10.601.866	5,486	58.161.837	109.087.901.658	0,05332%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	7.831.444	19,905	155.884.893	109.087.901.658	0,14290%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	7.831.444	5,486	42.963.302	109.087.901.658	0,03938%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	4.554.324	19,905	90.653.819	109.087.901.658	0,08310%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	4.554.324	5,486	24.985.021	109.087.901.658	0,02290%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	22.613	19,905	450.112	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	22.613	5,486	124.055	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	12.308.312	19,905	244.996.950	109.087.901.658	0,22459%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	12.308.312	5,486	67.523.400	109.087.901.658	0,06190%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	277.740	19,905	5.528.415	109.087.901.658	0,00507%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	277.740	5,486	1.523.682	109.087.901.658	0,00140%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VPC	314.966	5,486	1.727.903	109.087.901.658	0,00158%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	314.966	19,905	6.269.398	109.087.901.658	0,00575%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	2.254.606	19,905	44.877.932	109.087.901.658	0,04114%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	2.254.606	5,486	12.368.769	109.087.901.658	0,01134%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	175.611	19,905	3.495.537	109.087.901.658	0,00320%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	175.611	5,486	963.402	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	5.767	19,905	114.792	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	PERIQUITO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	5.767	5,486	31.638	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	PORTEIRINHA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYP-ETO	20.854	8,579	178.906	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	PORTEIRINHA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ETO-EJN	20.854	10,572	220.468	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	PRUDENTE DE MORAIS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESL-EPM	20.854	0,991	20.666	109.087.901.658	0,00002%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	452.578	6,803	3.078.888	109.087.901.658	0,00282%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	452.578	1,470	665.290	109.087.901.658	0,00061%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	471.355	6,803	3.206.628	109.087.901.658	0,00294%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	471.355	1,470	692.892	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	9.636.141	6,803	65.554.667	109.087.901.658	0,06009%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	9.636.141	1,470	14.165.127	109.087.901.658	0,01299%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.040.246	6,803	7.076.794	109.087.901.658	0,00649%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.040.246	1,470	1.529.162	109.087.901.658	0,00140%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	175.991	6,803	1.197.267	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	175.991	1,470	258.707	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	16.754.022	6,803	113.977.612	109.087.901.658	0,10448%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	16.754.022	1,470	24.628.412	109.087.901.658	0,02258%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	5.195.905	6,803	35.347.742	109.087.901.658	0,03240%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	5.195.905	1,470	7.637.980	109.087.901.658	0,00700%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	9.694.113	6,803	65.949.051	109.087.901.658	0,06045%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	9.694.113	1,470	14.250.346	109.087.901.658	0,01306%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	753.441	6,803	5.125.659	109.087.901.658	0,00470%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	753.441	1,470	1.107.558	109.087.901.658	0,00102%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.632.345	6,803	17.907.843	109.087.901.658	0,01642%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.632.345	1,470	3.869.547	109.087.901.658	0,00355%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	3.225.523	6,803	21.943.233	109.087.901.658	0,02012%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	3.225.523	1,470	4.741.519	109.087.901.658	0,00435%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	11.042.972	6,803	75.125.339	109.087.901.658	0,06887%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	11.042.972	1,470	16.233.169	109.087.901.658	0,01488%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.360.110	6,803	9.252.828	109.087.901.658	0,00848%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.360.110	1,470	1.999.362	109.087.901.658	0,00183%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.915.189	6,803	19.832.031	109.087.901.658	0,01818%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.915.189	1,470	4.285.328	109.087.901.658	0,00393%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.208.569	6,803	15.024.895	109.087.901.658	0,01377%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.208.569	1,470	3.246.596	109.087.901.658	0,00298%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	140.317	6,803	954.577	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	140.317	1,470	206.266	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	16.481.129	6,803	112.121.121	109.087.901.658	0,10278%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	16.481.129	1,470	24.227.260	109.087.901.658	0,02221%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	3.218.053	6,803	21.892.415	109.087.901.658	0,02007%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	3.218.053	1,470	4.730.538	109.087.901.658	0,00434%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.928.832	6,803	13.121.844	109.087.901.658	0,01203%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.928.832	1,470	2.835.383	109.087.901.658	0,00260%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	4.306.483	6,803	29.297.004	109.087.901.658	0,02686%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	4.306.483	1,470	6.330.530	109.087.901.658	0,00580%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.246.693	6,803	15.284.252	109.087.901.658	0,01401%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.246.693	1,470	3.302.639	109.087.901.658	0,00303%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.899.329	6,803	12.921.135	109.087.901.658	0,01184%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.899.329	1,470	2.792.014	109.087.901.658	0,00256%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	598.315	6,803	4.070.337	109.087.901.658	0,00373%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	598.315	1,470	879.523	109.087.901.658	0,00081%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	3.373.361	6,803	22.948.975	109.087.901.658	0,02104%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	3.373.361	1,470	4.958.841	109.087.901.658	0,00455%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	3.518.020	6,803	23.933.090	109.087.901.658	0,02194%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	3.518.020	1,470	5.171.489	109.087.901.658	0,00474%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	37.363	6,803	254.180	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	37.363	1,470	54.924	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.054.657	6,803	13.977.832	109.087.901.658	0,01281%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.054.657	1,470	3.020.346	109.087.901.658	0,00277%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	472.702	6,803	3.215.792	109.087.901.658	0,00295%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	472.702	1,470	694.872	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	2.357.294	6,803	16.036.671	109.087.901.658	0,01470%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	2.357.294	1,470	3.465.222	109.087.901.658	0,00318%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	809.514	6,803	5.507.124	109.087.901.658	0,00505%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	809.514	1,470	1.189.986	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.400.010	6,803	9.524.268	109.087.901.658	0,00873%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.400.010	1,470	2.058.015	109.087.901.658	0,00189%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.077.672	6,803	7.331.403	109.087.901.658	0,00672%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.077.672	1,470	1.584.178	109.087.901.658	0,00145%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	972.896	6,803	6.618.611	109.087.901.658	0,00607%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	972.896	1,470	1.430.157	109.087.901.658	0,00131%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.044.080	6,803	7.102.876	109.087.901.658	0,00651%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.044.080	1,470	1.534.798	109.087.901.658	0,00141%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	855.456	6,803	5.819.667	109.087.901.658	0,00533%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	855.456	1,470	1.257.520	109.087.901.658	0,00115%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	14.457	6,803	98.351	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	14.457	1,470	21.252	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	14.817	6,803	100.800	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	14.817	1,470	21.781	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	1.085.334	6,803	7.383.527	109.087.901.658	0,00677%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	1.085.334	1,470	1.595.441	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	233.772	6,803	1.590.351	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	233.772	1,470	343.645	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FIC	346.347	1,470	509.130	109.087.901.658	0,00047%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FRC	346.347	6,803	2.356.199	109.087.901.658	0,00216%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	24.259	6,803	165.034	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE COSTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	24.259	1,470	35.661	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VRD	9.877	8,436	83.322	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VCN	9.877	16,017	158.200	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VCP	9.877	1,236	12.208	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	1.702.127	1,236	2.103.829	109.087.901.658	0,00193%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	1.702.127	16,017	27.262.968	109.087.901.658	0,02499%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	1.702.127	8,436	14.359.143	109.087.901.658	0,01316%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	18.062.495	1,236	22.325.244	109.087.901.658	0,02047%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	18.062.495	16,017	289.306.982	109.087.901.658	0,26521%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	18.062.495	8,436	152.375.208	109.087.901.658	0,13968%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	21.380.399	1,236	26.426.173	109.087.901.658	0,02422%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	21.380.399	16,017	342.449.851	109.087.901.658	0,31392%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	21.380.399	8,436	180.365.046	109.087.901.658	0,16534%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	10.601.866	1,236	13.103.906	109.087.901.658	0,01201%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	10.601.866	16,017	169.810.088	109.087.901.658	0,15566%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	10.601.866	8,436	89.437.342	109.087.901.658	0,08199%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	7.831.444	1,236	9.679.665	109.087.901.658	0,00887%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	7.831.444	16,017	125.436.239	109.087.901.658	0,11499%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	7.831.444	8,436	66.066.062	109.087.901.658	0,06056%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	4.554.324	1,236	5.629.144	109.087.901.658	0,00516%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	4.554.324	16,017	72.946.608	109.087.901.658	0,06687%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	4.554.324	8,436	38.420.277	109.087.901.658	0,03522%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	22.613	1,236	27.950	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	22.613	16,017	362.192	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	22.613	8,436	190.763	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	12.308.312	1,236	15.213.074	109.087.901.658	0,01395%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	12.308.312	16,017	197.142.233	109.087.901.658	0,18072%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	12.308.312	8,436	103.832.920	109.087.901.658	0,09518%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	277.740	1,236	343.287	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	277.740	16,017	4.448.562	109.087.901.658	0,00408%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	277.740	8,436	2.343.015	109.087.901.658	0,00215%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VRD	314.966	8,436	2.657.053	109.087.901.658	0,00244%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VCN	314.966	16,017	5.044.810	109.087.901.658	0,00462%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VCP	314.966	1,236	389.298	109.087.901.658	0,00036%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	2.254.606	1,236	2.786.693	109.087.901.658	0,00255%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	2.254.606	16,017	36.112.024	109.087.901.658	0,03310%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	2.254.606	8,436	19.019.856	109.087.901.658	0,01744%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	175.611	1,236	217.055	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	175.611	16,017	2.812.761	109.087.901.658	0,00258%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	175.611	8,436	1.481.454	109.087.901.658	0,00136%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	5.767	1,236	7.128	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	5.767	16,017	92.370	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	RESPLENDOR	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	5.767	8,436	48.650	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	RESSAQUINHA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEV-FET	28.449	1,135	32.290	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	RESSAQUINHA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FCN	28.449	5,164	146.911	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	RESSAQUINHA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCN-FCM	28.449	0,643	18.293	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	RESSAQUINHA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FCN	231.735	0,643	149.006	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	RESSAQUINHA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCN-FET	231.735	5,164	1.196.680	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	RESSAQUINHA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FEV	231.735	1,135	263.019	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	RESSAQUINHA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FCN	6.249	0,643	4.018	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	RESSAQUINHA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCN-FET	6.249	5,164	32.270	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	RESSAQUINHA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FEV	6.249	1,135	7.093	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	RIO ACIMA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	280.277	0,333	93.332	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	RIO ACIMA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	16.754.022	0,333	5.579.089	109.087.901.658	0,00511%
MINÉRIO DE FERRO	BA, ES, MG	RIO ACIMA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	6.249	0,333	2.081	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	RIO ACIMA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	9.694.113	0,333	3.228.140	109.087.901.658	0,00296%
MINÉRIO DE FERRO	BA, ES, MG	RIO ACIMA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	1.360.110	0,333	452.917	109.087.901.658	0,00042%
MINÉRIO DE FERRO	BA, ES, MG	RIO ACIMA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	2.915.189	0,333	970.758	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	RIO ACIMA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	10.182	0,333	3.391	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	24.446	4,759	116.339	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	24.446	3,345	81.772	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	24.446	5,600	136.898	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	1.392.627	4,759	6.627.512	109.087.901.658	0,00608%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	1.392.627	3,345	4.658.337	109.087.901.658	0,00427%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	1.392.627	5,600	7.798.711	109.087.901.658	0,00715%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	621.896	4,759	2.959.603	109.087.901.658	0,00271%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	621.896	3,345	2.080.242	109.087.901.658	0,00191%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	621.896	5,600	3.482.618	109.087.901.658	0,00319%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	21.380.399	4,759	101.749.319	109.087.901.658	0,09327%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	21.380.399	3,345	71.517.435	109.087.901.658	0,06556%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	21.380.399	5,600	119.730.234	109.087.901.658	0,10976%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	7.831.444	4,759	37.269.842	109.087.901.658	0,03416%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	7.831.444	3,345	26.196.180	109.087.901.658	0,02401%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	7.831.444	5,600	43.856.086	109.087.901.658	0,04020%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	4.554.324	4,759	21.674.028	109.087.901.658	0,01987%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	4.554.324	3,345	15.234.214	109.087.901.658	0,01397%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	4.554.324	5,600	25.504.214	109.087.901.658	0,02338%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	22.613	4,759	107.615	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	22.613	3,345	75.640	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	22.613	5,600	126.633	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	12.308.312	4,759	58.575.257	109.087.901.658	0,05370%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	12.308.312	3,345	41.171.304	109.087.901.658	0,03774%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	12.308.312	5,600	68.926.547	109.087.901.658	0,06318%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	277.740	4,759	1.321.765	109.087.901.658	0,00121%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	277.740	3,345	929.040	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	277.740	5,600	1.555.344	109.087.901.658	0,00143%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	2.254.606	4,759	10.729.670	109.087.901.658	0,00984%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	2.254.606	3,345	7.541.657	109.087.901.658	0,00691%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	2.254.606	5,600	12.625.794	109.087.901.658	0,01157%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	175.611	4,759	835.733	109.087.901.658	0,00077%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	175.611	3,345	587.419	109.087.901.658	0,00054%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	175.611	5,600	983.422	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	181.628	4,759	864.368	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	181.628	3,345	607.546	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	181.628	5,600	1.017.117	109.087.901.658	0,00093%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	5.767	4,759	27.445	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	5.767	3,345	19.291	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	RIO PIRACICABA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	5.767	5,600	32.295	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	452.578	2,631	1.190.620	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	471.355	2,631	1.240.017	109.087.901.658	0,00114%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.636.141	2,631	25.350.278	109.087.901.658	0,02324%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.040.246	2,631	2.736.627	109.087.901.658	0,00251%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	175.991	2,631	462.988	109.087.901.658	0,00042%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.754.022	2,631	44.075.643	109.087.901.658	0,04040%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	5.195.905	2,631	13.669.127	109.087.901.658	0,01253%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.694.113	2,631	25.502.788	109.087.901.658	0,02338%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	753.441	2,631	1.982.115	109.087.901.658	0,00182%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.632.345	2,631	6.925.042	109.087.901.658	0,00635%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.225.523	2,631	8.485.545	109.087.901.658	0,00778%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	11.042.972	2,631	29.051.299	109.087.901.658	0,02663%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.360.110	2,631	3.578.109	109.087.901.658	0,00328%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.915.189	2,631	7.669.133	109.087.901.658	0,00703%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.208.569	2,631	5.810.193	109.087.901.658	0,00533%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	140.317	2,631	369.139	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.481.129	2,631	43.357.730	109.087.901.658	0,03975%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.218.053	2,631	8.465.893	109.087.901.658	0,00776%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.928.832	2,631	5.074.275	109.087.901.658	0,00465%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	4.306.483	2,631	11.329.280	109.087.901.658	0,01039%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.246.693	2,631	5.910.488	109.087.901.658	0,00542%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.899.329	2,631	4.996.660	109.087.901.658	0,00458%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	598.315	2,631	1.574.017	109.087.901.658	0,00144%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.373.361	2,631	8.874.469	109.087.901.658	0,00814%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.518.020	2,631	9.255.031	109.087.901.658	0,00848%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	37.363	2,631	98.293	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.054.657	2,631	5.405.289	109.087.901.658	0,00495%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	472.702	2,631	1.243.561	109.087.901.658	0,00114%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.357.294	2,631	6.201.451	109.087.901.658	0,00568%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	809.514	2,631	2.129.629	109.087.901.658	0,00195%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.400.010	2,631	3.683.076	109.087.901.658	0,00338%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.077.672	2,631	2.835.086	109.087.901.658	0,00260%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	972.896	2,631	2.559.446	109.087.901.658	0,00235%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.044.080	2,631	2.746.713	109.087.901.658	0,00252%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	855.456	2,631	2.250.491	109.087.901.658	0,00206%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.457	2,631	38.033	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.817	2,631	38.980	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.085.334	2,631	2.855.242	109.087.901.658	0,00262%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	233.772	2,631	614.996	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBU-FXA	346.347	2,634	912.278	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	RITAPOLIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	24.259	2,631	63.819	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHF-OCR	24.446	4,132	101.011	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OCR-EGC	24.446	1,077	26.328	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGC-VWI	24.446	1,266	30.949	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VWI-VDO	24.446	11,359	277.682	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	24.446	3,485	85.194	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHF-OCR	1.392.627	4,132	5.754.335	109.087.901.658	0,00527%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OCR-EGC	1.392.627	1,077	1.499.859	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGC-VWI	1.392.627	1,266	1.763.066	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VWI-VDO	1.392.627	11,359	15.818.850	109.087.901.658	0,01450%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	1.392.627	3,485	4.853.305	109.087.901.658	0,00445%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	621.896	1,919	1.193.418	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VWI-VDO	621.896	11,359	7.064.117	109.087.901.658	0,00648%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	621.896	3,485	2.167.308	109.087.901.658	0,00199%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VWI-VDO	175.611	11,359	1.994.765	109.087.901.658	0,00183%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	175.611	3,485	612.004	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHF-OCR	169.754	4,132	701.424	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OCR-EGC	169.754	1,077	182.825	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGC-VWI	169.754	1,266	214.909	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	181.628	1,919	348.544	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VWI-VDO	181.628	11,359	2.063.112	109.087.901.658	0,00189%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	181.628	3,485	632.974	109.087.901.658	0,00058%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	5.767	1,919	11.067	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VWI-VDO	5.767	11,359	65.507	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	SABARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	5.767	3,485	20.098	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	24.446	12,572	307.335	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	24.446	7,588	185.496	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	24.446	8,815	215.491	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	24.446	2,014	49.234	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	1.392.627	12,572	17.508.107	109.087.901.658	0,01605%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	1.392.627	7,588	10.567.254	109.087.901.658	0,00969%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	1.392.627	8,815	12.276.007	109.087.901.658	0,01125%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	1.392.627	2,014	2.804.751	109.087.901.658	0,00257%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	621.896	12,572	7.818.477	109.087.901.658	0,00717%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	621.896	7,588	4.718.947	109.087.901.658	0,00433%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	621.896	8,815	5.482.013	109.087.901.658	0,00503%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	621.896	2,014	1.252.499	109.087.901.658	0,00115%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	21.380.399	12,572	268.794.376	109.087.901.658	0,24640%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	21.380.399	7,588	162.234.468	109.087.901.658	0,14872%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	21.380.399	8,815	188.468.217	109.087.901.658	0,17277%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	21.380.399	2,014	43.060.124	109.087.901.658	0,03947%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	7.831.444	0,446	3.492.824	109.087.901.658	0,00320%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	7.831.444	7,588	59.424.997	109.087.901.658	0,05447%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	7.831.444	8,815	69.034.179	109.087.901.658	0,06328%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	7.831.444	2,014	15.772.528	109.087.901.658	0,01446%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	4.554.324	0,446	2.031.229	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	4.554.324	7,588	34.558.211	109.087.901.658	0,03168%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	4.554.324	8,815	40.146.366	109.087.901.658	0,03680%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	4.554.324	2,014	9.172.409	109.087.901.658	0,00841%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	22.613	0,446	10.085	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	22.613	7,588	171.587	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	22.613	8,815	199.334	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	22.613	2,014	45.543	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	12.308.312	0,446	5.489.507	109.087.901.658	0,00503%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	12.308.312	7,588	93.395.471	109.087.901.658	0,08561%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	12.308.312	8,815	108.497.770	109.087.901.658	0,09946%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	12.308.312	2,014	24.788.940	109.087.901.658	0,02272%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	277.740	0,446	123.872	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	277.740	7,588	2.107.491	109.087.901.658	0,00193%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	277.740	8,815	2.448.278	109.087.901.658	0,00224%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	277.740	2,014	559.368	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	2.254.606	12,572	28.344.907	109.087.901.658	0,02598%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	2.254.606	7,588	17.107.950	109.087.901.658	0,01568%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	2.254.606	8,815	19.874.352	109.087.901.658	0,01822%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	2.254.606	2,014	4.540.776	109.087.901.658	0,00416%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	175.611	12,572	2.207.781	109.087.901.658	0,00202%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	175.611	7,588	1.332.536	109.087.901.658	0,00122%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	175.611	8,815	1.548.011	109.087.901.658	0,00142%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	175.611	2,014	353.681	109.087.901.658	0,00032%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	181.628	12,572	2.283.427	109.087.901.658	0,00209%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	181.628	7,588	1.378.193	109.087.901.658	0,00126%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	181.628	8,815	1.601.051	109.087.901.658	0,00147%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	181.628	2,014	365.799	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	5.767	12,572	72.503	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	5.767	7,588	43.760	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	5.767	8,815	50.836	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	SANTA BARBARA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	5.767	2,014	11.615	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LUZIA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	621.896	1,039	646.150	109.087.901.658	0,00059%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LUZIA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	181.628	1,039	188.711	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	SANTA LUZIA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	5.767	1,039	5.992	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	452.578	5,740	2.597.798	109.087.901.658	0,00238%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	452.578	9,292	4.205.355	109.087.901.658	0,00386%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	471.355	5,740	2.705.578	109.087.901.658	0,00248%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	471.355	9,292	4.379.831	109.087.901.658	0,00401%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	9.636.141	5,740	55.311.449	109.087.901.658	0,05070%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	9.636.141	9,292	89.539.022	109.087.901.658	0,08208%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.040.246	5,740	5.971.012	109.087.901.658	0,00547%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.040.246	9,292	9.665.966	109.087.901.658	0,00886%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	175.991	5,740	1.010.188	109.087.901.658	0,00093%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	175.991	9,292	1.635.308	109.087.901.658	0,00150%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	16.754.022	5,740	96.168.086	109.087.901.658	0,08816%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	16.754.022	9,292	155.678.372	109.087.901.658	0,14271%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	5.195.905	5,740	29.824.495	109.087.901.658	0,02734%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	5.195.905	9,292	48.280.349	109.087.901.658	0,04426%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	9.694.113	5,740	55.644.209	109.087.901.658	0,05101%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	9.694.113	9,292	90.077.698	109.087.901.658	0,08257%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	753.441	5,740	4.324.751	109.087.901.658	0,00396%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	753.441	9,292	7.000.974	109.087.901.658	0,00642%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.632.345	5,740	15.109.660	109.087.901.658	0,01385%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.632.345	9,292	24.459.750	109.087.901.658	0,02242%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	3.225.523	5,740	18.514.502	109.087.901.658	0,01697%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	3.225.523	9,292	29.971.560	109.087.901.658	0,02747%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	11.042.972	5,740	63.386.659	109.087.901.658	0,05811%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	11.042.972	9,292	102.611.296	109.087.901.658	0,09406%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.360.110	5,740	7.807.031	109.087.901.658	0,00716%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.360.110	9,292	12.638.142	109.087.901.658	0,01159%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.915.189	5,740	16.733.185	109.087.901.658	0,01534%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.915.189	9,292	27.087.936	109.087.901.658	0,02483%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.208.569	5,740	12.677.186	109.087.901.658	0,01162%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.208.569	9,292	20.522.023	109.087.901.658	0,01881%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	140.317	5,740	805.420	109.087.901.658	0,00074%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	140.317	9,292	1.303.826	109.087.901.658	0,00120%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	16.481.129	5,740	94.601.680	109.087.901.658	0,08672%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	16.481.129	9,292	153.142.651	109.087.901.658	0,14038%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	3.218.053	5,740	18.471.624	109.087.901.658	0,01693%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	3.218.053	9,292	29.902.148	109.087.901.658	0,02741%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.928.832	5,740	11.071.496	109.087.901.658	0,01015%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.928.832	9,292	17.922.707	109.087.901.658	0,01643%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	4.306.483	5,740	24.719.212	109.087.901.658	0,02266%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	4.306.483	9,292	40.015.840	109.087.901.658	0,03668%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.246.693	5,740	12.896.018	109.087.901.658	0,01182%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.246.693	9,292	20.876.271	109.087.901.658	0,01914%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.899.329	5,740	10.902.148	109.087.901.658	0,00999%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.899.329	9,292	17.648.565	109.087.901.658	0,01618%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	598.315	5,740	3.434.328	109.087.901.658	0,00315%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	598.315	9,292	5.559.543	109.087.901.658	0,00510%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	3.373.361	5,740	19.363.092	109.087.901.658	0,01775%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	3.373.361	9,292	31.345.270	109.087.901.658	0,02873%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	3.518.020	5,740	20.193.435	109.087.901.658	0,01851%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	3.518.020	9,292	32.689.442	109.087.901.658	0,02997%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	37.363	5,740	214.464	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	37.363	9,292	347.177	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.054.657	5,740	11.793.731	109.087.901.658	0,01081%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.054.657	9,292	19.091.873	109.087.901.658	0,01750%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	472.702	5,740	2.713.309	109.087.901.658	0,00249%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	472.702	9,292	4.392.347	109.087.901.658	0,00403%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	2.357.294	5,740	13.530.868	109.087.901.658	0,01240%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	2.357.294	9,292	21.903.976	109.087.901.658	0,02008%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	809.514	5,740	4.646.610	109.087.901.658	0,00426%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	809.514	9,292	7.522.004	109.087.901.658	0,00690%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.400.010	5,740	8.036.057	109.087.901.658	0,00737%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.400.010	9,292	13.008.893	109.087.901.658	0,01193%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.077.672	5,740	6.185.837	109.087.901.658	0,00567%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.077.672	9,292	10.013.728	109.087.901.658	0,00918%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	972.896	5,740	5.584.423	109.087.901.658	0,00512%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	972.896	9,292	9.040.150	109.087.901.658	0,00829%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.044.080	5,740	5.993.019	109.087.901.658	0,00549%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.044.080	9,292	9.701.591	109.087.901.658	0,00889%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	855.456	5,740	4.910.317	109.087.901.658	0,00450%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	855.456	9,292	7.948.897	109.087.901.658	0,00729%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	14.457	5,740	82.983	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	14.457	9,292	134.334	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	190.241	5,740	1.091.983	109.087.901.658	0,00100%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	190.241	9,292	1.767.719	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	14.817	5,740	85.050	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	14.817	9,292	137.680	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	1.085.334	5,740	6.229.817	109.087.901.658	0,00571%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	1.085.334	9,292	10.084.924	109.087.901.658	0,00924%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	233.772	5,740	1.341.851	109.087.901.658	0,00123%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	233.772	9,292	2.172.209	109.087.901.658	0,00199%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	269.202	5,740	1.545.219	109.087.901.658	0,00142%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	269.202	9,292	2.501.425	109.087.901.658	0,00229%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FJT	346.347	9,292	3.218.256	109.087.901.658	0,00295%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FOJ	346.347	5,740	1.988.032	109.087.901.658	0,00182%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	174.123	5,740	999.466	109.087.901.658	0,00092%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	174.123	9,292	1.617.951	109.087.901.658	0,00148%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	24.259	5,740	139.247	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	SANTA RITA DE JACUTINGA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	24.259	9,292	225.415	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO DESERTO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFP-FSR	28.449	1,012	28.790	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO DESERTO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSR-FSA	28.449	3,226	91.776	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO DESERTO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFP-FSR	22.579	1,012	22.850	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO DESERTO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSR-FSA	22.579	3,226	72.840	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VJC	9.877	21,781	215.131	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VIC	9.877	0,716	7.072	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	1.702.127	0,716	1.218.723	109.087.901.658	0,00112%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	1.702.127	21,781	37.074.028	109.087.901.658	0,03399%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	18.062.495	0,716	12.932.746	109.087.901.658	0,01186%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	18.062.495	21,781	393.419.204	109.087.901.658	0,36064%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	21.380.399	0,716	15.308.366	109.087.901.658	0,01403%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	21.380.399	21,781	465.686.471	109.087.901.658	0,42689%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	10.601.866	0,716	7.590.936	109.087.901.658	0,00096%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	10.601.866	21,781	230.919.243	109.087.901.658	0,21168%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	7.831.444	0,716	5.607.314	109.087.901.658	0,00514%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	7.831.444	21,781	170.576.682	109.087.901.658	0,15637%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	4.554.324	0,716	3.260.896	109.087.901.658	0,00299%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	4.554.324	21,781	99.197.731	109.087.901.658	0,09093%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	22.613	0,716	16.191	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	22.613	21,781	492.534	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	12.308.312	0,716	8.812.751	109.087.901.658	0,00808%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	12.308.312	21,781	268.087.344	109.087.901.658	0,24575%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	277.740	0,716	198.862	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	277.740	21,781	6.049.455	109.087.901.658	0,00555%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VJC	314.966	21,781	6.860.274	109.087.901.658	0,00629%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VIC	314.966	0,716	225.516	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	2.254.606	0,716	1.614.298	109.087.901.658	0,00148%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	2.254.606	21,781	49.107.573	109.087.901.658	0,04502%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	175.611	0,716	125.737	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	175.611	21,781	3.824.983	109.087.901.658	0,00351%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	5.767	0,716	4.129	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	SANTANA DO PARAISO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	5.767	21,781	125.611	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEB-FSM	28.449	0,745	21.195	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSM-FSD	28.449	7,446	211.831	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSD-FRV	28.449	6,840	194.591	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRV-FMQ	28.449	4,924	140.083	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMQ-FRD	28.449	9,278	263.950	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRD-FQT	28.449	3,924	111.634	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQT-FJA	28.449	1,799	51.180	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJA-FQT	231.735	1,799	416.891	109.087.901.658	0,00038%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQT-FRD	231.735	3,924	909.328	109.087.901.658	0,00083%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRD-FMQ	231.735	9,278	2.150.037	109.087.901.658	0,00197%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMQ-FRV	231.735	4,924	1.141.063	109.087.901.658	0,00105%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRV-FSD	231.735	6,840	1.585.067	109.087.901.658	0,00145%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSD-FSM	231.735	7,446	1.725.499	109.087.901.658	0,00158%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSM-FEB	231.735	0,745	172.643	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJA-FQT	6.249	1,799	11.242	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQT-FRD	6.249	3,924	24.521	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRD-FMQ	6.249	9,278	57.978	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMQ-FRV	6.249	4,924	30.770	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRV-FSD	6.249	6,840	42.743	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSD-FSM	6.249	7,446	46.530	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SANTOS DUMONT	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSM-FEB	6.249	0,745	4.656	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	452.578	8,279	3.746.893	109.087.901.658	0,00343%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	471.355	8,279	3.902.348	109.087.901.658	0,00358%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	9.636.141	8,279	79.777.611	109.087.901.658	0,07313%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.040.246	8,279	8.612.197	109.087.901.658	0,00789%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	175.991	8,279	1.457.029	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	16.754.022	0,543	9.097.434	109.087.901.658	0,00834%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	16.754.022	8,279	138.706.548	109.087.901.658	0,12715%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	5.195.905	8,279	43.016.897	109.087.901.658	0,03943%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	9.694.113	0,543	5.263.903	109.087.901.658	0,00483%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	9.694.113	8,279	80.257.562	109.087.901.658	0,07357%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	753.441	8,279	6.237.738	109.087.901.658	0,00572%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	2.632.345	0,543	1.429.363	109.087.901.658	0,00131%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.632.345	8,279	21.793.184	109.087.901.658	0,01998%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	3.225.523	8,279	26.704.105	109.087.901.658	0,02448%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	11.042.972	0,543	5.996.334	109.087.901.658	0,00550%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	11.042.972	8,279	91.424.765	109.087.901.658	0,08381%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	1.360.110	0,543	738.540	109.087.901.658	0,00068%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.360.110	8,279	11.260.351	109.087.901.658	0,01032%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	2.915.189	0,543	1.582.948	109.087.901.658	0,00145%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.915.189	8,279	24.134.850	109.087.901.658	0,02212%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	2.208.569	0,543	1.199.253	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.208.569	8,279	18.284.743	109.087.901.658	0,01676%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	140.317	8,279	1.161.684	109.087.901.658	0,00106%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	16.481.129	8,279	136.447.267	109.087.901.658	0,12508%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	3.218.053	8,279	26.642.261	109.087.901.658	0,02442%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.928.832	8,279	15.968.800	109.087.901.658	0,01464%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	4.306.483	8,279	35.653.373	109.087.901.658	0,03268%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.246.693	8,279	18.600.371	109.087.901.658	0,01705%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.899.329	8,279	15.724.545	109.087.901.658	0,01441%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	598.315	8,279	4.953.450	109.087.901.658	0,00454%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	3.373.361	8,279	27.928.056	109.087.901.658	0,02560%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	3.518.020	8,279	29.125.688	109.087.901.658	0,02670%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	37.363	8,279	309.328	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.054.657	8,279	17.010.505	109.087.901.658	0,01559%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	472.702	8,279	3.913.500	109.087.901.658	0,00359%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	2.357.294	0,543	1.280.011	109.087.901.658	0,00117%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	2.357.294	8,279	19.516.037	109.087.901.658	0,01789%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	809.514	8,279	6.701.966	109.087.901.658	0,00614%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.400.010	8,279	11.590.683	109.087.901.658	0,01063%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.077.672	8,279	8.922.046	109.087.901.658	0,00818%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	972.896	8,279	8.054.606	109.087.901.658	0,00738%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.044.080	8,279	8.643.938	109.087.901.658	0,00792%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	855.456	8,279	7.082.320	109.087.901.658	0,00649%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	14.457	8,279	119.690	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	14.817	8,279	122.670	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	1.085.334	8,279	8.985.480	109.087.901.658	0,00824%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	233.772	8,279	1.935.398	109.087.901.658	0,00177%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FJC	346.347	8,279	2.867.407	109.087.901.658	0,00263%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FLF	346.347	0,543	188.066	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	SAO BRAS DO SUACUI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	24.259	8,279	200.840	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	24.446	0,562	13.739	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	24.446	4,432	108.345	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	1.392.627	0,562	782.656	109.087.901.658	0,00072%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	1.392.627	4,432	6.172.123	109.087.901.658	0,00566%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	621.896	0,562	349.506	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	621.896	4,432	2.756.243	109.087.901.658	0,00253%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	21.380.399	4,432	94.757.928	109.087.901.658	0,08686%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	2.254.606	0,562	1.267.089	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	2.254.606	4,432	9.992.414	109.087.901.658	0,00916%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	175.611	0,562	98.693	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	175.611	4,432	778.308	109.087.901.658	0,00071%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	181.628	0,562	102.075	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	181.628	4,432	804.975	109.087.901.658	0,00074%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	5.767	0,562	3.241	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	SAO GONCALO DO RIO ABAIXO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	5.767	4,432	25.559	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	452.578	28,666	12.973.646	109.087.901.658	0,01189%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	452.578	7,238	3.275.760	109.087.901.658	0,00300%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	452.578	14,864	6.727.119	109.087.901.658	0,00617%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	452.578	6,710	3.036.798	109.087.901.658	0,00278%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	471.355	28,666	13.511.910	109.087.901.658	0,01239%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	471.355	7,238	3.411.667	109.087.901.658	0,00313%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	471.355	14,864	7.006.221	109.087.901.658	0,00642%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	471.355	6,710	3.162.792	109.087.901.658	0,00290%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.636.141	28,666	276.230.582	109.087.901.658	0,25322%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	9.636.141	7,238	69.746.389	109.087.901.658	0,06394%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	9.636.141	14,864	143.231.600	109.087.901.658	0,13130%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	9.636.141	6,710	64.658.506	109.087.901.658	0,05927%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.040.246	28,666	29.819.796	109.087.901.658	0,02734%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.040.246	7,238	7.529.301	109.087.901.658	0,00690%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.040.246	14,864	15.462.217	109.087.901.658	0,01417%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.040.246	6,710	6.980.051	109.087.901.658	0,00640%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	175.991	28,666	5.044.976	109.087.901.658	0,00462%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	175.991	7,238	1.273.823	109.087.901.658	0,00117%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	175.991	14,864	2.615.930	109.087.901.658	0,00240%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	175.991	6,710	1.180.900	109.087.901.658	0,00108%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.754.022	28,666	480.272.470	109.087.901.658	0,44026%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	16.754.022	7,238	121.265.611	109.087.901.658	0,11116%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	16.754.022	14,864	249.031.783	109.087.901.658	0,22829%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	16.754.022	6,710	112.419.488	109.087.901.658	0,10305%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	5.195.905	28,666	148.946.332	109.087.901.658	0,13654%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	5.195.905	7,238	37.607.960	109.087.901.658	0,03447%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	5.195.905	14,864	77.231.932	109.087.901.658	0,07080%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	5.195.905	6,710	34.864.523	109.087.901.658	0,03196%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	9.694.113	28,666	277.892.413	109.087.901.658	0,25474%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	9.694.113	7,238	70.165.990	109.087.901.658	0,06432%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	9.694.113	14,864	144.093.296	109.087.901.658	0,13209%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	9.694.113	6,710	65.047.498	109.087.901.658	0,05963%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	753.441	28,666	21.598.215	109.087.901.658	0,01980%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	753.441	7,238	5.453.406	109.087.901.658	0,00500%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	753.441	14,864	11.199.147	109.087.901.658	0,01027%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	753.441	6,710	5.055.589	109.087.901.658	0,00463%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.632.345	28,666	75.459.065	109.087.901.658	0,06917%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.632.345	7,238	19.052.913	109.087.901.658	0,01747%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.632.345	14,864	39.127.176	109.087.901.658	0,03587%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.632.345	6,710	17.663.035	109.087.901.658	0,01619%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.225.523	28,666	92.463.165	109.087.901.658	0,08476%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.225.523	7,238	23.346.335	109.087.901.658	0,02140%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	3.225.523	14,864	47.944.174	109.087.901.658	0,04395%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	3.225.523	6,710	21.643.259	109.087.901.658	0,01984%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	11.042.972	28,666	316.558.940	109.087.901.658	0,29019%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	11.042.972	7,238	79.929.031	109.087.901.658	0,07327%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	11.042.972	14,864	164.142.736	109.087.901.658	0,15047%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	11.042.972	6,710	74.098.342	109.087.901.658	0,06793%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.360.110	28,666	38.989.049	109.087.901.658	0,03574%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.360.110	7,238	9.844.476	109.087.901.658	0,00902%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.360.110	14,864	20.216.675	109.087.901.658	0,01853%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.360.110	6,710	9.126.338	109.087.901.658	0,00837%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.915.189	28,666	83.567.099	109.087.901.658	0,07661%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.915.189	7,238	21.100.138	109.087.901.658	0,01934%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.915.189	14,864	43.331.369	109.087.901.658	0,03972%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.915.189	6,710	19.560.918	109.087.901.658	0,01793%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.208.569	28,666	63.311.060	109.087.901.658	0,05804%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.208.569	7,238	15.985.622	109.087.901.658	0,01465%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.208.569	14,864	32.828.170	109.087.901.658	0,03009%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.208.569	6,710	14.819.498	109.087.901.658	0,01358%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	140.317	28,666	4.022.341	109.087.901.658	0,00369%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	140.317	7,238	1.015.614	109.087.901.658	0,00093%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	140.317	14,864	2.085.672	109.087.901.658	0,00191%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	140.317	6,710	941.527	109.087.901.658	0,00086%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	16.481.129	28,666	472.449.692	109.087.901.658	0,43309%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	16.481.129	7,238	119.290.412	109.087.901.658	0,10935%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	16.481.129	14,864	244.975.501	109.087.901.658	0,22457%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	16.481.129	6,710	110.588.376	109.087.901.658	0,10138%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.218.053	28,666	92.249.029	109.087.901.658	0,08456%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.218.053	7,238	23.292.268	109.087.901.658	0,02135%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	3.218.053	14,864	47.833.140	109.087.901.658	0,04385%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	3.218.053	6,710	21.593.136	109.087.901.658	0,01979%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.928.832	28,666	55.292.091	109.087.901.658	0,05069%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.928.832	7,238	13.960.886	109.087.901.658	0,01280%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.928.832	14,864	28.670.159	109.087.901.658	0,02628%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.928.832	6,710	12.942.463	109.087.901.658	0,01186%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	4.306.483	28,666	123.450.072	109.087.901.658	0,11317%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	4.306.483	7,238	31.170.324	109.087.901.658	0,02857%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	4.306.483	14,864	64.011.563	109.087.901.658	0,05868%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	4.306.483	6,710	28.896.501	109.087.901.658	0,02649%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.246.693	28,666	64.403.926	109.087.901.658	0,05904%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.246.693	7,238	16.261.564	109.087.901.658	0,01491%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.246.693	14,864	33.394.845	109.087.901.658	0,03061%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.246.693	6,710	15.075.310	109.087.901.658	0,01382%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.899.329	28,666	54.446.355	109.087.901.658	0,04991%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.899.329	7,238	13.747.343	109.087.901.658	0,01260%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.899.329	14,864	28.231.626	109.087.901.658	0,02588%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.899.329	6,710	12.744.498	109.087.901.658	0,01168%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	598.315	28,666	17.151.358	109.087.901.658	0,01572%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	598.315	7,238	4.330.604	109.087.901.658	0,00397%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	598.315	14,864	8.893.354	109.087.901.658	0,00815%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	598.315	6,710	4.014.694	109.087.901.658	0,00368%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.373.361	28,666	96.701.104	109.087.901.658	0,08865%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.373.361	7,238	24.416.387	109.087.901.658	0,02238%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	3.373.361	14,864	50.141.638	109.087.901.658	0,04596%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	3.373.361	6,710	22.635.252	109.087.901.658	0,02075%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	3.518.020	28,666	100.847.913	109.087.901.658	0,09245%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	3.518.020	7,238	25.463.429	109.087.901.658	0,02334%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	3.518.020	14,864	52.291.849	109.087.901.658	0,04794%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	3.518.020	6,710	23.605.914	109.087.901.658	0,02164%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	37.363	28,666	1.071.051	109.087.901.658	0,00098%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	37.363	7,238	270.433	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	37.363	14,864	555.364	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	37.363	6,710	250.706	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.054.657	28,666	58.899.003	109.087.901.658	0,05399%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.054.657	7,238	14.871.607	109.087.901.658	0,01363%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.054.657	14,864	30.540.422	109.087.901.658	0,02800%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.054.657	6,710	13.786.748	109.087.901.658	0,01264%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	472.702	28,666	13.550.523	109.087.901.658	0,01242%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	472.702	7,238	3.421.417	109.087.901.658	0,00314%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	472.702	14,864	7.026.243	109.087.901.658	0,00644%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	472.702	6,710	3.171.830	109.087.901.658	0,00291%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	2.357.294	28,666	67.574.426	109.087.901.658	0,06194%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	2.357.294	7,238	17.062.094	109.087.901.658	0,01564%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	2.357.294	14,864	35.038.818	109.087.901.658	0,03212%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	2.357.294	6,710	15.817.443	109.087.901.658	0,01450%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	809.514	28,666	23.205.609	109.087.901.658	0,02127%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	809.514	7,238	5.859.262	109.087.901.658	0,00537%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	809.514	14,864	12.032.616	109.087.901.658	0,01103%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	809.514	6,710	5.431.839	109.087.901.658	0,00498%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.400.010	28,666	40.132.827	109.087.901.658	0,03679%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.400.010	7,238	10.133.272	109.087.901.658	0,00929%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.400.010	14,864	20.809.749	109.087.901.658	0,01908%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.400.010	6,710	9.394.067	109.087.901.658	0,00861%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.077.672	28,666	30.892.653	109.087.901.658	0,02832%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.077.672	7,238	7.800.190	109.087.901.658	0,00715%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.077.672	14,864	16.018.517	109.087.901.658	0,01468%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.077.672	6,710	7.231.179	109.087.901.658	0,00663%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	972.896	28,666	27.889.134	109.087.901.658	0,02557%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	972.896	7,238	7.041.821	109.087.901.658	0,00646%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	972.896	14,864	14.461.126	109.087.901.658	0,01326%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	972.896	6,710	6.528.132	109.087.901.658	0,00598%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.044.080	28,666	29.929.702	109.087.901.658	0,02744%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.044.080	7,238	7.557.051	109.087.901.658	0,00693%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.044.080	14,864	15.519.205	109.087.901.658	0,01423%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.044.080	6,710	7.005.777	109.087.901.658	0,00642%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	855.456	28,666	24.522.587	109.087.901.658	0,02248%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	855.456	7,238	6.191.791	109.087.901.658	0,00568%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	855.456	14,864	12.715.498	109.087.901.658	0,01166%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	855.456	6,710	5.740.110	109.087.901.658	0,00526%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.457	28,666	414.426	109.087.901.658	0,00038%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	14.457	7,238	104.640	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	14.457	14,864	214.889	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	14.457	6,710	97.006	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	190.241	14,864	2.827.742	109.087.901.658	0,00259%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	190.241	6,710	1.276.517	109.087.901.658	0,00117%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	14.817	28,666	424.746	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	14.817	7,238	107.245	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	14.817	14,864	220.240	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	14.817	6,710	99.422	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	1.085.334	28,666	31.112.293	109.087.901.658	0,02852%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	1.085.334	7,238	7.855.647	109.087.901.658	0,00720%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	1.085.334	14,864	16.132.405	109.087.901.658	0,01479%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	1.085.334	6,710	7.282.591	109.087.901.658	0,00668%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	233.772	28,666	6.701.332	109.087.901.658	0,00614%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	233.772	7,238	1.692.042	109.087.901.658	0,00155%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	233.772	14,864	3.474.787	109.087.901.658	0,00319%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	233.772	6,710	1.568.610	109.087.901.658	0,00144%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	269.202	14,864	4.001.419	109.087.901.658	0,00367%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	269.202	6,710	1.806.345	109.087.901.658	0,00166%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FRN	346.347	6,710	2.323.988	109.087.901.658	0,00213%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FGT	346.347	14,864	5.148.102	109.087.901.658	0,00472%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FDE	346.347	7,238	2.506.860	109.087.901.658	0,00230%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FBU	346.347	13,897	4.813.184	109.087.901.658	0,00441%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBU-FXA	346.347	8,151	2.823.074	109.087.901.658	0,00259%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	174.123	14,864	2.588.164	109.087.901.658	0,00237%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	174.123	6,710	1.168.365	109.087.901.658	0,00107%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FDE	24.259	28,666	695.411	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	24.259	7,238	175.587	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	24.259	14,864	360.586	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAO DEL REI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	24.259	6,710	162.778	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	471.355	2,118	998.330	109.087.901.658	0,00092%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	9.636.141	2,118	20.409.347	109.087.901.658	0,01871%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	5.195.905	2,118	11.004.927	109.087.901.658	0,01009%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	753.441	2,118	1.595.788	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	1.928.832	2,118	4.085.266	109.087.901.658	0,00374%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	4.306.483	2,118	9.121.131	109.087.901.658	0,00836%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	1.899.329	2,118	4.022.779	109.087.901.658	0,00369%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	598.315	2,118	1.267.231	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	1.044.080	2,118	2.211.361	109.087.901.658	0,00203%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	855.456	2,118	1.811.856	109.087.901.658	0,00166%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOAQUIM DE BICAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	14.817	2,118	31.382	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SAO SEBASTIAO DO OESTE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EWD-EDV	24.446	1,484	36.278	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	452.578	1,146	518.654	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	452.578	2,829	1.280.343	109.087.901.658	0,00117%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	471.355	1,146	540.173	109.087.901.658	0,00050%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	471.355	2,829	1.333.463	109.087.901.658	0,00122%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	9.636.141	1,146	11.043.018	109.087.901.658	0,01012%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	9.636.141	2,829	27.260.643	109.087.901.658	0,02499%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.040.246	1,146	1.192.122	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.040.246	2,829	2.942.856	109.087.901.658	0,00270%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	175.991	1,146	201.686	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	175.991	2,829	497.879	109.087.901.658	0,00046%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	16.754.022	1,146	19.200.109	109.087.901.658	0,01760%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	16.754.022	2,829	47.397.128	109.087.901.658	0,04345%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	5.195.905	1,146	5.954.507	109.087.901.658	0,00546%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	5.195.905	2,829	14.699.215	109.087.901.658	0,01347%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	9.694.113	1,146	11.109.453	109.087.901.658	0,01018%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	9.694.113	2,829	27.424.646	109.087.901.658	0,02514%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	753.441	1,146	863.443	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	753.441	2,829	2.131.485	109.087.901.658	0,00195%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.632.345	1,146	3.016.667	109.087.901.658	0,00277%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.632.345	2,829	7.446.904	109.087.901.658	0,00683%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.225.523	1,146	3.696.449	109.087.901.658	0,00339%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	3.225.523	2,829	9.125.005	109.087.901.658	0,00836%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	11.042.972	1,146	12.655.246	109.087.901.658	0,01160%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	11.042.972	2,829	31.240.568	109.087.901.658	0,02864%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.360.110	1,146	1.558.686	109.087.901.658	0,00143%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.360.110	2,829	3.847.751	109.087.901.658	0,00353%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.915.189	1,146	3.340.807	109.087.901.658	0,00306%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.915.189	2,829	8.247.070	109.087.901.658	0,00756%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.208.569	1,146	2.531.020	109.087.901.658	0,00232%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.208.569	2,829	6.248.042	109.087.901.658	0,00573%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	140.317	1,146	160.803	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	140.317	2,829	396.957	109.087.901.658	0,00036%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	16.481.129	1,146	18.887.374	109.087.901.658	0,01731%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	16.481.129	2,829	46.625.114	109.087.901.658	0,04274%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.218.053	1,146	3.687.889	109.087.901.658	0,00338%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	3.218.053	2,829	9.103.872	109.087.901.658	0,00835%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.928.832	1,146	2.210.441	109.087.901.658	0,00203%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.928.832	2,829	5.456.666	109.087.901.658	0,00500%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	4.306.483	1,146	4.935.230	109.087.901.658	0,00452%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	4.306.483	2,829	12.183.040	109.087.901.658	0,01117%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.246.693	1,146	2.574.710	109.087.901.658	0,00236%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.246.693	2,829	6.355.894	109.087.901.658	0,00583%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.899.329	1,146	2.176.631	109.087.901.658	0,00200%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.899.329	2,829	5.373.202	109.087.901.658	0,00493%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	598.315	1,146	685.669	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	598.315	2,829	1.692.633	109.087.901.658	0,00155%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.373.361	1,146	3.865.872	109.087.901.658	0,00354%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	3.373.361	2,829	9.543.238	109.087.901.658	0,00875%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	3.518.020	1,146	4.031.651	109.087.901.658	0,00370%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	3.518.020	2,829	9.952.479	109.087.901.658	0,00912%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	37.363	1,146	42.818	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	37.363	2,829	105.700	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.054.657	1,146	2.354.637	109.087.901.658	0,00216%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.054.657	2,829	5.812.625	109.087.901.658	0,00533%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	472.702	1,146	541.716	109.087.901.658	0,00050%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	472.702	2,829	1.337.274	109.087.901.658	0,00123%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	2.357.294	1,146	2.701.459	109.087.901.658	0,00248%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	2.357.294	2,829	6.668.785	109.087.901.658	0,00611%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	809.514	1,146	927.703	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	809.514	2,829	2.290.115	109.087.901.658	0,00210%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.400.010	1,146	1.604.411	109.087.901.658	0,00147%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.400.010	2,829	3.960.628	109.087.901.658	0,00363%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.077.672	1,146	1.235.012	109.087.901.658	0,00113%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.077.672	2,829	3.048.734	109.087.901.658	0,00279%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	972.896	1,146	1.114.939	109.087.901.658	0,00102%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	972.896	2,829	2.752.323	109.087.901.658	0,00252%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.044.080	1,146	1.196.516	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.044.080	2,829	2.953.702	109.087.901.658	0,00271%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	855.456	1,146	980.353	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	855.456	2,829	2.420.085	109.087.901.658	0,00222%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	14.457	1,146	16.568	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	14.457	2,829	40.899	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	190.241	1,146	218.016	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	190.241	2,829	538.192	109.087.901.658	0,00049%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	14.817	1,146	16.980	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	14.817	2,829	41.917	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	1.085.334	1,146	1.243.793	109.087.901.658	0,00114%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	1.085.334	2,829	3.070.410	109.087.901.658	0,00281%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	233.772	1,146	267.903	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	233.772	2,829	661.341	109.087.901.658	0,00061%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	269.202	1,146	308.505	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	269.202	2,829	761.572	109.087.901.658	0,00070%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FAU	346.347	2,829	979.816	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FGO	346.347	1,146	396.914	109.087.901.658	0,00036%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	174.123	1,146	199.545	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	174.123	2,829	492.594	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	24.259	1,146	27.801	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SAO VICENTE DE MINAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	24.259	2,829	68.629	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSO-FZN	471.355	3,779	1.781.251	109.087.901.658	0,00163%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	471.355	1,867	880.020	109.087.901.658	0,00081%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	9.636.141	1,867	17.990.675	109.087.901.658	0,01649%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIE-FPO	5.195.905	1,008	5.237.472	109.087.901.658	0,00480%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPO-FSO	5.195.905	5,602	29.107.460	109.087.901.658	0,02668%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSO-FZN	5.195.905	3,779	19.635.325	109.087.901.658	0,01800%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	5.195.905	1,867	9.700.755	109.087.901.658	0,00889%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIE-FPO	753.441	1,008	759.469	109.087.901.658	0,00070%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPO-FSO	753.441	5,602	4.220.776	109.087.901.658	0,00387%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSO-FZN	753.441	3,779	2.847.254	109.087.901.658	0,00261%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	753.441	1,867	1.406.674	109.087.901.658	0,00129%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSO-FZN	1.928.832	3,779	7.289.056	109.087.901.658	0,00668%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	1.928.832	1,867	3.601.129	109.087.901.658	0,00330%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	4.306.483	1,867	8.040.204	109.087.901.658	0,00737%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSO-FZN	1.899.329	3,779	7.177.564	109.087.901.658	0,00658%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	1.899.329	1,867	3.546.047	109.087.901.658	0,00325%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	598.315	1,867	1.117.054	109.087.901.658	0,00102%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSO-FZN	1.044.080	3,779	3.945.578	109.087.901.658	0,00362%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	1.044.080	1,867	1.949.297	109.087.901.658	0,00179%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	855.456	1,867	1.597.136	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	14.817	1,867	27.663	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIE-FPO	50.456	1,008	50.860	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	SARZEDO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPO-FSO	50.456	5,602	282.655	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	SENHORA DOS REMEDIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEV-FET	28.449	3,595	102.274	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	SENHORA DOS REMEDIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FCN	28.449	1,028	29.246	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SENHORA DOS REMEDIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCN-FCM	28.449	1,510	42.958	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SENHORA DOS REMEDIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FCN	231.735	1,510	349.920	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	SENHORA DOS REMEDIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCN-FET	231.735	1,028	238.224	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	SENHORA DOS REMEDIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FEV	231.735	3,595	833.087	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	SENHORA DOS REMEDIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FCN	6.249	1,510	9.436	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SENHORA DOS REMEDIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCN-FET	6.249	1,028	6.424	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SENHORA DOS REMEDIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FEV	6.249	3,595	22.465	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SERRA DO SALITRE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ELI-EDZ	5.067.826	5,460	27.670.330	109.087.901.658	0,02537%
MINÉRIO DE FERRO	BA, ES, MG	SERRA DO SALITRE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EDZ-ECT	5.067.826	14,836	75.186.267	109.087.901.658	0,06892%
MINÉRIO DE FERRO	BA, ES, MG	SERRA DO SALITRE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECT-EJR	5.067.826	15,016	76.098.475	109.087.901.658	0,06976%
MINÉRIO DE FERRO	BA, ES, MG	SERRA DO SALITRE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJR-EGB	5.067.826	8,428	42.711.638	109.087.901.658	0,03915%
MINÉRIO DE FERRO	BA, ES, MG	SERRA DO SALITRE	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGB-EOM	5.067.826	2,980	15.102.121	109.087.901.658	0,01384%
MINÉRIO DE FERRO	BA, ES, MG	SETE LAGOAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAI-ESX	20.854	5,674	118.326	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	SETE LAGOAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESX-ESL	20.854	17,194	358.564	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	SETE LAGOAS	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESL-EPM	20.854	7,453	155.425	109.087.901.658	0,00014%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSR-FSA	28.449	2,588	73.626	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSA-FPN	28.449	7,632	217.123	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPN-FUN	28.449	1,098	31.237	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FUN-FAA	28.449	0,709	20.170	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDD-FSI	28.449	0,296	8.421	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSI-FOT	28.449	5,569	158.432	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOT-FDC	28.449	0,539	15.334	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSR-FSA	22.579	2,588	58.434	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSA-FPN	22.579	7,632	172.323	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPN-FUN	22.579	1,098	24.792	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FUN-FAA	22.579	0,709	16.009	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDD-FSI	22.579	0,296	6.683	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSI-FOT	22.579	5,569	125.742	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	SIMAO PEREIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOT-FDC	22.579	0,539	12.170	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	24.446	1,060	25.913	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	24.446	5,017	122.646	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	1.392.627	1,060	1.476.185	109.087.901.658	0,00135%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	FCA	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	1.392.627	5,017	6.986.810	109.087.901.658	0,00640%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	621.896	1,060	659.210	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	621.896	5,017	3.120.052	109.087.901.658	0,00286%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	1.702.127	5,017	8.539.571	109.087.901.658	0,00783%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	18.062.495	1,060	19.146.245	109.087.901.658	0,01755%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	18.062.495	5,017	90.619.537	109.087.901.658	0,08307%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	53.135	5,017	266.578	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	21.380.399	1,060	22.663.223	109.087.901.658	0,02078%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	21.380.399	5,017	107.265.462	109.087.901.658	0,09833%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	10.601.866	1,060	11.237.978	109.087.901.658	0,01030%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	10.601.866	5,017	53.189.562	109.087.901.658	0,04876%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	7.831.444	1,060	8.301.331	109.087.901.658	0,00761%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	7.831.444	5,017	39.290.355	109.087.901.658	0,03602%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	4.554.324	1,060	4.827.583	109.087.901.658	0,00443%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	4.554.324	5,017	22.849.044	109.087.901.658	0,02095%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	22.613	1,060	23.970	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	22.613	5,017	113.449	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	12.308.312	1,060	13.046.811	109.087.901.658	0,01196%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	12.308.312	5,017	61.750.801	109.087.901.658	0,05661%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	277.740	1,060	294.404	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	277.740	5,017	1.393.422	109.087.901.658	0,00128%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	2.254.606	1,060	2.389.882	109.087.901.658	0,00219%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	2.254.606	5,017	11.311.358	109.087.901.658	0,01037%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	175.611	1,060	186.148	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	175.611	5,017	881.040	109.087.901.658	0,00081%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	181.628	1,060	192.526	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	5.767	1,060	6.113	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	TIMOTEO	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	5.767	5,017	28.933	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VST	9.877	6,710	66.275	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VTR	9.877	12,451	122.979	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VGV	9.877	12,451	122.979	109.087.901.658	0,00011%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	1.702.127	12,451	21.193.183	109.087.901.658	0,01943%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	1.702.127	12,451	21.193.183	109.087.901.658	0,01943%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	1.702.127	6,710	11.421.272	109.087.901.658	0,01047%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	18.062.495	12,451	224.896.125	109.087.901.658	0,20616%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	18.062.495	12,451	224.896.125	109.087.901.658	0,20616%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	18.062.495	6,710	121.199.341	109.087.901.658	0,11110%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	21.380.399	12,451	266.207.348	109.087.901.658	0,24403%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	21.380.399	12,451	266.207.348	109.087.901.658	0,24403%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	21.380.399	6,710	143.462.477	109.087.901.658	0,13151%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	10.601.866	12,451	132.003.834	109.087.901.658	0,12101%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	10.601.866	12,451	132.003.834	109.087.901.658	0,12101%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	10.601.866	6,710	71.138.521	109.087.901.658	0,06521%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	7.831.444	12,451	97.509.309	109.087.901.658	0,08939%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	7.831.444	12,451	97.509.309	109.087.901.658	0,08939%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	7.831.444	6,710	52.548.989	109.087.901.658	0,04817%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	4.554.324	12,451	56.705.888	109.087.901.658	0,05198%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	4.554.324	12,451	56.705.888	109.087.901.658	0,05198%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	4.554.324	6,710	30.559.514	109.087.901.658	0,02801%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	22.613	12,451	281.554	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	22.613	12,451	281.554	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	22.613	6,710	151.733	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	12.308.312	12,451	153.250.793	109.087.901.658	0,14048%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	12.308.312	12,451	153.250.793	109.087.901.658	0,14048%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	12.308.312	6,710	82.588.774	109.087.901.658	0,07571%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	277.740	12,451	3.458.141	109.087.901.658	0,00317%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	277.740	12,451	3.458.141	109.087.901.658	0,00317%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	277.740	6,710	1.863.635	109.087.901.658	0,00171%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VST	314.966	6,710	2.113.422	109.087.901.658	0,00194%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VTR	314.966	12,451	3.921.642	109.087.901.658	0,00359%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VGV	314.966	12,451	3.921.642	109.087.901.658	0,00359%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	2.254.606	12,451	28.072.099	109.087.901.658	0,02573%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	2.254.606	12,451	28.072.099	109.087.901.658	0,02573%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	2.254.606	6,710	15.128.406	109.087.901.658	0,01387%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	175.611	12,451	2.186.533	109.087.901.658	0,00200%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	175.611	12,451	2.186.533	109.087.901.658	0,00200%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	175.611	6,710	1.178.350	109.087.901.658	0,00108%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	5.767	12,451	71.805	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	5.767	12,451	71.805	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	TUMIRITINGA	EFVM	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	5.767	6,710	38.697	109.087.901.658	0,00004%
MINÉRIO DE FERRO	MS	CORUMBA	RMO	14	MS	RMO	JAM-JAB	2.671.191	18,479	49.360.938	141.070.939	34,99015%
MINÉRIO DE FERRO	MS	CORUMBA	RMO	14	MS	RMO	JAB-JKE	2.671.191	29,987	80.101.005	141.070.939	56,78066%
MINÉRIO DE FERRO	MS	CORUMBA	RMO	14	MS	RMO	JKE-JPC	2.671.191	4,346	11.608.996	141.070.939	8,22919%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DO TO	EFC	12	MA, PA	EFC	QMA-QAL	543.513	42,939	23.337.905	157.207.576.503	0,01485%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DO TO	EFC	12	MA, PA	EFC	QMA-QAL	74.006.486	42,939	3.177.764.502	157.207.576.503	2,02138%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DO TO	EFC	12	MA, PA	EFC	QMA-QAL	90.289.295	42,939	3.876.932.038	157.207.576.503	2,46612%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DO TO	EFC	12	MA, PA	EFC	QMA-QAL	4.738.635	42,939	203.472.248	157.207.576.503	0,12943%
MINÉRIO DE FERRO	MA, PA	BOM JESUS DO TO	EFC	12	MA, PA	EFC	QMA-QAL	1.588.131	42,939	68.192.757	157.207.576.503	0,04338%
MINÉRIO DE FERRO	MA, PA	CANAL DOS CARAJAS	EFC	12	MA, PA	EFC	QSS-QRS	74.006.486	56,648	4.192.319.419	157.207.576.503	2,66674%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MA, PA	CURIONOPOLIS	EFC	12	MA, PA	EFC	QRS-QSL	74.006.486	5,346	395.638.674	157.207.576.503	0,25167%
MINÉRIO DE FERRO	MA, PA	CURIONOPOLIS	EFC	12	MA, PA	EFC	QRS-QSL	90.289.295	5,346	482.686.571	157.207.576.503	0,30704%
MINÉRIO DE FERRO	MA, PA	CURIONOPOLIS	EFC	12	MA, PA	EFC	QRS-QSL	1.588.131	5,346	8.490.148	157.207.576.503	0,00540%
MINÉRIO DE FERRO	MA, PA	CURIONOPOLIS	EFC	12	MA, PA	EFC	QRS-QSL	254.083	5,346	1.358.328	157.207.576.503	0,00086%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QMA-QAL	543.513	22,128	12.026.856	157.207.576.503	0,00765%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QRS-QSL	74.006.486	1,395	103.239.048	157.207.576.503	0,06567%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QSL-QMA	74.006.486	99,202	7.341.591.424	157.207.576.503	4,67000%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QMA-QAL	74.006.486	22,128	1.637.615.522	157.207.576.503	1,04169%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QRS-QSL	90.289.295	1,395	125.953.567	157.207.576.503	0,08012%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QSL-QMA	90.289.295	99,202	8.956.878.643	157.207.576.503	5,69749%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QMA-QAL	90.289.295	22,128	1.997.921.520	157.207.576.503	1,27088%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QSL-QMA	4.738.635	99,202	470.082.069	157.207.576.503	0,29902%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QMA-QAL	4.738.635	22,128	104.856.515	157.207.576.503	0,06670%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QRS-QSL	1.588.131	1,395	2.215.443	157.207.576.503	0,00141%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QSL-QMA	1.588.131	99,202	157.545.771	157.207.576.503	0,10022%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QMA-QAL	1.588.131	22,128	35.142.163	157.207.576.503	0,02235%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QRS-QSL	254.083	1,395	354.446	157.207.576.503	0,00023%
MINÉRIO DE FERRO	MA, PA	MARABA	EFC	12	MA, PA	EFC	QSL-QMA	254.083	99,202	25.205.542	157.207.576.503	0,01603%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QSS-QRS	74.006.486	43,530	3.221.502.336	157.207.576.503	2,04920%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QRS-QSL	74.006.486	15,932	1.179.071.335	157.207.576.503	0,75001%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QCA-QPA	90.289.295	37,390	3.375.916.740	157.207.576.503	2,14743%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QPA-QRS	90.289.295	0,422	38.102.082	157.207.576.503	0,02424%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QRS-QSL	90.289.295	15,932	1.438.489.048	157.207.576.503	0,91503%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QCA-QPA	1.588.131	37,390	59.380.218	157.207.576.503	0,03777%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QPA-QRS	1.588.131	0,422	670.191	157.207.576.503	0,00043%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QRS-QSL	1.588.131	15,932	25.302.103	157.207.576.503	0,01609%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QCA-QPA	254.083	37,390	9.500.163	157.207.576.503	0,00604%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QPA-QRS	254.083	0,422	107.223	157.207.576.503	0,00007%
MINÉRIO DE FERRO	MA, PA	PARAUPEBAS	EFC	12	MA, PA	EFC	QRS-QSL	254.083	15,932	4.048.050	157.207.576.503	0,00257%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FSB	28.449	5,005	142.387	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FBP	28.449	4,296	122.217	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FDQ	28.449	2,767	78.718	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDQ-FAT	28.449	3,240	92.175	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	452.578	1,533	693.802	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	452.578	5,583	2.526.743	109.087.901.658	0,00232%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	452.578	5,522	2.499.136	109.087.901.658	0,00229%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	452.578	2,517	1.139.139	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	452.578	4,296	1.944.275	109.087.901.658	0,00178%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	452.578	5,005	2.265.153	109.087.901.658	0,00208%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	471.355	1,533	722.587	109.087.901.658	0,00066%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	471.355	5,583	2.631.575	109.087.901.658	0,00241%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	471.355	5,522	2.602.822	109.087.901.658	0,00239%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	471.355	2,517	1.186.401	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	471.355	4,296	2.024.941	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	471.355	5,005	2.359.132	109.087.901.658	0,00216%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	9.636.141	1,533	14.772.204	109.087.901.658	0,01354%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	9.636.141	5,583	53.798.575	109.087.901.658	0,04932%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	9.636.141	5,522	53.210.771	109.087.901.658	0,04878%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	9.636.141	2,517	24.254.167	109.087.901.658	0,02223%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	9.636.141	4,296	41.396.862	109.087.901.658	0,03795%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	9.636.141	5,005	48.228.886	109.087.901.658	0,04421%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.040.246	1,533	1.594.697	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	1.040.246	5,583	5.807.693	109.087.901.658	0,00532%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	1.040.246	5,522	5.744.238	109.087.901.658	0,00527%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	1.040.246	2,517	2.618.299	109.087.901.658	0,00240%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	1.040.246	4,296	4.468.897	109.087.901.658	0,00410%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.040.246	5,005	5.206.431	109.087.901.658	0,00477%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	175.991	1,533	269.794	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	175.991	5,583	982.558	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	175.991	5,522	971.822	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	175.991	2,517	442.969	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	175.991	4,296	756.057	109.087.901.658	0,00069%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	175.991	5,005	880.835	109.087.901.658	0,00081%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	16.754.022	1,533	25.683.916	109.087.901.658	0,02354%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	16.754.022	5,583	93.537.705	109.087.901.658	0,08575%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	16.754.022	5,522	92.515.709	109.087.901.658	0,08481%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	16.754.022	2,517	42.169.873	109.087.901.658	0,03866%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	16.754.022	4,296	71.975.279	109.087.901.658	0,06598%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	16.754.022	5,005	83.853.880	109.087.901.658	0,07687%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	5.195.905	1,533	7.965.322	109.087.901.658	0,00730%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	5.195.905	5,583	29.008.738	109.087.901.658	0,02659%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	5.195.905	5,522	28.691.787	109.087.901.658	0,02630%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	5.195.905	2,517	13.078.093	109.087.901.658	0,01199%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	5.195.905	4,296	22.321.608	109.087.901.658	0,02046%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	5.195.905	5,005	26.005.505	109.087.901.658	0,02384%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	9.694.113	1,533	14.861.075	109.087.901.658	0,01362%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	9.694.113	5,583	54.122.233	109.087.901.658	0,04961%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	9.694.113	5,522	53.530.892	109.087.901.658	0,04907%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	9.694.113	2,517	24.400.082	109.087.901.658	0,02237%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	9.694.113	4,296	41.645.909	109.087.901.658	0,03818%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	9.694.113	5,005	48.519.036	109.087.901.658	0,04448%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	753.441	1,533	1.155.025	109.087.901.658	0,00106%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	753.441	5,583	4.206.461	109.087.901.658	0,00386%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	753.441	5,522	4.160.501	109.087.901.658	0,00381%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	753.441	2,517	1.896.411	109.087.901.658	0,00174%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	753.441	4,296	3.236.783	109.087.901.658	0,00297%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	753.441	5,005	3.770.972	109.087.901.658	0,00346%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.632.345	1,533	4.035.385	109.087.901.658	0,00370%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	2.632.345	5,583	14.696.382	109.087.901.658	0,01347%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	2.632.345	5,522	14.535.809	109.087.901.658	0,01332%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	2.632.345	2,517	6.625.612	109.087.901.658	0,00607%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	2.632.345	4,296	11.308.554	109.087.901.658	0,01037%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.632.345	5,005	13.174.887	109.087.901.658	0,01208%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	11.042.972	1,533	16.928.876	109.087.901.658	0,01552%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	11.042.972	5,583	61.652.913	109.087.901.658	0,05652%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	11.042.972	5,522	60.979.291	109.087.901.658	0,05590%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	11.042.972	2,517	27.795.161	109.087.901.658	0,02548%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	11.042.972	4,296	47.440.608	109.087.901.658	0,04349%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	11.042.972	5,005	55.270.075	109.087.901.658	0,05067%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.915.189	1,533	4.468.985	109.087.901.658	0,00410%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	2.915.189	5,583	16.275.500	109.087.901.658	0,01492%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	2.915.189	5,522	16.097.674	109.087.901.658	0,01476%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	2.915.189	2,517	7.337.531	109.087.901.658	0,00673%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	2.915.189	4,296	12.523.652	109.087.901.658	0,01148%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.915.189	5,005	14.590.521	109.087.901.658	0,01338%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.208.569	1,533	3.385.736	109.087.901.658	0,00310%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	2.208.569	5,583	12.330.441	109.087.901.658	0,01130%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	2.208.569	5,522	12.195.718	109.087.901.658	0,01118%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	2.208.569	2,517	5.558.968	109.087.901.658	0,00510%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	2.208.569	4,296	9.488.012	109.087.901.658	0,00870%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.208.569	5,005	11.053.888	109.087.901.658	0,01013%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	16.481.129	1,533	25.265.571	109.087.901.658	0,02316%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	16.481.129	5,583	92.014.143	109.087.901.658	0,08435%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	16.481.129	5,522	91.008.794	109.087.901.658	0,08343%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	16.481.129	2,517	41.483.002	109.087.901.658	0,03803%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	16.481.129	4,296	70.802.930	109.087.901.658	0,06490%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	16.481.129	5,005	82.488.051	109.087.901.658	0,07562%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	3.218.053	1,533	4.933.275	109.087.901.658	0,00452%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	3.218.053	5,583	17.966.390	109.087.901.658	0,01647%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	3.218.053	5,522	17.770.089	109.087.901.658	0,01629%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	3.218.053	2,517	8.099.839	109.087.901.658	0,00743%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	3.218.053	4,296	13.824.756	109.087.901.658	0,01267%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	3.218.053	5,005	16.106.355	109.087.901.658	0,01476%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.928.832	1,533	2.956.899	109.087.901.658	0,00271%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	1.928.832	5,583	10.768.669	109.087.901.658	0,00987%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	1.928.832	5,522	10.651.010	109.087.901.658	0,00976%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	1.928.832	2,517	4.854.870	109.087.901.658	0,00445%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	1.928.832	4,296	8.286.262	109.087.901.658	0,00760%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.928.832	5,005	9.653.804	109.087.901.658	0,00885%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	4.306.483	1,533	6.601.838	109.087.901.658	0,00605%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	4.306.483	5,583	24.043.095	109.087.901.658	0,02204%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	4.306.483	5,522	23.780.399	109.087.901.658	0,02180%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	4.306.483	2,517	10.839.418	109.087.901.658	0,00994%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	4.306.483	4,296	18.500.651	109.087.901.658	0,01696%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	4.306.483	5,005	21.553.947	109.087.901.658	0,01976%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.246.693	1,533	3.444.180	109.087.901.658	0,00316%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	2.246.693	5,583	12.543.287	109.087.901.658	0,01150%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	2.246.693	5,522	12.406.239	109.087.901.658	0,01137%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	2.246.693	2,517	5.654.926	109.087.901.658	0,00518%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	2.246.693	4,296	9.651.793	109.087.901.658	0,00885%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.246.693	5,005	11.244.698	109.087.901.658	0,01031%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.899.329	1,533	2.911.671	109.087.901.658	0,00267%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	1.899.329	5,583	10.603.954	109.087.901.658	0,00972%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	1.899.329	5,522	10.488.095	109.087.901.658	0,00961%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	1.899.329	2,517	4.780.611	109.087.901.658	0,00438%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	1.899.329	4,296	8.159.517	109.087.901.658	0,00748%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.899.329	5,005	9.506.142	109.087.901.658	0,00871%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	598.315	1,533	917.217	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	598.315	5,583	3.340.393	109.087.901.658	0,00306%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	598.315	5,522	3.303.895	109.087.901.658	0,00303%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	598.315	2,517	1.505.959	109.087.901.658	0,00138%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	598.315	4,296	2.570.361	109.087.901.658	0,00236%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	598.315	5,005	2.994.567	109.087.901.658	0,00275%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	3.373.361	1,533	5.171.362	109.087.901.658	0,00474%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	3.373.361	5,583	18.833.474	109.087.901.658	0,01726%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	3.373.361	5,522	18.627.699	109.087.901.658	0,01708%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	3.373.361	2,517	8.490.750	109.087.901.658	0,00778%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	3.373.361	4,296	14.491.959	109.087.901.658	0,01328%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	3.373.361	5,005	16.883.672	109.087.901.658	0,01548%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	3.518.020	1,533	5.393.125	109.087.901.658	0,00494%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	3.518.020	5,583	19.641.106	109.087.901.658	0,01800%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	3.518.020	5,522	19.426.506	109.087.901.658	0,01781%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	3.518.020	2,517	8.854.856	109.087.901.658	0,00812%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	3.518.020	4,296	15.113.414	109.087.901.658	0,01385%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	3.518.020	5,005	17.607.690	109.087.901.658	0,01614%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.054.657	1,533	3.149.789	109.087.901.658	0,00289%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	2.054.657	5,583	11.471.150	109.087.901.658	0,01052%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	2.054.657	5,522	11.345.816	109.087.901.658	0,01040%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	2.054.657	2,517	5.171.572	109.087.901.658	0,00474%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	2.054.657	4,296	8.826.806	109.087.901.658	0,00809%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.054.657	5,005	10.283.558	109.087.901.658	0,00943%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	472.702	1,533	724.652	109.087.901.658	0,00066%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	472.702	5,583	2.639.095	109.087.901.658	0,00242%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	472.702	5,522	2.610.260	109.087.901.658	0,00239%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	472.702	2,517	1.189.791	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	472.702	4,296	2.030.728	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	472.702	5,005	2.365.874	109.087.901.658	0,00217%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.357.294	1,533	3.613.732	109.087.901.658	0,00331%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	2.357.294	5,583	13.160.772	109.087.901.658	0,01206%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	2.357.294	5,522	13.016.977	109.087.901.658	0,01193%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	2.357.294	2,517	5.933.309	109.087.901.658	0,00544%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	2.357.294	4,296	10.126.935	109.087.901.658	0,00928%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.357.294	5,005	11.798.256	109.087.901.658	0,01082%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	809.514	1,533	1.240.985	109.087.901.658	0,00114%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	809.514	5,583	4.519.517	109.087.901.658	0,00414%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	809.514	5,522	4.470.136	109.087.901.658	0,00410%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	809.514	2,517	2.037.547	109.087.901.658	0,00187%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	809.514	4,296	3.477.672	109.087.901.658	0,00319%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	809.514	5,005	4.051.618	109.087.901.658	0,00371%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.400.010	1,533	2.146.215	109.087.901.658	0,00197%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	1.400.010	5,583	7.816.256	109.087.901.658	0,00717%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	1.400.010	5,522	7.730.855	109.087.901.658	0,00709%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	1.400.010	2,517	3.523.825	109.087.901.658	0,00323%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	1.400.010	4,296	6.014.443	109.087.901.658	0,00551%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.400.010	5,005	7.007.050	109.087.901.658	0,00642%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FSB	321.691	5,005	1.610.063	109.087.901.658	0,00148%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FBP	321.691	4,296	1.381.985	109.087.901.658	0,00127%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FPU	321.691	2,517	809.696	109.087.901.658	0,00074%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FWB	321.691	5,522	1.776.378	109.087.901.658	0,00163%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FVA	321.691	5,583	1.796.001	109.087.901.658	0,00165%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FPL	321.691	1,533	493.152	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.077.672	1,533	1.652.071	109.087.901.658	0,00151%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	1.077.672	5,583	6.016.643	109.087.901.658	0,00552%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	1.077.672	5,522	5.950.905	109.087.901.658	0,00546%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	1.077.672	2,517	2.712.500	109.087.901.658	0,00249%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	1.077.672	4,296	4.629.679	109.087.901.658	0,00424%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.077.672	5,005	5.393.748	109.087.901.658	0,00494%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	972.896	1,533	1.491.450	109.087.901.658	0,00137%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	972.896	5,583	5.431.678	109.087.901.658	0,00498%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	972.896	5,522	5.372.332	109.087.901.658	0,00492%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	972.896	2,517	2.448.779	109.087.901.658	0,00224%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	972.896	4,296	4.179.561	109.087.901.658	0,00383%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	972.896	5,005	4.869.344	109.087.901.658	0,00446%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.044.080	1,533	1.600.575	109.087.901.658	0,00147%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	1.044.080	5,583	5.829.099	109.087.901.658	0,00534%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	1.044.080	5,522	5.765.410	109.087.901.658	0,00529%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	1.044.080	2,517	2.627.949	109.087.901.658	0,00241%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	1.044.080	4,296	4.485.368	109.087.901.658	0,00411%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.044.080	5,005	5.225.620	109.087.901.658	0,00479%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	855.456	1,533	1.311.414	109.087.901.658	0,00120%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	855.456	5,583	4.776.011	109.087.901.658	0,00438%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	855.456	5,522	4.723.828	109.087.901.658	0,00433%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	855.456	2,517	2.153.183	109.087.901.658	0,00197%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	855.456	4,296	3.675.039	109.087.901.658	0,00337%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	855.456	5,005	4.281.557	109.087.901.658	0,00392%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	14.457	1,533	22.163	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	14.457	5,583	80.713	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	14.457	5,522	79.832	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	14.457	2,517	36.388	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	14.457	4,296	62.107	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	14.457	5,005	72.357	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	190.241	1,533	291.639	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	190.241	5,583	1.062.116	109.087.901.658	0,00097%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	190.241	5,522	1.050.511	109.087.901.658	0,00096%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	190.241	2,517	478.837	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	190.241	4,296	817.275	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	190.241	5,005	952.156	109.087.901.658	0,00087%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	14.817	1,533	22.714	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	14.817	5,583	82.723	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	14.817	5,522	81.819	109.087.901.658	0,00008%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	14.817	2,517	37.294	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	14.817	4,296	63.654	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	14.817	5,005	74.159	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.085.334	1,533	1.663.817	109.087.901.658	0,00153%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	1.085.334	5,583	6.059.420	109.087.901.658	0,00555%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	1.085.334	5,522	5.993.214	109.087.901.658	0,00549%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	1.085.334	2,517	2.731.786	109.087.901.658	0,00250%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	1.085.334	4,296	4.662.595	109.087.901.658	0,00427%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.085.334	5,005	5.432.097	109.087.901.658	0,00498%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	233.772	1,533	358.372	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	233.772	5,583	1.305.149	109.087.901.658	0,00120%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	233.772	5,522	1.290.889	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	233.772	2,517	588.404	109.087.901.658	0,00054%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	233.772	4,296	1.004.285	109.087.901.658	0,00092%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	233.772	5,005	1.170.029	109.087.901.658	0,00107%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	240.592	1,533	368.828	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	240.592	5,583	1.343.225	109.087.901.658	0,00123%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	240.592	5,522	1.328.549	109.087.901.658	0,00122%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	240.592	2,517	605.570	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	240.592	4,296	1.033.583	109.087.901.658	0,00095%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	240.592	5,005	1.204.163	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	269.202	1,533	412.687	109.087.901.658	0,00038%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	269.202	5,583	1.502.955	109.087.901.658	0,00138%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	269.202	5,522	1.486.533	109.087.901.658	0,00136%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	269.202	2,517	677.581	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	269.202	4,296	1.156.492	109.087.901.658	0,00106%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	269.202	5,005	1.347.356	109.087.901.658	0,00124%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FSB	346.347	5,005	1.733.467	109.087.901.658	0,00159%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FBP	346.347	4,296	1.487.907	109.087.901.658	0,00136%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FPU	346.347	2,517	871.755	109.087.901.658	0,00080%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FWB	346.347	5,522	1.912.528	109.087.901.658	0,00175%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FVA	346.347	5,583	1.933.655	109.087.901.658	0,00177%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FPL	346.347	1,533	530.950	109.087.901.658	0,00049%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	22.579	1,533	34.614	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	22.579	5,583	126.059	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	22.579	5,522	124.681	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	22.579	2,517	56.831	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FDQ	22.579	2,767	62.476	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDQ-FAT	22.579	3,240	73.156	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	174.123	1,533	266.931	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	174.123	5,583	972.129	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	174.123	5,522	961.507	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	174.123	2,517	438.268	109.087.901.658	0,00040%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	174.123	4,296	748.032	109.087.901.658	0,00069%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	174.123	5,005	871.486	109.087.901.658	0,00080%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	24.259	1,533	37.189	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	24.259	5,583	135.438	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	24.259	5,522	133.958	109.087.901.658	0,00012%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	24.259	2,517	61.060	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	24.259	4,296	104.217	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	BARRA DO PIRAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	24.259	5,005	121.416	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	452.578	9,252	4.187.252	109.087.901.658	0,00384%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	452.578	4,789	2.167.396	109.087.901.658	0,00199%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	452.578	2,390	1.081.661	109.087.901.658	0,00099%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	452.578	3,927	1.777.274	109.087.901.658	0,00163%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	452.578	0,434	196.419	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	471.355	9,252	4.360.976	109.087.901.658	0,00400%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	471.355	4,789	2.257.319	109.087.901.658	0,00207%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	471.355	2,390	1.126.538	109.087.901.658	0,00103%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	471.355	3,927	1.851.011	109.087.901.658	0,00170%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	471.355	0,434	204.568	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	9.636.141	9,252	89.153.577	109.087.901.658	0,08173%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	9.636.141	4,789	46.147.479	109.087.901.658	0,04230%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	9.636.141	2,390	23.030.377	109.087.901.658	0,02111%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	9.636.141	3,927	37.841.126	109.087.901.658	0,03469%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	9.636.141	0,434	4.182.085	109.087.901.658	0,00383%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.040.246	9,252	9.624.356	109.087.901.658	0,00882%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	1.040.246	4,789	4.981.738	109.087.901.658	0,00457%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	1.040.246	2,390	2.486.188	109.087.901.658	0,00228%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	1.040.246	3,927	4.085.046	109.087.901.658	0,00374%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.040.246	0,434	451.467	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	175.991	9,252	1.628.269	109.087.901.658	0,00149%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	175.991	4,789	842.821	109.087.901.658	0,00077%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	175.991	2,390	420.618	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	175.991	3,927	691.117	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	175.991	0,434	76.380	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	16.754.022	9,252	155.008.212	109.087.901.658	0,14209%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	16.754.022	4,789	80.235.011	109.087.901.658	0,07355%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	16.754.022	2,390	40.042.113	109.087.901.658	0,03671%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	16.754.022	3,927	65.793.044	109.087.901.658	0,06031%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	16.754.022	0,434	7.271.246	109.087.901.658	0,00667%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	5.195.905	9,252	48.072.513	109.087.901.658	0,04407%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	5.195.905	4,789	24.883.189	109.087.901.658	0,02281%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	5.195.905	2,390	12.418.213	109.087.901.658	0,01138%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	5.195.905	3,927	20.404.319	109.087.901.658	0,01870%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	5.195.905	0,434	2.255.023	109.087.901.658	0,00207%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	9.694.113	9,252	89.689.933	109.087.901.658	0,08222%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	9.694.113	4,789	46.425.107	109.087.901.658	0,04256%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	9.694.113	2,390	23.168.930	109.087.901.658	0,02124%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	9.694.113	3,927	38.068.782	109.087.901.658	0,03490%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	9.694.113	0,434	4.207.245	109.087.901.658	0,00386%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	753.441	9,252	6.970.836	109.087.901.658	0,00639%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	753.441	4,789	3.608.229	109.087.901.658	0,00331%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	753.441	2,390	1.800.724	109.087.901.658	0,00165%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	753.441	3,927	2.958.763	109.087.901.658	0,00271%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSÁ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	753.441	0,434	326.993	109.087.901.658	0,00030%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.632.345	9,252	24.354.456	109.087.901.658	0,02233%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	2.632.345	4,789	12.606.300	109.087.901.658	0,01156%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	2.632.345	2,390	6.291.305	109.087.901.658	0,00577%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	2.632.345	3,927	10.337.219	109.087.901.658	0,00948%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.632.345	0,434	1.142.438	109.087.901.658	0,00105%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	3.225.523	9,252	29.842.539	109.087.901.658	0,02736%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	3.225.523	4,789	15.447.030	109.087.901.658	0,01416%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	3.225.523	2,390	7.709.000	109.087.901.658	0,00707%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	3.225.523	3,927	12.666.629	109.087.901.658	0,01161%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	3.225.523	0,434	1.399.877	109.087.901.658	0,00128%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	11.042.972	9,252	102.169.577	109.087.901.658	0,09366%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	11.042.972	4,789	52.884.793	109.087.901.658	0,04848%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	11.042.972	2,390	26.392.703	109.087.901.658	0,02419%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	11.042.972	3,927	43.365.751	109.087.901.658	0,03975%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	11.042.972	0,434	4.792.650	109.087.901.658	0,00439%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.360.110	9,252	12.583.738	109.087.901.658	0,01154%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	1.360.110	4,789	6.513.567	109.087.901.658	0,00597%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	1.360.110	2,390	3.250.663	109.087.901.658	0,00298%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	1.360.110	3,927	5.341.152	109.087.901.658	0,00490%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.360.110	0,434	590.288	109.087.901.658	0,00054%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.915.189	9,252	26.971.329	109.087.901.658	0,02472%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	2.915.189	4,789	13.960.840	109.087.901.658	0,01280%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	2.915.189	2,390	6.967.302	109.087.901.658	0,00639%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	2.915.189	3,927	11.447.947	109.087.901.658	0,01049%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.915.189	0,434	1.265.192	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.208.569	9,252	20.433.680	109.087.901.658	0,01873%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	2.208.569	4,789	10.576.837	109.087.901.658	0,00970%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	2.208.569	2,390	5.278.480	109.087.901.658	0,00484%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	2.208.569	3,927	8.673.050	109.087.901.658	0,00795%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.208.569	0,434	958.519	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	140.317	9,252	1.298.213	109.087.901.658	0,00119%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	140.317	4,789	671.978	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	140.317	2,390	335.358	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	140.317	3,927	551.025	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	140.317	0,434	60.898	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	16.481.129	9,252	152.483.406	109.087.901.658	0,13978%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	16.481.129	4,789	78.928.127	109.087.901.658	0,07235%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	16.481.129	2,390	39.389.898	109.087.901.658	0,03611%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	16.481.129	3,927	64.721.394	109.087.901.658	0,05933%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	16.481.129	0,434	7.152.810	109.087.901.658	0,00656%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	3.218.053	9,252	29.773.426	109.087.901.658	0,02729%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	3.218.053	4,789	15.411.256	109.087.901.658	0,01413%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	3.218.053	2,390	7.691.147	109.087.901.658	0,00705%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	3.218.053	3,927	12.637.294	109.087.901.658	0,01158%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	3.218.053	0,434	1.396.635	109.087.901.658	0,00128%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.928.832	9,252	17.845.554	109.087.901.658	0,01636%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	1.928.832	4,789	9.237.176	109.087.901.658	0,00847%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	1.928.832	2,390	4.609.908	109.087.901.658	0,00423%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	1.928.832	3,927	7.574.523	109.087.901.658	0,00694%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.928.832	0,434	837.113	109.087.901.658	0,00077%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	4.306.483	9,252	39.843.581	109.087.901.658	0,03652%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	4.306.483	4,789	20.623.747	109.087.901.658	0,01891%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	4.306.483	2,390	10.292.494	109.087.901.658	0,00944%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	4.306.483	3,927	16.911.559	109.087.901.658	0,01550%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	4.306.483	0,434	1.869.014	109.087.901.658	0,00171%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.246.693	9,252	20.786.404	109.087.901.658	0,01905%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	2.246.693	4,789	10.759.413	109.087.901.658	0,00986%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	2.246.693	2,390	5.369.596	109.087.901.658	0,00492%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	2.246.693	3,927	8.822.763	109.087.901.658	0,00809%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.246.693	0,434	975.065	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.899.329	9,252	17.572.592	109.087.901.658	0,01611%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	1.899.329	4,789	9.095.887	109.087.901.658	0,00834%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	1.899.329	2,390	4.539.396	109.087.901.658	0,00416%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	1.899.329	3,927	7.458.665	109.087.901.658	0,00684%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.899.329	0,434	824.309	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	598.315	9,252	5.535.610	109.087.901.658	0,00507%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	598.315	4,789	2.865.331	109.087.901.658	0,00263%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	598.315	2,390	1.429.973	109.087.901.658	0,00131%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	598.315	3,927	2.349.583	109.087.901.658	0,00215%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	598.315	0,434	259.669	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	3.373.361	9,252	31.210.336	109.087.901.658	0,02861%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	3.373.361	4,789	16.155.026	109.087.901.658	0,01481%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	3.373.361	2,390	8.062.333	109.087.901.658	0,00739%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	3.373.361	3,927	13.247.189	109.087.901.658	0,01214%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	3.373.361	0,434	1.464.039	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	3.518.020	9,252	32.548.721	109.087.901.658	0,02984%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	3.518.020	4,789	16.847.798	109.087.901.658	0,01544%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	3.518.020	2,390	8.408.068	109.087.901.658	0,00771%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	3.518.020	3,927	13.815.265	109.087.901.658	0,01266%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	3.518.020	0,434	1.526.821	109.087.901.658	0,00140%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	37.363	9,252	345.682	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	37.363	4,789	178.931	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	37.363	2,390	89.298	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	37.363	3,927	146.725	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	37.363	0,434	16.216	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.054.657	9,252	19.009.687	109.087.901.658	0,01743%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	2.054.657	4,789	9.839.752	109.087.901.658	0,00902%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	2.054.657	2,390	4.910.630	109.087.901.658	0,00450%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	2.054.657	3,927	8.068.638	109.087.901.658	0,00740%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.054.657	0,434	891.721	109.087.901.658	0,00082%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	472.702	9,252	4.373.439	109.087.901.658	0,00401%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	472.702	4,789	2.263.770	109.087.901.658	0,00208%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	472.702	2,390	1.129.758	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	472.702	3,927	1.856.301	109.087.901.658	0,00170%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	472.702	0,434	205.153	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.357.294	9,252	21.809.684	109.087.901.658	0,01999%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	2.357.294	4,789	11.289.081	109.087.901.658	0,01035%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	2.357.294	2,390	5.633.933	109.087.901.658	0,00516%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	2.357.294	3,927	9.257.094	109.087.901.658	0,00849%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.357.294	0,434	1.023.066	109.087.901.658	0,00094%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	809.514	9,252	7.489.624	109.087.901.658	0,00687%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	809.514	4,789	3.876.763	109.087.901.658	0,00355%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	809.514	2,390	1.934.738	109.087.901.658	0,00177%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	809.514	3,927	3.178.961	109.087.901.658	0,00291%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	809.514	0,434	351.329	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.400.010	9,252	12.952.893	109.087.901.658	0,01187%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	1.400.010	4,789	6.704.648	109.087.901.658	0,00615%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	1.400.010	2,390	3.346.024	109.087.901.658	0,00307%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	1.400.010	3,927	5.497.839	109.087.901.658	0,00504%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.400.010	0,434	607.604	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.077.672	9,252	9.970.621	109.087.901.658	0,00914%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	1.077.672	4,789	5.160.971	109.087.901.658	0,00473%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	1.077.672	2,390	2.575.636	109.087.901.658	0,00236%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	1.077.672	3,927	4.232.018	109.087.901.658	0,00388%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.077.672	0,434	467.710	109.087.901.658	0,00043%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	972.896	9,252	9.001.234	109.087.901.658	0,00825%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	972.896	4,789	4.659.199	109.087.901.658	0,00427%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	972.896	2,390	2.325.221	109.087.901.658	0,00213%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	972.896	3,927	3.820.563	109.087.901.658	0,00350%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	972.896	0,434	422.237	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.044.080	9,252	9.659.828	109.087.901.658	0,00886%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	1.044.080	4,789	5.000.099	109.087.901.658	0,00458%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	1.044.080	2,390	2.495.351	109.087.901.658	0,00229%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	1.044.080	3,927	4.100.102	109.087.901.658	0,00376%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.044.080	0,434	453.131	109.087.901.658	0,00042%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	855.456	9,252	7.914.679	109.087.901.658	0,00726%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	855.456	4,789	4.096.779	109.087.901.658	0,00376%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	855.456	2,390	2.044.540	109.087.901.658	0,00187%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	855.456	3,927	3.359.376	109.087.901.658	0,00308%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	855.456	0,434	371.268	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	14.457	9,252	133.756	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	14.457	4,789	69.235	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	14.457	2,390	34.552	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	14.457	3,927	56.773	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	14.457	0,434	6.274	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	190.241	9,252	1.760.110	109.087.901.658	0,00161%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	190.241	4,789	911.064	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	190.241	2,390	454.676	109.087.901.658	0,00042%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	190.241	3,927	747.076	109.087.901.658	0,00068%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	190.241	0,434	82.565	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	14.817	9,252	137.087	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	14.817	4,789	70.959	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	14.817	2,390	35.413	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	14.817	3,927	58.186	109.087.901.658	0,00005%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	14.817	0,434	6.431	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.085.334	9,252	10.041.510	109.087.901.658	0,00920%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	1.085.334	4,789	5.197.665	109.087.901.658	0,00476%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	1.085.334	2,390	2.593.948	109.087.901.658	0,00238%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	1.085.334	3,927	4.262.107	109.087.901.658	0,00391%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.085.334	0,434	471.035	109.087.901.658	0,00043%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	233.772	9,252	2.162.859	109.087.901.658	0,00198%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	233.772	4,789	1.119.534	109.087.901.658	0,00103%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	233.772	2,390	558.715	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	233.772	3,927	918.023	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	233.772	0,434	101.457	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAN-FFL	240.592	0,508	122.221	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFL-FPB	240.592	7,911	1.903.323	109.087.901.658	0,00174%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPB-FSE	240.592	7,016	1.687.993	109.087.901.658	0,00155%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	240.592	2,390	575.015	109.087.901.658	0,00053%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	240.592	3,927	944.805	109.087.901.658	0,00087%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	240.592	0,434	104.417	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	269.202	9,252	2.490.657	109.087.901.658	0,00228%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	269.202	4,789	1.289.208	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	269.202	2,390	643.393	109.087.901.658	0,00059%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	269.202	3,927	1.057.156	109.087.901.658	0,00097%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	269.202	0,434	116.834	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVB	346.347	0,434	150.315	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FBM	346.347	3,927	1.360.105	109.087.901.658	0,00125%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FSE	346.347	2,390	827.769	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FEU	346.347	4,789	1.658.656	109.087.901.658	0,00152%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FPT	346.347	9,252	3.204.402	109.087.901.658	0,00294%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAN-FFL	22.579	0,508	11.470	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFL-FPB	22.579	7,911	178.622	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPB-FSE	22.579	7,016	158.414	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	22.579	2,390	53.964	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	22.579	3,927	88.668	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	22.579	0,434	9.799	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	174.123	9,252	1.610.986	109.087.901.658	0,00148%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	174.123	4,789	833.875	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	174.123	2,390	416.154	109.087.901.658	0,00038%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	174.123	3,927	683.781	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	174.123	0,434	75.569	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	24.259	9,252	224.444	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	24.259	4,789	116.176	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	24.259	2,390	57.979	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	24.259	3,927	95.265	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	BARRA MANSA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	24.259	0,434	10.528	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTR-FFP	28.449	1,122	31.920	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFP-FSR	28.449	5,775	164.293	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSR-FSA	28.449	0,338	9.616	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FUN-FAA	28.449	1,957	55.675	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAA-FDD	28.449	1,160	33.001	109.087.901.658	0,00003%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTR-FFP	22.579	1,122	25.334	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFP-FSR	22.579	5,775	130.394	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSR-FSA	22.579	0,338	7.632	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FUN-FAA	22.579	1,957	44.187	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	COMENDADOR LEVY GASPARIAN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAA-FDD	22.579	1,160	26.192	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FPD	28.449	2,542	72.317	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-FER	28.449	3,851	109.557	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FHA	28.449	3,268	92.971	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	452.578	3,268	1.479.025	109.087.901.658	0,00136%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	452.578	3,851	1.742.878	109.087.901.658	0,00160%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	452.578	2,542	1.150.453	109.087.901.658	0,00105%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	471.355	3,268	1.540.388	109.087.901.658	0,00141%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	471.355	3,851	1.815.188	109.087.901.658	0,00166%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	471.355	2,542	1.198.184	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	9.636.141	3,268	31.490.909	109.087.901.658	0,02887%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	9.636.141	3,851	37.108.779	109.087.901.658	0,03402%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	9.636.141	2,542	24.495.070	109.087.901.658	0,02245%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.040.246	3,268	3.399.524	109.087.901.658	0,00312%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	1.040.246	3,851	4.005.987	109.087.901.658	0,00367%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.040.246	2,542	2.644.305	109.087.901.658	0,00242%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	175.991	3,268	575.139	109.087.901.658	0,00053%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	175.991	3,851	677.741	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	175.991	2,542	447.369	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	16.754.022	3,268	54.752.144	109.087.901.658	0,05019%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	16.754.022	3,851	64.519.739	109.087.901.658	0,05914%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	16.754.022	2,542	42.588.724	109.087.901.658	0,03904%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	5.195.905	3,268	16.980.218	109.087.901.658	0,01557%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	5.195.905	3,851	20.009.430	109.087.901.658	0,01834%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	5.195.905	2,542	13.207.991	109.087.901.658	0,01211%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	9.694.113	3,268	31.680.361	109.087.901.658	0,02904%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	9.694.113	3,851	37.332.029	109.087.901.658	0,03422%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	9.694.113	2,542	24.642.435	109.087.901.658	0,02259%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	753.441	3,268	2.462.245	109.087.901.658	0,00226%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	753.441	3,851	2.901.501	109.087.901.658	0,00266%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	753.441	2,542	1.915.247	109.087.901.658	0,00176%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.632.345	3,268	8.602.503	109.087.901.658	0,00789%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	2.632.345	3,851	10.137.161	109.087.901.658	0,00929%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.632.345	2,542	6.691.421	109.087.901.658	0,00613%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	11.042.972	3,268	36.088.432	109.087.901.658	0,03308%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	11.042.972	3,851	42.526.485	109.087.901.658	0,03898%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	11.042.972	2,542	28.071.235	109.087.901.658	0,02573%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.915.189	3,268	9.526.838	109.087.901.658	0,00873%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	2.915.189	3,851	11.226.393	109.087.901.658	0,01029%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.915.189	2,542	7.410.410	109.087.901.658	0,00679%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.208.569	3,268	7.217.603	109.087.901.658	0,00662%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	2.208.569	3,851	8.505.199	109.087.901.658	0,00780%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.208.569	2,542	5.614.182	109.087.901.658	0,00515%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	16.481.129	3,268	53.860.330	109.087.901.658	0,04937%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	16.481.129	3,851	63.468.828	109.087.901.658	0,05818%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	16.481.129	2,542	41.895.030	109.087.901.658	0,03840%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	3.218.053	3,268	10.516.597	109.087.901.658	0,00964%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	3.218.053	3,851	12.392.722	109.087.901.658	0,01136%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	3.218.053	2,542	8.180.291	109.087.901.658	0,00750%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.928.832	3,268	6.303.423	109.087.901.658	0,00578%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	1.928.832	3,851	7.427.932	109.087.901.658	0,00681%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.928.832	2,542	4.903.091	109.087.901.658	0,00449%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	4.306.483	3,268	14.073.586	109.087.901.658	0,01290%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	4.306.483	3,851	16.584.266	109.087.901.658	0,01520%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	4.306.483	2,542	10.947.080	109.087.901.658	0,01004%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.246.693	3,268	7.342.193	109.087.901.658	0,00673%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	2.246.693	3,851	8.652.015	109.087.901.658	0,00793%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.246.693	2,542	5.711.094	109.087.901.658	0,00524%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.899.329	3,268	6.207.007	109.087.901.658	0,00569%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	1.899.329	3,851	7.314.316	109.087.901.658	0,00670%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.899.329	2,542	4.828.094	109.087.901.658	0,00443%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	598.315	3,268	1.955.293	109.087.901.658	0,00179%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	598.315	3,851	2.304.111	109.087.901.658	0,00211%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	598.315	2,542	1.520.917	109.087.901.658	0,00139%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	3.373.361	3,268	11.024.144	109.087.901.658	0,01011%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	3.373.361	3,851	12.990.813	109.087.901.658	0,01191%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	3.373.361	2,542	8.575.084	109.087.901.658	0,00786%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	3.518.020	3,268	11.496.889	109.087.901.658	0,01054%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	3.518.020	3,851	13.547.895	109.087.901.658	0,01242%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	3.518.020	2,542	8.942.807	109.087.901.658	0,00820%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.054.657	3,268	6.714.619	109.087.901.658	0,00616%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	2.054.657	3,851	7.912.484	109.087.901.658	0,00725%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.054.657	2,542	5.222.938	109.087.901.658	0,00479%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	472.702	3,268	1.544.790	109.087.901.658	0,00142%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	472.702	3,851	1.820.375	109.087.901.658	0,00167%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	472.702	2,542	1.201.608	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.357.294	3,268	7.703.637	109.087.901.658	0,00706%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	2.357.294	3,851	9.077.939	109.087.901.658	0,00832%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.357.294	2,542	5.992.241	109.087.901.658	0,00549%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	809.514	3,268	2.645.492	109.087.901.658	0,00243%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	809.514	3,851	3.117.438	109.087.901.658	0,00286%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	809.514	2,542	2.057.785	109.087.901.658	0,00189%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.400.010	3,268	4.575.233	109.087.901.658	0,00419%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	1.400.010	3,851	5.391.439	109.087.901.658	0,00494%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.400.010	2,542	3.558.825	109.087.901.658	0,00326%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FPD	321.691	2,542	817.739	109.087.901.658	0,00075%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-FER	321.691	3,851	1.238.832	109.087.901.658	0,00114%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FHA	321.691	3,268	1.051.286	109.087.901.658	0,00096%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.077.672	3,268	3.521.832	109.087.901.658	0,00323%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	1.077.672	3,851	4.150.115	109.087.901.658	0,00380%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.077.672	2,542	2.739.442	109.087.901.658	0,00251%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	972.896	3,268	3.179.424	109.087.901.658	0,00291%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	972.896	3,851	3.746.622	109.087.901.658	0,00343%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	972.896	2,542	2.473.102	109.087.901.658	0,00227%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.044.080	3,268	3.412.053	109.087.901.658	0,00313%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	1.044.080	3,851	4.020.752	109.087.901.658	0,00369%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.044.080	2,542	2.654.051	109.087.901.658	0,00243%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	855.456	3,268	2.795.630	109.087.901.658	0,00256%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	855.456	3,851	3.294.361	109.087.901.658	0,00302%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	855.456	2,542	2.174.569	109.087.901.658	0,00199%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	14.457	3,268	47.245	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	14.457	3,851	55.674	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	14.457	2,542	36.750	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	190.241	3,268	621.708	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	190.241	3,851	732.618	109.087.901.658	0,00067%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	190.241	2,542	483.593	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	14.817	3,268	48.422	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	14.817	3,851	57.060	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	14.817	2,542	37.665	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.085.334	3,268	3.546.872	109.087.901.658	0,00325%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	1.085.334	3,851	4.179.621	109.087.901.658	0,00383%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.085.334	2,542	2.758.919	109.087.901.658	0,00253%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	233.772	3,268	763.967	109.087.901.658	0,00070%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	233.772	3,851	900.256	109.087.901.658	0,00083%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	233.772	2,542	594.248	109.087.901.658	0,00054%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	240.592	3,268	786.255	109.087.901.658	0,00072%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	240.592	3,851	926.520	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	240.592	2,542	611.585	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	269.202	3,268	879.752	109.087.901.658	0,00081%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	269.202	3,851	1.036.697	109.087.901.658	0,00095%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	269.202	2,542	684.311	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FPD	346.347	2,542	880.414	109.087.901.658	0,00081%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-FER	346.347	3,851	1.333.782	109.087.901.658	0,00122%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FHA	346.347	3,268	1.131.862	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	174.123	3,268	569.034	109.087.901.658	0,00052%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	174.123	3,851	670.548	109.087.901.658	0,00061%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	174.123	2,542	442.621	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	24.259	3,268	79.278	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	24.259	3,851	93.421	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	ENGENHEIRO PAULO DE FRONTIN	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	24.259	2,542	61.666	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FCG	28.449	1,891	53.797	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FBA	28.449	6,287	178.859	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOS	28.449	7,973	226.824	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	452.578	7,973	3.608.404	109.087.901.658	0,00331%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	452.578	3,000	1.357.734	109.087.901.658	0,00124%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	471.355	7,973	3.758.113	109.087.901.658	0,00345%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	471.355	3,000	1.414.065	109.087.901.658	0,00130%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	9.636.141	7,973	76.828.952	109.087.901.658	0,07043%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	9.636.141	3,000	28.908.423	109.087.901.658	0,02650%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.040.246	7,973	8.293.881	109.087.901.658	0,00760%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	1.040.246	3,000	3.120.738	109.087.901.658	0,00286%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	175.991	7,973	1.403.176	109.087.901.658	0,00129%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	175.991	3,000	527.973	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	16.754.022	7,973	133.579.817	109.087.901.658	0,12245%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	16.754.022	6,287	105.332.536	109.087.901.658	0,09656%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	16.754.022	1,891	31.681.856	109.087.901.658	0,02904%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	5.195.905	7,973	41.426.951	109.087.901.658	0,03798%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	5.195.905	6,287	32.666.655	109.087.901.658	0,02995%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	5.195.905	1,891	9.825.456	109.087.901.658	0,00901%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	9.694.113	7,973	77.291.163	109.087.901.658	0,07085%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	9.694.113	2,290	22.199.519	109.087.901.658	0,02035%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	753.441	7,973	6.007.185	109.087.901.658	0,00551%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	753.441	2,290	1.725.380	109.087.901.658	0,00158%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.632.345	7,973	20.987.687	109.087.901.658	0,01924%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	2.632.345	6,287	16.549.553	109.087.901.658	0,01517%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	2.632.345	1,891	4.977.764	109.087.901.658	0,00456%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	11.042.972	7,973	88.045.616	109.087.901.658	0,08071%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	11.042.972	2,290	25.288.406	109.087.901.658	0,02318%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.915.189	7,973	23.242.802	109.087.901.658	0,02131%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	2.915.189	6,842	19.945.723	109.087.901.658	0,01828%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.208.569	7,973	17.608.921	109.087.901.658	0,01614%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	2.208.569	6,842	15.111.029	109.087.901.658	0,01385%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	16.481.129	7,973	131.404.042	109.087.901.658	0,12046%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	16.481.129	2,290	37.741.785	109.087.901.658	0,03460%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	3.218.053	7,973	25.657.537	109.087.901.658	0,02352%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	3.218.053	2,290	7.369.341	109.087.901.658	0,00676%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.928.832	7,973	15.378.578	109.087.901.658	0,01410%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	1.928.832	2,290	4.417.025	109.087.901.658	0,00405%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	4.306.483	7,973	34.335.589	109.087.901.658	0,03148%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	4.306.483	2,290	9.861.846	109.087.901.658	0,00904%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.246.693	7,973	17.912.883	109.087.901.658	0,01642%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	2.246.693	2,290	5.144.927	109.087.901.658	0,00472%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.899.329	7,973	15.143.350	109.087.901.658	0,01388%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	598.315	7,973	4.770.365	109.087.901.658	0,00437%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	3.373.361	7,973	26.895.807	109.087.901.658	0,02466%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	3.518.020	7,973	28.049.173	109.087.901.658	0,02571%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.054.657	7,973	16.381.780	109.087.901.658	0,01502%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	472.702	7,973	3.768.853	109.087.901.658	0,00345%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	472.702	3,000	1.418.106	109.087.901.658	0,00130%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.357.294	7,973	18.794.705	109.087.901.658	0,01723%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	2.357.294	3,000	7.071.882	109.087.901.658	0,00648%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	809.514	7,973	6.454.255	109.087.901.658	0,00592%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	809.514	2,290	1.853.787	109.087.901.658	0,00170%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.400.010	7,973	11.162.280	109.087.901.658	0,01023%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	1.400.010	6,842	9.578.868	109.087.901.658	0,00878%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	321.691	2,290	736.672	109.087.901.658	0,00068%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOS	321.691	7,973	2.564.842	109.087.901.658	0,00235%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.077.672	7,973	8.592.279	109.087.901.658	0,00788%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	1.077.672	6,287	6.775.324	109.087.901.658	0,00621%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	1.077.672	1,891	2.037.878	109.087.901.658	0,00187%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	972.896	7,973	7.756.900	109.087.901.658	0,00711%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	972.896	6,287	6.116.597	109.087.901.658	0,00561%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	972.896	1,891	1.839.746	109.087.901.658	0,00169%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.044.080	7,973	8.324.450	109.087.901.658	0,00763%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	1.044.080	6,287	6.564.131	109.087.901.658	0,00602%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	1.044.080	1,891	1.974.355	109.087.901.658	0,00181%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	855.456	7,973	6.820.551	109.087.901.658	0,00625%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	855.456	6,287	5.378.252	109.087.901.658	0,00493%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	855.456	1,891	1.617.667	109.087.901.658	0,00148%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	14.457	7,973	115.266	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	14.457	6,287	90.891	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	14.457	1,891	27.338	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	190.241	7,973	1.516.791	109.087.901.658	0,00139%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	190.241	3,000	570.723	109.087.901.658	0,00052%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	14.817	7,973	118.136	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	14.817	6,842	101.378	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.085.334	7,973	8.653.368	109.087.901.658	0,00793%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	1.085.334	6,287	6.823.495	109.087.901.658	0,00626%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	1.085.334	1,891	2.052.367	109.087.901.658	0,00188%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	233.772	7,973	1.863.864	109.087.901.658	0,00171%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	233.772	2,290	535.338	109.087.901.658	0,00049%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	240.592	7,973	1.918.240	109.087.901.658	0,00176%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	240.592	6,842	1.646.130	109.087.901.658	0,00151%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	269.202	7,973	2.146.348	109.087.901.658	0,00197%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	269.202	2,290	616.473	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-FBA	346.347	6,842	2.369.706	109.087.901.658	0,00217%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOS	346.347	7,973	2.761.425	109.087.901.658	0,00253%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	174.123	7,973	1.388.283	109.087.901.658	0,00127%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	174.123	6,842	1.191.350	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	24.259	7,973	193.417	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	ITAGUAI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	24.259	3,000	72.777	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	ITATIAIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEP-FIA	240.592	5,952	1.432.004	109.087.901.658	0,00131%
MINÉRIO DE FERRO	BA, ES, MG	ITATIAIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIA-FMU	240.592	3,509	844.194	109.087.901.658	0,00077%
MINÉRIO DE FERRO	BA, ES, MG	ITATIAIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMU-FAN	240.592	4,670	1.123.541	109.087.901.658	0,00103%
MINÉRIO DE FERRO	BA, ES, MG	ITATIAIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEP-FIA	22.579	5,952	134.390	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	ITATIAIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIA-FMU	22.579	3,509	79.226	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	ITATIAIA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMU-FAN	22.579	4,670	105.442	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGI-FIB	28.449	3,555	101.136	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FSS	28.449	4,438	126.257	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FTY	28.449	7,461	212.271	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FIS	28.449	5,086	144.678	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FCG	28.449	3,726	106.001	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	16.754.022	3,726	62.425.486	109.087.901.658	0,05722%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	16.754.022	5,086	85.203.039	109.087.901.658	0,07810%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	16.754.022	5,086	85.203.039	109.087.901.658	0,07810%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	16.754.022	7,461	125.009.675	109.087.901.658	0,11460%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	16.754.022	4,438	74.354.350	109.087.901.658	0,06816%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	16.754.022	3,555	59.560.548	109.087.901.658	0,05460%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	5.195.905	3,726	19.359.942	109.087.901.658	0,01775%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	5.195.905	5,086	26.423.918	109.087.901.658	0,02422%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	5.195.905	5,086	26.423.918	109.087.901.658	0,02422%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	5.195.905	7,461	38.769.102	109.087.901.658	0,03554%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	5.195.905	4,438	23.059.426	109.087.901.658	0,02114%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	5.195.905	3,555	18.471.442	109.087.901.658	0,01693%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	2.632.345	3,726	9.808.117	109.087.901.658	0,00899%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	2.632.345	5,086	13.386.863	109.087.901.658	0,01227%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	2.632.345	5,086	13.386.863	109.087.901.658	0,01227%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	2.632.345	7,461	19.641.170	109.087.901.658	0,01800%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	2.632.345	4,438	11.682.347	109.087.901.658	0,01071%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	2.632.345	3,555	9.357.986	109.087.901.658	0,00858%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	1.077.672	3,726	4.015.406	109.087.901.658	0,00368%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	1.077.672	5,086	5.480.531	109.087.901.658	0,00502%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	1.077.672	5,086	5.480.531	109.087.901.658	0,00502%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	1.077.672	7,461	8.041.020	109.087.901.658	0,00737%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	1.077.672	4,438	4.782.708	109.087.901.658	0,00438%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	1.077.672	3,555	3.831.124	109.087.901.658	0,00351%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	972.896	3,726	3.625.010	109.087.901.658	0,00332%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	972.896	5,086	4.947.689	109.087.901.658	0,00454%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	972.896	5,086	4.947.689	109.087.901.658	0,00454%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	972.896	7,461	7.259.237	109.087.901.658	0,00665%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	972.896	4,438	4.317.712	109.087.901.658	0,00396%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	972.896	3,555	3.458.645	109.087.901.658	0,00317%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	1.044.080	3,726	3.890.242	109.087.901.658	0,00357%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	1.044.080	5,086	5.309.698	109.087.901.658	0,00487%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	1.044.080	5,086	5.309.698	109.087.901.658	0,00487%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	1.044.080	7,461	7.790.374	109.087.901.658	0,00714%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	1.044.080	4,438	4.633.627	109.087.901.658	0,00425%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	1.044.080	3,555	3.711.704	109.087.901.658	0,00340%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	855.456	3,726	3.187.429	109.087.901.658	0,00292%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	855.456	5,086	4.350.445	109.087.901.658	0,00399%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	855.456	5,086	4.350.445	109.087.901.658	0,00399%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	855.456	7,461	6.382.961	109.087.901.658	0,00585%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	855.456	4,438	3.796.514	109.087.901.658	0,00348%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	855.456	3,555	3.041.146	109.087.901.658	0,00279%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	14.457	3,726	53.867	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	14.457	5,086	73.521	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	14.457	5,086	73.521	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	14.457	7,461	107.871	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	14.457	4,438	64.160	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	14.457	3,555	51.395	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	1.085.334	3,726	4.043.954	109.087.901.658	0,00371%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	1.085.334	5,086	5.519.496	109.087.901.658	0,00506%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	1.085.334	5,086	5.519.496	109.087.901.658	0,00506%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	1.085.334	7,461	8.098.190	109.087.901.658	0,00742%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	1.085.334	4,438	4.816.712	109.087.901.658	0,00442%
MINÉRIO DE FERRO	BA, ES, MG	MANGARATIBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	1.085.334	3,555	3.858.362	109.087.901.658	0,00354%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FHA	28.449	0,897	25.519	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FME	28.449	2,114	60.141	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FMA	28.449	5,433	154.563	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FMG	28.449	2,068	58.833	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FSB	28.449	0,211	6.003	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	452.578	0,211	95.494	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	452.578	2,068	935.931	109.087.901.658	0,00086%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	452.578	5,433	2.458.856	109.087.901.658	0,00225%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	452.578	2,114	956.750	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	452.578	0,897	405.962	109.087.901.658	0,00037%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	471.355	0,211	99.456	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	471.355	2,068	974.762	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	471.355	5,433	2.560.872	109.087.901.658	0,00235%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	471.355	2,114	996.444	109.087.901.658	0,00091%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	471.355	0,897	422.805	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	9.636.141	0,211	2.033.226	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	9.636.141	2,068	19.927.540	109.087.901.658	0,01827%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	9.636.141	5,433	52.353.154	109.087.901.658	0,04799%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	9.636.141	2,114	20.370.802	109.087.901.658	0,01867%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	9.636.141	0,897	8.643.618	109.087.901.658	0,00792%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.040.246	0,211	219.492	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	1.040.246	2,068	2.151.229	109.087.901.658	0,00197%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	1.040.246	5,433	5.651.657	109.087.901.658	0,00518%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	1.040.246	2,114	2.199.080	109.087.901.658	0,00202%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.040.246	0,897	933.101	109.087.901.658	0,00086%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	175.991	0,211	37.134	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	175.991	2,068	363.949	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	175.991	5,433	956.159	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	175.991	2,114	372.045	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	175.991	0,897	157.864	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	16.754.022	0,211	3.535.099	109.087.901.658	0,00324%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	16.754.022	2,068	34.647.317	109.087.901.658	0,03176%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	16.754.022	5,433	91.024.602	109.087.901.658	0,08344%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	16.754.022	2,114	35.418.003	109.087.901.658	0,03247%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	16.754.022	0,897	15.028.358	109.087.901.658	0,01378%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	5.195.905	0,211	1.096.336	109.087.901.658	0,00101%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	5.195.905	2,068	10.745.132	109.087.901.658	0,00985%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	5.195.905	5,433	28.229.352	109.087.901.658	0,02588%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	5.195.905	2,114	10.984.143	109.087.901.658	0,01007%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	5.195.905	0,897	4.660.727	109.087.901.658	0,00427%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	9.694.113	0,211	2.045.458	109.087.901.658	0,00188%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	9.694.113	2,068	20.047.426	109.087.901.658	0,01838%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	9.694.113	5,433	52.668.116	109.087.901.658	0,04828%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	9.694.113	2,114	20.493.355	109.087.901.658	0,01879%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	9.694.113	0,897	8.695.619	109.087.901.658	0,00797%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	753.441	0,211	158.976	109.087.901.658	0,00015%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	753.441	2,068	1.558.116	109.087.901.658	0,00143%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	753.441	5,433	4.093.445	109.087.901.658	0,00375%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	753.441	2,114	1.592.774	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	753.441	0,897	675.837	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.632.345	0,211	555.425	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	2.632.345	2,068	5.443.689	109.087.901.658	0,00499%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	2.632.345	5,433	14.301.530	109.087.901.658	0,01311%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	2.632.345	2,114	5.564.777	109.087.901.658	0,00510%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.632.345	0,897	2.361.213	109.087.901.658	0,00216%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	11.042.972	0,211	2.330.067	109.087.901.658	0,00214%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	11.042.972	2,068	22.836.866	109.087.901.658	0,02093%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	11.042.972	5,433	59.996.467	109.087.901.658	0,05500%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	11.042.972	2,114	23.344.843	109.087.901.658	0,02140%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	11.042.972	0,897	9.905.546	109.087.901.658	0,00908%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.915.189	0,211	615.105	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	2.915.189	2,068	6.028.611	109.087.901.658	0,00553%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	2.915.189	5,433	15.838.222	109.087.901.658	0,01452%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	2.915.189	2,114	6.162.710	109.087.901.658	0,00565%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.915.189	0,897	2.614.925	109.087.901.658	0,00240%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.208.569	0,211	466.008	109.087.901.658	0,00043%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	2.208.569	2,068	4.567.321	109.087.901.658	0,00419%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	2.208.569	5,433	11.999.155	109.087.901.658	0,01100%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	2.208.569	2,114	4.668.915	109.087.901.658	0,00428%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.208.569	0,897	1.981.086	109.087.901.658	0,00182%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	16.481.129	0,211	3.477.518	109.087.901.658	0,00319%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	16.481.129	2,068	34.082.975	109.087.901.658	0,03124%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	16.481.129	5,433	89.541.974	109.087.901.658	0,08208%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	16.481.129	2,114	34.841.107	109.087.901.658	0,03194%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	16.481.129	0,897	14.783.573	109.087.901.658	0,01355%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	3.218.053	0,211	679.009	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	3.218.053	2,068	6.654.934	109.087.901.658	0,00610%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	3.218.053	5,433	17.483.682	109.087.901.658	0,01603%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	3.218.053	2,114	6.802.964	109.087.901.658	0,00624%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	3.218.053	0,897	2.886.594	109.087.901.658	0,00265%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.928.832	0,211	406.984	109.087.901.658	0,00037%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	1.928.832	2,068	3.988.825	109.087.901.658	0,00366%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	1.928.832	5,433	10.479.344	109.087.901.658	0,00961%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	1.928.832	2,114	4.077.551	109.087.901.658	0,00374%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.928.832	0,897	1.730.162	109.087.901.658	0,00159%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	4.306.483	0,211	908.668	109.087.901.658	0,00083%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	4.306.483	2,068	8.905.807	109.087.901.658	0,00816%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	4.306.483	5,433	23.397.122	109.087.901.658	0,02145%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	4.306.483	2,114	9.103.905	109.087.901.658	0,00835%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	4.306.483	0,897	3.862.915	109.087.901.658	0,00354%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.246.693	0,211	474.052	109.087.901.658	0,00043%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	2.246.693	2,068	4.646.161	109.087.901.658	0,00426%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	2.246.693	5,433	12.206.283	109.087.901.658	0,01119%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	2.246.693	2,114	4.749.509	109.087.901.658	0,00435%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.246.693	0,897	2.015.284	109.087.901.658	0,00185%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.899.329	0,211	400.758	109.087.901.658	0,00037%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	1.899.329	2,068	3.927.812	109.087.901.658	0,00360%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	1.899.329	5,433	10.319.054	109.087.901.658	0,00946%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	1.899.329	2,114	4.015.182	109.087.901.658	0,00368%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.899.329	0,897	1.703.698	109.087.901.658	0,00156%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	598.315	0,211	126.244	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	598.315	2,068	1.237.315	109.087.901.658	0,00113%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	598.315	5,433	3.250.645	109.087.901.658	0,00298%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	598.315	2,114	1.264.838	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	598.315	0,897	536.689	109.087.901.658	0,00049%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	3.373.361	0,211	711.779	109.087.901.658	0,00065%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	3.373.361	2,068	6.976.111	109.087.901.658	0,00639%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	3.373.361	5,433	18.327.470	109.087.901.658	0,01680%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	3.373.361	2,114	7.131.285	109.087.901.658	0,00654%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	3.373.361	0,897	3.025.905	109.087.901.658	0,00277%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	3.518.020	0,211	742.302	109.087.901.658	0,00068%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	3.518.020	2,068	7.275.265	109.087.901.658	0,00667%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	3.518.020	5,433	19.113.403	109.087.901.658	0,01752%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	3.518.020	2,114	7.437.094	109.087.901.658	0,00682%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	3.518.020	0,897	3.155.664	109.087.901.658	0,00289%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.054.657	0,211	433.533	109.087.901.658	0,00040%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	2.054.657	2,068	4.249.031	109.087.901.658	0,00390%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	2.054.657	5,433	11.162.951	109.087.901.658	0,01023%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	2.054.657	2,114	4.343.545	109.087.901.658	0,00398%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.054.657	0,897	1.843.027	109.087.901.658	0,00169%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	472.702	0,211	99.740	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	472.702	2,068	977.548	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	472.702	5,433	2.568.190	109.087.901.658	0,00235%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	472.702	2,114	999.292	109.087.901.658	0,00092%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	472.702	0,897	424.014	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	2.357.294	0,211	497.389	109.087.901.658	0,00046%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	2.357.294	2,068	4.874.884	109.087.901.658	0,00447%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	2.357.294	5,433	12.807.178	109.087.901.658	0,01174%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	2.357.294	2,114	4.983.320	109.087.901.658	0,00457%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	2.357.294	0,897	2.114.493	109.087.901.658	0,00194%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	809.514	0,211	170.807	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	809.514	2,068	1.674.075	109.087.901.658	0,00153%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	809.514	5,433	4.398.090	109.087.901.658	0,00403%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	809.514	2,114	1.711.313	109.087.901.658	0,00157%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	809.514	0,897	726.134	109.087.901.658	0,00067%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.400.010	0,211	295.402	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	1.400.010	2,068	2.895.221	109.087.901.658	0,00265%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	1.400.010	5,433	7.606.254	109.087.901.658	0,00697%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	1.400.010	2,114	2.959.621	109.087.901.658	0,00271%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.400.010	0,897	1.255.809	109.087.901.658	0,00115%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FHA	321.691	0,897	288.557	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FME	321.691	2,114	680.055	109.087.901.658	0,00062%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FMA	321.691	5,433	1.747.747	109.087.901.658	0,00160%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FMG	321.691	2,068	665.257	109.087.901.658	0,00061%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FSB	321.691	0,211	67.877	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.077.672	0,211	227.389	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	1.077.672	2,068	2.228.626	109.087.901.658	0,00204%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	1.077.672	5,433	5.854.992	109.087.901.658	0,00537%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	1.077.672	2,114	2.278.199	109.087.901.658	0,00209%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.077.672	0,897	966.672	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	972.896	0,211	205.281	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	972.896	2,068	2.011.949	109.087.901.658	0,00184%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	972.896	5,433	5.285.744	109.087.901.658	0,00485%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	972.896	2,114	2.056.702	109.087.901.658	0,00189%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	972.896	0,897	872.688	109.087.901.658	0,00080%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.044.080	0,211	220.301	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	1.044.080	2,068	2.159.157	109.087.901.658	0,00198%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	1.044.080	5,433	5.672.487	109.087.901.658	0,00520%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	1.044.080	2,114	2.207.185	109.087.901.658	0,00202%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.044.080	0,897	936.540	109.087.901.658	0,00086%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	855.456	0,211	180.501	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	855.456	2,068	1.769.083	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	855.456	5,433	4.647.692	109.087.901.658	0,00426%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	855.456	2,114	1.808.434	109.087.901.658	0,00166%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	855.456	0,897	767.344	109.087.901.658	0,00070%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	14.457	0,211	3.050	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	14.457	2,068	29.897	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	14.457	5,433	78.545	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	14.457	2,114	30.562	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	14.457	0,897	12.968	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	190.241	0,211	40.141	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	190.241	2,068	393.418	109.087.901.658	0,00036%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	190.241	5,433	1.033.579	109.087.901.658	0,00095%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	190.241	2,114	402.169	109.087.901.658	0,00037%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	190.241	0,897	170.646	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	14.817	0,211	3.126	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	14.817	2,068	30.642	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	14.817	5,433	80.501	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	14.817	2,114	31.323	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	14.817	0,897	13.291	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	1.085.334	0,211	229.005	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	1.085.334	2,068	2.244.471	109.087.901.658	0,00206%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	1.085.334	5,433	5.896.620	109.087.901.658	0,00541%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	1.085.334	2,114	2.294.396	109.087.901.658	0,00210%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	1.085.334	0,897	973.545	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	233.772	0,211	49.326	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	233.772	2,068	483.440	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	233.772	5,433	1.270.083	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	233.772	2,114	494.194	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	233.772	0,897	209.693	109.087.901.658	0,00019%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	240.592	0,211	50.765	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	240.592	2,068	497.544	109.087.901.658	0,00046%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	240.592	5,433	1.307.136	109.087.901.658	0,00120%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	240.592	2,114	508.611	109.087.901.658	0,00047%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	240.592	0,897	215.811	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	269.202	0,211	56.802	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	269.202	2,068	556.710	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	269.202	5,433	1.462.574	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	269.202	2,114	569.093	109.087.901.658	0,00052%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	269.202	0,897	241.474	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FHA	346.347	0,897	310.673	109.087.901.658	0,00028%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FME	346.347	2,114	732.178	109.087.901.658	0,00067%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FMA	346.347	5,433	1.881.703	109.087.901.658	0,00172%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FMG	346.347	2,068	716.246	109.087.901.658	0,00066%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FSB	346.347	0,211	73.079	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	174.123	0,211	36.740	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	174.123	2,068	360.086	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	174.123	5,433	946.010	109.087.901.658	0,00087%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	174.123	2,114	368.096	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	174.123	0,897	156.188	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	24.259	0,211	5.119	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	24.259	2,068	50.168	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	24.259	5,433	131.799	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	24.259	2,114	51.284	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	MENDES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	24.259	0,897	21.760	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FQS	28.449	1,055	30.014	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FHE	28.449	2,388	67.936	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FMB	28.449	3,969	112.914	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-F39	28.449	4,787	136.185	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FPD	28.449	3,211	91.350	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	452.578	3,211	1.453.228	109.087.901.658	0,00133%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	452.578	4,787	2.166.491	109.087.901.658	0,00199%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	452.578	3,969	1.796.282	109.087.901.658	0,00165%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	452.578	2,388	1.080.756	109.087.901.658	0,00099%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	452.578	1,055	477.470	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	471.355	3,211	1.513.521	109.087.901.658	0,00139%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	471.355	4,787	2.256.376	109.087.901.658	0,00207%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	471.355	3,969	1.870.808	109.087.901.658	0,00171%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	471.355	2,388	1.125.596	109.087.901.658	0,00103%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	471.355	1,055	497.280	109.087.901.658	0,00046%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	9.636.141	3,211	30.941.649	109.087.901.658	0,02836%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	9.636.141	4,787	46.128.207	109.087.901.658	0,04229%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	9.636.141	3,969	38.245.844	109.087.901.658	0,03506%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	9.636.141	2,388	23.011.105	109.087.901.658	0,02109%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	9.636.141	1,055	10.166.129	109.087.901.658	0,00932%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.040.246	3,211	3.340.230	109.087.901.658	0,00306%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	1.040.246	4,787	4.979.658	109.087.901.658	0,00456%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	1.040.246	3,969	4.128.736	109.087.901.658	0,00378%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	1.040.246	2,388	2.484.107	109.087.901.658	0,00228%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.040.246	1,055	1.097.460	109.087.901.658	0,00101%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	175.991	3,211	565.107	109.087.901.658	0,00052%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	175.991	4,787	842.469	109.087.901.658	0,00077%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	175.991	3,969	698.508	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	175.991	2,388	420.267	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	175.991	1,055	185.671	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	16.754.022	3,211	53.797.165	109.087.901.658	0,04932%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	16.754.022	4,787	80.201.503	109.087.901.658	0,07352%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	16.754.022	3,969	66.496.713	109.087.901.658	0,06096%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	16.754.022	2,388	40.008.605	109.087.901.658	0,03668%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	16.754.022	1,055	17.675.493	109.087.901.658	0,01620%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	5.195.905	3,211	16.684.051	109.087.901.658	0,01529%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	5.195.905	4,787	24.872.797	109.087.901.658	0,02280%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	5.195.905	3,969	20.622.547	109.087.901.658	0,01890%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	5.195.905	2,388	12.407.821	109.087.901.658	0,01137%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	5.195.905	1,055	5.481.680	109.087.901.658	0,00503%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	9.694.113	3,211	31.127.797	109.087.901.658	0,02853%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	9.694.113	4,787	46.405.719	109.087.901.658	0,04254%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	9.694.113	3,969	38.475.934	109.087.901.658	0,03527%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	9.694.113	2,388	23.149.542	109.087.901.658	0,02122%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	9.694.113	1,055	10.227.289	109.087.901.658	0,00938%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	753.441	3,211	2.419.299	109.087.901.658	0,00222%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	753.441	4,787	3.606.722	109.087.901.658	0,00331%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	753.441	3,969	2.990.407	109.087.901.658	0,00274%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	753.441	2,388	1.799.217	109.087.901.658	0,00165%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	753.441	1,055	794.880	109.087.901.658	0,00073%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.632.345	3,211	8.452.460	109.087.901.658	0,00775%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	2.632.345	4,787	12.601.036	109.087.901.658	0,01155%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	2.632.345	3,969	10.447.777	109.087.901.658	0,00958%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	2.632.345	2,388	6.286.040	109.087.901.658	0,00576%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.632.345	1,055	2.777.124	109.087.901.658	0,00255%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	11.042.972	3,211	35.458.983	109.087.901.658	0,03250%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	11.042.972	4,787	52.862.707	109.087.901.658	0,04846%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	11.042.972	3,969	43.829.556	109.087.901.658	0,04018%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	11.042.972	2,388	26.370.617	109.087.901.658	0,02417%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	11.042.972	1,055	11.650.335	109.087.901.658	0,01068%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.915.189	3,211	9.360.672	109.087.901.658	0,00858%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	2.915.189	4,787	13.955.010	109.087.901.658	0,01279%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	2.915.189	3,969	11.570.385	109.087.901.658	0,01061%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	2.915.189	2,388	6.961.471	109.087.901.658	0,00638%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.915.189	1,055	3.075.524	109.087.901.658	0,00282%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.208.569	3,211	7.091.715	109.087.901.658	0,00650%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	2.208.569	4,787	10.572.420	109.087.901.658	0,00969%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	2.208.569	3,969	8.765.810	109.087.901.658	0,00804%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	2.208.569	2,388	5.274.063	109.087.901.658	0,00483%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.208.569	1,055	2.330.040	109.087.901.658	0,00214%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	16.481.129	3,211	52.920.905	109.087.901.658	0,04851%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	16.481.129	4,787	78.895.165	109.087.901.658	0,07232%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	16.481.129	3,969	65.413.601	109.087.901.658	0,05996%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	16.481.129	2,388	39.356.936	109.087.901.658	0,03608%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	16.481.129	1,055	17.387.591	109.087.901.658	0,01594%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	3.218.053	3,211	10.333.168	109.087.901.658	0,00947%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	3.218.053	4,787	15.404.820	109.087.901.658	0,01412%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	3.218.053	3,969	12.772.452	109.087.901.658	0,01171%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	3.218.053	2,388	7.684.711	109.087.901.658	0,00704%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	3.218.053	1,055	3.395.046	109.087.901.658	0,00311%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.928.832	3,211	6.193.480	109.087.901.658	0,00568%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	1.928.832	4,787	9.233.319	109.087.901.658	0,00846%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	1.928.832	3,969	7.655.534	109.087.901.658	0,00702%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	1.928.832	2,388	4.606.051	109.087.901.658	0,00422%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.928.832	1,055	2.034.918	109.087.901.658	0,00187%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	4.306.483	3,211	13.828.117	109.087.901.658	0,01268%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	4.306.483	4,787	20.615.134	109.087.901.658	0,01890%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	4.306.483	3,969	17.092.431	109.087.901.658	0,01567%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	4.306.483	2,388	10.283.881	109.087.901.658	0,00943%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	4.306.483	1,055	4.543.340	109.087.901.658	0,00416%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.246.693	3,211	7.214.131	109.087.901.658	0,00661%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	2.246.693	4,787	10.754.919	109.087.901.658	0,00986%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	2.246.693	3,969	8.917.125	109.087.901.658	0,00817%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	2.246.693	2,388	5.365.103	109.087.901.658	0,00492%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.246.693	1,055	2.370.261	109.087.901.658	0,00217%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.899.329	3,211	6.098.745	109.087.901.658	0,00559%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	1.899.329	4,787	9.092.088	109.087.901.658	0,00833%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	1.899.329	3,969	7.538.437	109.087.901.658	0,00691%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	1.899.329	2,388	4.535.598	109.087.901.658	0,00416%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.899.329	1,055	2.003.792	109.087.901.658	0,00184%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	598.315	3,211	1.921.189	109.087.901.658	0,00176%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	598.315	4,787	2.864.134	109.087.901.658	0,00263%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	598.315	3,969	2.374.712	109.087.901.658	0,00218%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	598.315	2,388	1.428.776	109.087.901.658	0,00131%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	598.315	1,055	631.222	109.087.901.658	0,00058%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	3.373.361	3,211	10.831.862	109.087.901.658	0,00993%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	3.373.361	4,787	16.148.279	109.087.901.658	0,01480%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	3.373.361	3,969	13.388.870	109.087.901.658	0,01227%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	3.373.361	2,388	8.055.586	109.087.901.658	0,00738%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	3.373.361	1,055	3.558.896	109.087.901.658	0,00326%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	3.518.020	3,211	11.296.362	109.087.901.658	0,01036%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	3.518.020	4,787	16.840.762	109.087.901.658	0,01544%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	3.518.020	3,969	13.963.021	109.087.901.658	0,01280%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	3.518.020	2,388	8.401.032	109.087.901.658	0,00770%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	3.518.020	1,055	3.711.511	109.087.901.658	0,00340%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.054.657	3,211	6.597.504	109.087.901.658	0,00605%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	2.054.657	4,787	9.835.643	109.087.901.658	0,00902%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	2.054.657	3,969	8.154.934	109.087.901.658	0,00748%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	2.054.657	2,388	4.906.521	109.087.901.658	0,00450%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.054.657	1,055	2.167.663	109.087.901.658	0,00199%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	472.702	3,211	1.517.846	109.087.901.658	0,00139%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	472.702	4,787	2.262.824	109.087.901.658	0,00207%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	472.702	3,969	1.876.154	109.087.901.658	0,00172%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	472.702	2,388	1.128.812	109.087.901.658	0,00103%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	472.702	1,055	498.701	109.087.901.658	0,00046%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	2.357.294	3,211	7.569.271	109.087.901.658	0,00694%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	2.357.294	4,787	11.284.366	109.087.901.658	0,01034%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	2.357.294	3,969	9.356.100	109.087.901.658	0,00858%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	2.357.294	2,388	5.629.218	109.087.901.658	0,00516%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.357.294	1,055	2.486.945	109.087.901.658	0,00228%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	809.514	3,211	2.599.349	109.087.901.658	0,00238%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	809.514	4,787	3.875.144	109.087.901.658	0,00355%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	809.514	3,969	3.212.961	109.087.901.658	0,00295%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	809.514	2,388	1.933.119	109.087.901.658	0,00177%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	809.514	1,055	854.037	109.087.901.658	0,00078%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.400.010	3,211	4.495.432	109.087.901.658	0,00412%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	1.400.010	4,787	6.701.848	109.087.901.658	0,00614%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	1.400.010	3,969	5.556.640	109.087.901.658	0,00509%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	1.400.010	2,388	3.343.224	109.087.901.658	0,00306%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.400.010	1,055	1.477.011	109.087.901.658	0,00135%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FQS	321.691	1,055	339.384	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FHE	321.691	2,388	768.198	109.087.901.658	0,00070%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FMB	321.691	3,969	1.276.792	109.087.901.658	0,00117%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-F39	321.691	4,787	1.539.935	109.087.901.658	0,00141%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FPD	321.691	3,211	1.032.950	109.087.901.658	0,00095%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.077.672	3,211	3.460.405	109.087.901.658	0,00317%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	1.077.672	4,787	5.158.816	109.087.901.658	0,00473%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	1.077.672	3,969	4.277.280	109.087.901.658	0,00392%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	1.077.672	2,388	2.573.481	109.087.901.658	0,00236%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.077.672	1,055	1.136.944	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	972.896	3,211	3.123.969	109.087.901.658	0,00286%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	972.896	4,787	4.657.253	109.087.901.658	0,00427%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	972.896	3,969	3.861.424	109.087.901.658	0,00354%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	972.896	2,388	2.323.276	109.087.901.658	0,00213%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	972.896	1,055	1.026.405	109.087.901.658	0,00094%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.044.080	3,211	3.352.541	109.087.901.658	0,00307%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	1.044.080	4,787	4.998.011	109.087.901.658	0,00458%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	1.044.080	3,969	4.143.954	109.087.901.658	0,00380%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	1.044.080	2,388	2.493.263	109.087.901.658	0,00229%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.044.080	1,055	1.101.504	109.087.901.658	0,00101%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	855.456	3,211	2.746.869	109.087.901.658	0,00252%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	855.456	4,787	4.095.068	109.087.901.658	0,00375%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	855.456	3,969	3.395.305	109.087.901.658	0,00311%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	855.456	2,388	2.042.829	109.087.901.658	0,00187%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	855.456	1,055	902.506	109.087.901.658	0,00083%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	14.457	3,211	46.421	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	14.457	4,787	69.206	109.087.901.658	0,00006%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	14.457	3,969	57.380	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	14.457	2,388	34.523	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	14.457	1,055	15.252	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	190.241	3,211	610.864	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	190.241	4,787	910.684	109.087.901.658	0,00083%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	190.241	3,969	755.067	109.087.901.658	0,00069%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	190.241	2,388	454.296	109.087.901.658	0,00042%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	190.241	1,055	200.704	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	14.817	3,211	47.577	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	14.817	4,787	70.929	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	14.817	3,969	58.809	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	14.817	2,388	35.383	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	14.817	1,055	15.632	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	1.085.334	3,211	3.485.007	109.087.901.658	0,00319%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	1.085.334	4,787	5.195.494	109.087.901.658	0,00476%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	1.085.334	3,969	4.307.691	109.087.901.658	0,00395%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	1.085.334	2,388	2.591.778	109.087.901.658	0,00238%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.085.334	1,055	1.145.027	109.087.901.658	0,00105%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	233.772	3,211	750.642	109.087.901.658	0,00069%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	233.772	4,787	1.119.067	109.087.901.658	0,00103%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	233.772	3,969	927.841	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	233.772	2,388	558.248	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	233.772	1,055	246.629	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	240.592	3,211	772.541	109.087.901.658	0,00071%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	240.592	4,787	1.151.714	109.087.901.658	0,00106%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	240.592	3,969	954.910	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	240.592	2,388	574.534	109.087.901.658	0,00053%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	240.592	1,055	253.825	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	269.202	3,211	864.408	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	269.202	4,787	1.288.670	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	269.202	3,969	1.068.463	109.087.901.658	0,00098%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	269.202	2,388	642.854	109.087.901.658	0,00059%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	269.202	1,055	284.008	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FQS	346.347	1,055	365.396	109.087.901.658	0,00033%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FHE	346.347	2,388	827.077	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FMB	346.347	3,969	1.374.651	109.087.901.658	0,00126%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-F39	346.347	4,787	1.657.963	109.087.901.658	0,00152%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FPD	346.347	3,211	1.112.120	109.087.901.658	0,00102%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	174.123	3,211	559.109	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	174.123	4,787	833.527	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	174.123	3,969	691.094	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	174.123	2,388	415.806	109.087.901.658	0,00038%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	174.123	1,055	183.700	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	24.259	3,211	77.896	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	24.259	4,787	116.128	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	24.259	3,969	96.284	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	24.259	2,388	57.930	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	PARACAMBI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	24.259	1,055	25.593	109.087.901.658	0,00002%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	PARAIBA DO SUL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAP-FVC	28.449	5,370	152.771	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	PARAIBA DO SUL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVC-FPS	28.449	8,109	230.693	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	PARAIBA DO SUL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPS-FBN	28.449	5,305	150.922	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	PARAIBA DO SUL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBN-FCQ	28.449	0,230	6.543	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	PARAIBA DO SUL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAP-FVC	22.579	5,370	121.249	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	PARAIBA DO SUL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVC-FPS	22.579	8,109	183.093	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	PARAIBA DO SUL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPS-FBN	22.579	5,305	119.782	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	PARAIBA DO SUL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBN-FCQ	22.579	0,230	5.193	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	452.578	5,290	2.394.138	109.087.901.658	0,00219%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	452.578	6,575	2.975.700	109.087.901.658	0,00273%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	471.355	5,290	2.493.468	109.087.901.658	0,00229%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	471.355	6,575	3.099.159	109.087.901.658	0,00284%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	9.636.141	5,290	50.975.186	109.087.901.658	0,04673%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	9.636.141	6,575	63.357.627	109.087.901.658	0,05808%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.040.246	5,290	5.502.901	109.087.901.658	0,00504%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.040.246	6,575	6.839.617	109.087.901.658	0,00627%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	175.991	5,290	930.992	109.087.901.658	0,00085%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	175.991	6,575	1.157.141	109.087.901.658	0,00106%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	16.754.022	5,290	88.628.776	109.087.901.658	0,08125%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	16.754.022	6,575	110.157.695	109.087.901.658	0,10098%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	5.195.905	5,290	27.486.337	109.087.901.658	0,02520%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	5.195.905	6,575	34.163.075	109.087.901.658	0,03132%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	9.694.113	5,290	51.281.858	109.087.901.658	0,04701%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	9.694.113	6,575	63.738.793	109.087.901.658	0,05843%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	753.441	5,290	3.985.703	109.087.901.658	0,00365%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	753.441	6,575	4.953.875	109.087.901.658	0,00454%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.632.345	5,290	13.925.105	109.087.901.658	0,01277%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.632.345	6,575	17.307.668	109.087.901.658	0,01587%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	11.042.972	5,290	58.417.322	109.087.901.658	0,05355%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	11.042.972	6,575	72.607.541	109.087.901.658	0,06656%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.915.189	5,290	15.421.350	109.087.901.658	0,01414%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.915.189	6,575	19.167.368	109.087.901.658	0,01757%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.208.569	5,290	11.683.330	109.087.901.658	0,01071%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.208.569	6,575	14.521.341	109.087.901.658	0,01331%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	16.481.129	5,290	87.185.172	109.087.901.658	0,07992%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	16.481.129	6,575	108.363.423	109.087.901.658	0,09934%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	3.218.053	5,290	17.023.500	109.087.901.658	0,01561%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	3.218.053	6,575	21.158.698	109.087.901.658	0,01940%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.928.832	5,290	10.203.521	109.087.901.658	0,00935%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.928.832	6,575	12.682.070	109.087.901.658	0,01163%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	4.306.483	5,290	22.781.295	109.087.901.658	0,02088%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	4.306.483	6,575	28.315.126	109.087.901.658	0,02596%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.246.693	5,290	11.885.006	109.087.901.658	0,01089%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.246.693	6,575	14.772.006	109.087.901.658	0,01354%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.899.329	5,290	10.047.450	109.087.901.658	0,00921%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.899.329	6,575	12.488.088	109.087.901.658	0,01145%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	598.315	5,290	3.165.086	109.087.901.658	0,00290%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	598.315	6,575	3.933.921	109.087.901.658	0,00361%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	3.373.361	5,290	17.845.080	109.087.901.658	0,01636%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	3.373.361	6,575	22.179.849	109.087.901.658	0,02033%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	3.518.020	5,290	18.610.326	109.087.901.658	0,01706%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	3.518.020	6,575	23.130.982	109.087.901.658	0,02120%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.054.657	5,290	10.869.136	109.087.901.658	0,00996%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.054.657	6,575	13.509.370	109.087.901.658	0,01238%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	472.702	5,290	2.500.594	109.087.901.658	0,00229%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	472.702	6,575	3.108.016	109.087.901.658	0,00285%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.357.294	5,290	12.470.085	109.087.901.658	0,01143%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	2.357.294	6,575	15.499.208	109.087.901.658	0,01421%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	809.514	5,290	4.282.329	109.087.901.658	0,00393%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	809.514	6,575	5.322.555	109.087.901.658	0,00488%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.400.010	5,290	7.406.053	109.087.901.658	0,00679%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.400.010	6,575	9.205.066	109.087.901.658	0,00844%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FPL	321.691	6,575	2.115.118	109.087.901.658	0,00194%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FRK	321.691	5,290	1.701.745	109.087.901.658	0,00156%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.077.672	5,290	5.700.885	109.087.901.658	0,00523%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.077.672	6,575	7.085.693	109.087.901.658	0,00650%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	972.896	5,290	5.146.620	109.087.901.658	0,00472%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	972.896	6,575	6.396.791	109.087.901.658	0,00586%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.044.080	5,290	5.523.183	109.087.901.658	0,00506%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.044.080	6,575	6.864.826	109.087.901.658	0,00629%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	855.456	5,290	4.525.362	109.087.901.658	0,00415%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	855.456	6,575	5.624.623	109.087.901.658	0,00516%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	14.457	5,290	76.478	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	14.457	6,575	95.055	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	190.241	5,290	1.006.375	109.087.901.658	0,00092%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	190.241	6,575	1.250.835	109.087.901.658	0,00115%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	14.817	5,290	78.382	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	14.817	6,575	97.422	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.085.334	5,290	5.741.417	109.087.901.658	0,00526%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	1.085.334	6,575	7.136.071	109.087.901.658	0,00654%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	233.772	5,290	1.236.654	109.087.901.658	0,00113%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	233.772	6,575	1.537.051	109.087.901.658	0,00141%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	240.592	5,290	1.272.732	109.087.901.658	0,00117%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	240.592	6,575	1.581.892	109.087.901.658	0,00145%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	269.202	5,290	1.424.079	109.087.901.658	0,00131%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	269.202	6,575	1.770.003	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FPL	346.347	6,575	2.277.232	109.087.901.658	0,00209%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FRK	346.347	5,290	1.832.176	109.087.901.658	0,00168%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	22.579	5,290	119.443	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	22.579	6,575	148.457	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	174.123	5,290	921.111	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	174.123	6,575	1.144.859	109.087.901.658	0,00105%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	24.259	5,290	128.330	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	PINHEIRAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	24.259	6,575	159.503	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	PORTO REAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAN-FFL	240.592	7,321	1.761.374	109.087.901.658	0,00161%
MINÉRIO DE FERRO	BA, ES, MG	PORTO REAL	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAN-FFL	22.579	7,321	165.301	109.087.901.658	0,00015%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	452.578	11,450	5.182.018	109.087.901.658	0,00475%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	452.578	5,087	2.302.264	109.087.901.658	0,00211%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	452.578	7,753	3.508.837	109.087.901.658	0,00322%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	471.355	11,450	5.397.015	109.087.901.658	0,00495%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	471.355	5,087	2.397.783	109.087.901.658	0,00220%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	471.355	7,753	3.654.415	109.087.901.658	0,00335%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	9.636.141	11,450	110.333.814	109.087.901.658	0,10114%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	9.636.141	5,087	49.019.049	109.087.901.658	0,04494%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	9.636.141	7,753	74.709.001	109.087.901.658	0,06849%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.040.246	11,450	11.910.817	109.087.901.658	0,01092%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	1.040.246	5,087	5.291.731	109.087.901.658	0,00485%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.040.246	7,753	8.065.027	109.087.901.658	0,00739%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	175.991	11,450	2.015.097	109.087.901.658	0,00185%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	175.991	5,087	895.266	109.087.901.658	0,00082%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	175.991	7,753	1.364.458	109.087.901.658	0,00125%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	16.754.022	11,450	191.833.552	109.087.901.658	0,17585%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	16.754.022	5,087	85.227.710	109.087.901.658	0,07813%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	16.754.022	7,753	129.893.933	109.087.901.658	0,11907%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	5.195.905	11,450	59.493.112	109.087.901.658	0,05454%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	5.195.905	5,087	26.431.569	109.087.901.658	0,02423%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	5.195.905	7,753	40.283.851	109.087.901.658	0,03693%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	9.694.113	11,450	110.997.594	109.087.901.658	0,10175%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	9.694.113	5,087	49.313.953	109.087.901.658	0,04521%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	9.694.113	7,753	75.158.458	109.087.901.658	0,06890%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	753.441	11,450	8.626.899	109.087.901.658	0,00791%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	753.441	5,087	3.832.754	109.087.901.658	0,00351%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	753.441	7,753	5.841.428	109.087.901.658	0,00535%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.632.345	11,450	30.140.350	109.087.901.658	0,02763%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	2.632.345	5,087	13.390.739	109.087.901.658	0,01228%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.632.345	7,753	20.408.571	109.087.901.658	0,01871%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	3.225.523	11,450	36.932.238	109.087.901.658	0,03386%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	3.225.523	5,087	16.408.236	109.087.901.658	0,01504%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	3.225.523	7,753	25.007.480	109.087.901.658	0,02292%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	11.042.972	11,450	126.442.029	109.087.901.658	0,11591%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	11.042.972	5,087	56.175.599	109.087.901.658	0,05150%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	11.042.972	7,753	85.616.162	109.087.901.658	0,07848%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.360.110	11,450	15.573.260	109.087.901.658	0,01428%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	1.360.110	5,087	6.918.880	109.087.901.658	0,00634%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.360.110	7,753	10.544.933	109.087.901.658	0,00967%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.915.189	11,450	33.378.914	109.087.901.658	0,03060%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	2.915.189	5,087	14.829.566	109.087.901.658	0,01359%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.915.189	7,753	22.601.460	109.087.901.658	0,02072%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.208.569	11,450	25.288.115	109.087.901.658	0,02318%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	2.208.569	5,087	11.234.991	109.087.901.658	0,01030%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.208.569	7,753	17.123.035	109.087.901.658	0,01570%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	140.317	11,450	1.606.630	109.087.901.658	0,00147%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	140.317	5,087	713.793	109.087.901.658	0,00065%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	140.317	7,753	1.087.878	109.087.901.658	0,00100%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	16.481.129	11,450	188.708.927	109.087.901.658	0,17299%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	16.481.129	5,087	83.839.503	109.087.901.658	0,07685%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	16.481.129	7,753	127.778.193	109.087.901.658	0,11713%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	3.218.053	11,450	36.846.707	109.087.901.658	0,03378%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	3.218.053	5,087	16.370.236	109.087.901.658	0,01501%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	3.218.053	7,753	24.949.565	109.087.901.658	0,02287%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.928.832	11,450	22.085.126	109.087.901.658	0,02025%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	1.928.832	5,087	9.811.968	109.087.901.658	0,00899%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.928.832	7,753	14.954.234	109.087.901.658	0,01371%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	4.306.483	11,450	49.309.230	109.087.901.658	0,04520%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	4.306.483	5,087	21.907.079	109.087.901.658	0,02008%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	4.306.483	7,753	33.388.163	109.087.901.658	0,03061%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.246.693	11,450	25.724.635	109.087.901.658	0,02358%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	2.246.693	5,087	11.428.927	109.087.901.658	0,01048%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.246.693	7,753	17.418.611	109.087.901.658	0,01597%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.899.329	11,450	21.747.317	109.087.901.658	0,01994%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	1.899.329	5,087	9.661.887	109.087.901.658	0,00886%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.899.329	7,753	14.725.498	109.087.901.658	0,01350%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	598.315	11,450	6.850.707	109.087.901.658	0,00628%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	598.315	5,087	3.043.628	109.087.901.658	0,00279%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	598.315	7,753	4.638.736	109.087.901.658	0,00425%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	3.373.361	11,450	38.624.983	109.087.901.658	0,03541%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	3.373.361	5,087	17.160.287	109.087.901.658	0,01573%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	3.373.361	7,753	26.153.668	109.087.901.658	0,02397%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	3.518.020	11,450	40.281.329	109.087.901.658	0,03693%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	3.518.020	5,087	17.896.168	109.087.901.658	0,01641%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	3.518.020	7,753	27.275.209	109.087.901.658	0,02500%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	37.363	11,450	427.806	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	37.363	5,087	190.066	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	37.363	7,753	289.675	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.054.657	11,450	23.525.823	109.087.901.658	0,02157%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	2.054.657	5,087	10.452.040	109.087.901.658	0,00958%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.054.657	7,753	15.929.756	109.087.901.658	0,01460%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	472.702	11,450	5.412.438	109.087.901.658	0,00496%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	472.702	5,087	2.404.635	109.087.901.658	0,00220%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	472.702	7,753	3.664.859	109.087.901.658	0,00336%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.357.294	11,450	26.991.016	109.087.901.658	0,02474%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	2.357.294	5,087	11.991.555	109.087.901.658	0,01099%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	2.357.294	7,753	18.276.100	109.087.901.658	0,01675%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	809.514	11,450	9.268.935	109.087.901.658	0,00850%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	809.514	5,087	4.117.998	109.087.901.658	0,00377%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	809.514	7,753	6.276.162	109.087.901.658	0,00575%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.400.010	11,450	16.030.115	109.087.901.658	0,01469%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	1.400.010	5,087	7.121.851	109.087.901.658	0,00653%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.400.010	7,753	10.854.278	109.087.901.658	0,00995%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.077.672	11,450	12.339.344	109.087.901.658	0,01131%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	1.077.672	5,087	5.482.117	109.087.901.658	0,00503%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.077.672	7,753	8.355.191	109.087.901.658	0,00766%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	972.896	11,450	11.139.659	109.087.901.658	0,01021%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	972.896	5,087	4.949.122	109.087.901.658	0,00454%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	972.896	7,753	7.542.863	109.087.901.658	0,00691%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.044.080	11,450	11.954.716	109.087.901.658	0,01096%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	1.044.080	5,087	5.311.235	109.087.901.658	0,00487%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.044.080	7,753	8.094.752	109.087.901.658	0,00742%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	855.456	11,450	9.794.971	109.087.901.658	0,00898%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	855.456	5,087	4.351.705	109.087.901.658	0,00399%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	855.456	7,753	6.632.350	109.087.901.658	0,00608%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	14.457	11,450	165.533	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	14.457	5,087	73.543	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	14.457	7,753	112.085	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	190.241	11,450	2.178.259	109.087.901.658	0,00200%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	190.241	5,087	967.756	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	190.241	7,753	1.474.938	109.087.901.658	0,00135%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	14.817	11,450	169.655	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	14.817	5,087	75.374	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	14.817	7,753	114.876	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.085.334	11,450	12.427.074	109.087.901.658	0,01139%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	1.085.334	5,087	5.521.094	109.087.901.658	0,00506%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	1.085.334	7,753	8.414.595	109.087.901.658	0,00771%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	233.772	11,450	2.676.689	109.087.901.658	0,00245%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	233.772	5,087	1.189.198	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	233.772	7,753	1.812.434	109.087.901.658	0,00166%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	269.202	11,450	3.082.363	109.087.901.658	0,00283%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	269.202	5,087	1.369.431	109.087.901.658	0,00126%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	269.202	7,753	2.087.123	109.087.901.658	0,00191%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FPT	346.347	7,753	2.685.228	109.087.901.658	0,00246%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FJQ	346.347	5,087	1.761.867	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FOA	346.347	11,450	3.965.673	109.087.901.658	0,00364%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	174.123	11,450	1.993.708	109.087.901.658	0,00183%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	174.123	5,087	885.764	109.087.901.658	0,00081%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	174.123	7,753	1.349.976	109.087.901.658	0,00124%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	24.259	11,450	277.766	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	24.259	5,087	123.406	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	QUATIS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	24.259	7,753	188.080	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	452.578	3,638	1.646.479	109.087.901.658	0,00151%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	452.578	9,463	4.282.746	109.087.901.658	0,00393%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	452.578	2,640	1.194.806	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	471.355	3,638	1.714.789	109.087.901.658	0,00157%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	471.355	9,463	4.460.432	109.087.901.658	0,00409%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	471.355	2,640	1.244.377	109.087.901.658	0,00114%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	9.636.141	3,638	35.056.281	109.087.901.658	0,03214%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	9.636.141	9,463	91.186.802	109.087.901.658	0,08359%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	9.636.141	2,640	25.439.412	109.087.901.658	0,02332%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.040.246	3,638	3.784.415	109.087.901.658	0,00347%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	1.040.246	9,463	9.843.848	109.087.901.658	0,00902%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.040.246	2,640	2.746.249	109.087.901.658	0,00252%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	175.991	3,638	640.255	109.087.901.658	0,00059%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	175.991	9,463	1.665.403	109.087.901.658	0,00153%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	175.991	2,640	464.616	109.087.901.658	0,00043%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	16.754.022	3,638	60.951.132	109.087.901.658	0,05587%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	16.754.022	9,463	158.543.310	109.087.901.658	0,14534%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	16.754.022	2,640	44.230.618	109.087.901.658	0,04055%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	5.195.905	3,638	18.902.702	109.087.901.658	0,01733%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	5.195.905	9,463	49.168.849	109.087.901.658	0,04507%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	5.195.905	2,640	13.717.189	109.087.901.658	0,01257%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	9.694.113	3,638	35.267.183	109.087.901.658	0,03233%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	9.694.113	9,463	91.735.391	109.087.901.658	0,08409%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	9.694.113	2,640	25.592.458	109.087.901.658	0,02346%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	753.441	3,638	2.741.018	109.087.901.658	0,00251%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	753.441	9,463	7.129.812	109.087.901.658	0,00654%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	753.441	2,640	1.989.084	109.087.901.658	0,00182%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.632.345	3,638	9.576.471	109.087.901.658	0,00878%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	2.632.345	9,463	24.909.881	109.087.901.658	0,02283%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.632.345	2,640	6.949.391	109.087.901.658	0,00637%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	3.225.523	3,638	11.734.453	109.087.901.658	0,01076%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	3.225.523	9,463	30.523.124	109.087.901.658	0,02798%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	3.225.523	2,640	8.515.381	109.087.901.658	0,00781%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	11.042.972	3,638	40.174.332	109.087.901.658	0,03683%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	11.042.972	9,463	104.499.644	109.087.901.658	0,09579%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	11.042.972	2,640	29.153.446	109.087.901.658	0,02672%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.360.110	3,638	4.948.080	109.087.901.658	0,00454%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	1.360.110	9,463	12.870.721	109.087.901.658	0,01180%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.360.110	2,640	3.590.690	109.087.901.658	0,00329%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.915.189	3,638	10.605.458	109.087.901.658	0,00972%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	2.915.189	9,463	27.586.434	109.087.901.658	0,02529%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.915.189	2,640	7.696.099	109.087.901.658	0,00705%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.208.569	3,638	8.034.774	109.087.901.658	0,00737%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	2.208.569	9,463	20.899.688	109.087.901.658	0,01916%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.208.569	2,640	5.830.622	109.087.901.658	0,00534%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	140.317	3,638	510.473	109.087.901.658	0,00047%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	140.317	9,463	1.327.820	109.087.901.658	0,00122%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	140.317	2,640	370.437	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	16.481.129	3,638	59.958.347	109.087.901.658	0,05496%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	16.481.129	9,463	155.960.924	109.087.901.658	0,14297%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	16.481.129	2,640	43.510.181	109.087.901.658	0,03989%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	3.218.053	3,638	11.707.277	109.087.901.658	0,01073%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	3.218.053	9,463	30.452.436	109.087.901.658	0,02792%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	3.218.053	2,640	8.495.660	109.087.901.658	0,00779%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.928.832	3,638	7.017.091	109.087.901.658	0,00643%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	1.928.832	9,463	18.252.537	109.087.901.658	0,01673%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.928.832	2,640	5.092.116	109.087.901.658	0,00467%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	4.306.483	3,638	15.666.985	109.087.901.658	0,01436%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	4.306.483	9,463	40.752.249	109.087.901.658	0,03736%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	4.306.483	2,640	11.369.115	109.087.901.658	0,01042%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.246.693	3,638	8.173.469	109.087.901.658	0,00749%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	2.246.693	9,463	21.260.456	109.087.901.658	0,01949%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.246.693	2,640	5.931.270	109.087.901.658	0,00544%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.899.329	3,638	6.909.759	109.087.901.658	0,00633%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	1.899.329	9,463	17.973.350	109.087.901.658	0,01648%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.899.329	2,640	5.014.229	109.087.901.658	0,00460%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	598.315	3,638	2.176.670	109.087.901.658	0,00200%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	598.315	9,463	5.661.855	109.087.901.658	0,00519%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	598.315	2,640	1.579.552	109.087.901.658	0,00145%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	3.373.361	3,638	12.272.287	109.087.901.658	0,01125%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	3.373.361	9,463	31.922.115	109.087.901.658	0,02926%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	3.373.361	2,640	8.905.673	109.087.901.658	0,00816%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	3.518.020	3,638	12.798.557	109.087.901.658	0,01173%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	3.518.020	9,463	33.291.023	109.087.901.658	0,03052%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	3.518.020	2,640	9.287.573	109.087.901.658	0,00851%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	37.363	3,638	135.927	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	37.363	9,463	353.566	109.087.901.658	0,00032%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	37.363	2,640	98.638	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.054.657	3,638	7.474.842	109.087.901.658	0,00685%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	2.054.657	9,463	19.443.219	109.087.901.658	0,01782%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.054.657	2,640	5.424.294	109.087.901.658	0,00497%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	472.702	3,638	1.719.690	109.087.901.658	0,00158%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	472.702	9,463	4.473.179	109.087.901.658	0,00410%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	472.702	2,640	1.247.933	109.087.901.658	0,00114%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	2.357.294	3,638	8.575.836	109.087.901.658	0,00786%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	2.357.294	9,463	22.307.073	109.087.901.658	0,02045%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	2.357.294	2,640	6.223.256	109.087.901.658	0,00570%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	809.514	3,638	2.945.012	109.087.901.658	0,00270%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	809.514	9,463	7.660.431	109.087.901.658	0,00702%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	809.514	2,640	2.137.117	109.087.901.658	0,00196%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.400.010	3,638	5.093.236	109.087.901.658	0,00467%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	1.400.010	9,463	13.248.295	109.087.901.658	0,01214%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.400.010	2,640	3.696.026	109.087.901.658	0,00339%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.077.672	3,638	3.920.571	109.087.901.658	0,00359%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	1.077.672	9,463	10.198.010	109.087.901.658	0,00935%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.077.672	2,640	2.845.054	109.087.901.658	0,00261%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	972.896	3,638	3.539.396	109.087.901.658	0,00324%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	972.896	9,463	9.206.515	109.087.901.658	0,00844%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	972.896	2,640	2.568.445	109.087.901.658	0,00235%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.044.080	3,638	3.798.363	109.087.901.658	0,00348%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	1.044.080	9,463	9.880.129	109.087.901.658	0,00906%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.044.080	2,640	2.756.371	109.087.901.658	0,00253%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	855.456	3,638	3.112.149	109.087.901.658	0,00285%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	855.456	9,463	8.095.180	109.087.901.658	0,00742%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	855.456	2,640	2.258.404	109.087.901.658	0,00207%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	14.457	3,638	52.595	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	14.457	9,463	136.807	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	14.457	2,640	38.166	109.087.901.658	0,00003%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	190.241	3,638	692.097	109.087.901.658	0,00063%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	190.241	9,463	1.800.251	109.087.901.658	0,00165%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	190.241	2,640	502.236	109.087.901.658	0,00046%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	14.817	3,638	53.904	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	14.817	9,463	140.213	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	14.817	2,640	39.117	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	1.085.334	3,638	3.948.445	109.087.901.658	0,00362%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	1.085.334	9,463	10.270.516	109.087.901.658	0,00941%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	1.085.334	2,640	2.865.282	109.087.901.658	0,00263%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	233.772	3,638	850.463	109.087.901.658	0,00078%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	233.772	9,463	2.212.184	109.087.901.658	0,00203%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	233.772	2,640	617.158	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQU-FEP	240.592	2,578	620.246	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEP-FIA	240.592	6,405	1.540.992	109.087.901.658	0,00141%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMU-FAN	240.592	3,986	959.041	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAN-FFL	240.592	8,084	1.944.946	109.087.901.658	0,00178%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	269.202	3,638	979.357	109.087.901.658	0,00090%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	269.202	9,463	2.547.459	109.087.901.658	0,00234%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	269.202	2,640	710.693	109.087.901.658	0,00065%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FOA	346.347	2,640	914.356	109.087.901.658	0,00084%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FFU	346.347	9,463	3.277.482	109.087.901.658	0,00300%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FRP	346.347	3,638	1.260.010	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQU-FEP	22.579	2,578	58.209	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEP-FIA	22.579	6,405	144.618	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMU-FAN	22.579	3,986	90.004	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAN-FFL	22.579	8,084	182.529	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	174.123	3,638	633.459	109.087.901.658	0,00058%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	174.123	9,463	1.647.726	109.087.901.658	0,00151%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	174.123	2,640	459.685	109.087.901.658	0,00042%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	24.259	3,638	88.254	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	24.259	9,463	229.563	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	RESENDE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	24.259	2,640	64.044	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	RIO DAS FLORES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBL-FAI	28.449	0,565	16.074	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	RIO DAS FLORES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBL-FAI	22.579	0,565	12.757	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	2.915.189	0,695	2.026.056	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-HSG	2.915.189	10,175	29.662.048	109.087.901.658	0,02719%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	2.208.569	0,695	1.534.955	109.087.901.658	0,00141%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-HSG	2.208.569	10,175	22.472.190	109.087.901.658	0,02060%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	1.400.010	0,695	973.007	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-HSG	1.400.010	10,175	14.245.102	109.087.901.658	0,01306%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	14.817	0,695	10.298	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-HSG	14.817	10,175	150.763	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	240.592	0,695	167.211	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-HSG	240.592	10,175	2.448.024	109.087.901.658	0,00224%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-FBA	346.347	0,695	240.711	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	174.123	0,695	121.015	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	RIO DE JANEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-HSG	174.123	10,175	1.771.702	109.087.901.658	0,00162%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOS	28.449	2,117	60.227	109.087.901.658	0,00006%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FFX	28.449	9,983	284.006	109.087.901.658	0,00026%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FGD	28.449	8,423	239.626	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FQS	28.449	3,003	85.432	109.087.901.658	0,00008%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	452.578	3,003	1.359.092	109.087.901.658	0,00125%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	452.578	8,423	3.812.064	109.087.901.658	0,00349%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	452.578	9,983	4.518.086	109.087.901.658	0,00414%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	452.578	2,117	958.108	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	471.355	3,003	1.415.479	109.087.901.658	0,00130%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	471.355	8,423	3.970.223	109.087.901.658	0,00364%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	471.355	9,983	4.705.537	109.087.901.658	0,00431%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	471.355	2,117	997.859	109.087.901.658	0,00091%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	9.636.141	3,003	28.937.331	109.087.901.658	0,02653%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	9.636.141	8,423	81.165.216	109.087.901.658	0,07440%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	9.636.141	9,983	96.197.596	109.087.901.658	0,08818%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	9.636.141	2,117	20.399.710	109.087.901.658	0,01870%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.040.246	3,003	3.123.859	109.087.901.658	0,00286%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	1.040.246	8,423	8.761.992	109.087.901.658	0,00803%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	1.040.246	9,983	10.384.776	109.087.901.658	0,00952%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.040.246	2,117	2.202.201	109.087.901.658	0,00202%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	175.991	3,003	528.501	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	175.991	8,423	1.482.372	109.087.901.658	0,00136%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	175.991	9,983	1.756.918	109.087.901.658	0,00161%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	175.991	2,117	372.573	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	16.754.022	3,003	50.312.328	109.087.901.658	0,04612%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	16.754.022	8,423	141.119.127	109.087.901.658	0,12936%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	16.754.022	9,983	167.255.402	109.087.901.658	0,15332%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	16.754.022	2,117	35.468.265	109.087.901.658	0,03251%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	5.195.905	3,003	15.603.303	109.087.901.658	0,01430%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	5.195.905	8,423	43.765.108	109.087.901.658	0,04012%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	5.195.905	9,983	51.870.720	109.087.901.658	0,04755%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	5.195.905	2,117	10.999.731	109.087.901.658	0,01008%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	9.694.113	3,003	29.111.421	109.087.901.658	0,02669%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	9.694.113	8,423	81.653.514	109.087.901.658	0,07485%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	9.694.113	9,983	96.776.330	109.087.901.658	0,08871%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	9.694.113	2,117	20.522.437	109.087.901.658	0,01881%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	753.441	3,003	2.262.583	109.087.901.658	0,00207%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	753.441	8,423	6.346.234	109.087.901.658	0,00582%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	753.441	9,983	7.521.602	109.087.901.658	0,00689%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	753.441	2,117	1.595.035	109.087.901.658	0,00146%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.632.345	3,003	7.904.932	109.087.901.658	0,00725%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	2.632.345	8,423	22.172.242	109.087.901.658	0,02033%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	2.632.345	9,983	26.278.700	109.087.901.658	0,02409%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.632.345	2,117	5.572.674	109.087.901.658	0,00511%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	11.042.972	3,003	33.162.045	109.087.901.658	0,03040%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	11.042.972	8,423	93.014.953	109.087.901.658	0,08527%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	11.042.972	9,983	110.241.989	109.087.901.658	0,10106%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	11.042.972	2,117	23.377.972	109.087.901.658	0,02143%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.915.189	3,003	8.754.313	109.087.901.658	0,00803%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	2.915.189	8,423	24.554.637	109.087.901.658	0,02251%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	2.915.189	9,983	29.102.332	109.087.901.658	0,02668%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.915.189	2,117	6.171.455	109.087.901.658	0,00566%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.208.569	3,003	6.632.333	109.087.901.658	0,00608%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	2.208.569	8,423	18.602.777	109.087.901.658	0,01705%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	2.208.569	9,983	22.048.144	109.087.901.658	0,02021%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.208.569	2,117	4.675.541	109.087.901.658	0,00429%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	16.481.129	3,003	49.492.830	109.087.901.658	0,04537%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	16.481.129	8,423	138.820.550	109.087.901.658	0,12726%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	16.481.129	9,983	164.531.111	109.087.901.658	0,15082%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	16.481.129	2,117	34.890.550	109.087.901.658	0,03198%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	3.218.053	3,003	9.663.813	109.087.901.658	0,00886%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	3.218.053	8,423	27.105.660	109.087.901.658	0,02485%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	3.218.053	9,983	32.125.823	109.087.901.658	0,02945%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	3.218.053	2,117	6.812.618	109.087.901.658	0,00625%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.928.832	3,003	5.792.282	109.087.901.658	0,00531%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	1.928.832	8,423	16.246.552	109.087.901.658	0,01489%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	1.928.832	9,983	19.255.530	109.087.901.658	0,01765%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.928.832	2,117	4.083.337	109.087.901.658	0,00374%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	4.306.483	3,003	12.932.368	109.087.901.658	0,01185%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	4.306.483	8,423	36.273.506	109.087.901.658	0,03325%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	4.306.483	9,983	42.991.620	109.087.901.658	0,03941%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	4.306.483	2,117	9.116.825	109.087.901.658	0,00836%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.246.693	3,003	6.746.819	109.087.901.658	0,00618%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	2.246.693	8,423	18.923.895	109.087.901.658	0,01735%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	2.246.693	9,983	22.428.736	109.087.901.658	0,02056%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.246.693	2,117	4.756.249	109.087.901.658	0,00436%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.899.329	3,003	5.703.685	109.087.901.658	0,00523%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	1.899.329	8,423	15.998.048	109.087.901.658	0,01467%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	1.899.329	9,983	18.961.001	109.087.901.658	0,01738%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.899.329	2,117	4.020.879	109.087.901.658	0,00369%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	598.315	3,003	1.796.740	109.087.901.658	0,00165%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	598.315	8,423	5.039.607	109.087.901.658	0,00462%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	598.315	9,983	5.972.979	109.087.901.658	0,00548%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	598.315	2,117	1.266.633	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	3.373.361	3,003	10.130.203	109.087.901.658	0,00929%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	3.373.361	8,423	28.413.820	109.087.901.658	0,02605%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	3.373.361	9,983	33.676.263	109.087.901.658	0,03087%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	3.373.361	2,117	7.141.405	109.087.901.658	0,00655%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	3.518.020	3,003	10.564.614	109.087.901.658	0,00968%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	3.518.020	8,423	29.632.282	109.087.901.658	0,02716%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	3.518.020	9,983	35.120.394	109.087.901.658	0,03219%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	3.518.020	2,117	7.447.648	109.087.901.658	0,00683%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.054.657	3,003	6.170.135	109.087.901.658	0,00566%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	2.054.657	8,423	17.306.376	109.087.901.658	0,01586%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	2.054.657	9,983	20.511.641	109.087.901.658	0,01880%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.054.657	2,117	4.349.709	109.087.901.658	0,00399%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	472.702	3,003	1.419.524	109.087.901.658	0,00130%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	472.702	8,423	3.981.569	109.087.901.658	0,00365%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	472.702	9,983	4.718.984	109.087.901.658	0,00433%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	472.702	2,117	1.000.710	109.087.901.658	0,00092%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	2.357.294	3,003	7.078.954	109.087.901.658	0,00649%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	2.357.294	8,423	19.855.487	109.087.901.658	0,01820%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	2.357.294	9,983	23.532.866	109.087.901.658	0,02157%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	2.357.294	2,117	4.990.391	109.087.901.658	0,00457%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	809.514	3,003	2.430.971	109.087.901.658	0,00223%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	809.514	8,423	6.818.536	109.087.901.658	0,00625%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	809.514	9,983	8.081.378	109.087.901.658	0,00741%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	809.514	2,117	1.713.741	109.087.901.658	0,00157%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.400.010	3,003	4.204.230	109.087.901.658	0,00385%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	1.400.010	8,423	11.792.284	109.087.901.658	0,01081%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	1.400.010	9,983	13.976.300	109.087.901.658	0,01281%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.400.010	2,117	2.963.821	109.087.901.658	0,00272%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOS	321.691	2,117	681.020	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FFX	321.691	9,983	3.211.441	109.087.901.658	0,00294%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FGD	321.691	8,423	2.709.603	109.087.901.658	0,00248%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FQS	321.691	3,003	966.038	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.077.672	3,003	3.236.249	109.087.901.658	0,00297%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	1.077.672	8,423	9.077.231	109.087.901.658	0,00832%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	1.077.672	9,983	10.758.400	109.087.901.658	0,00986%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.077.672	2,117	2.281.432	109.087.901.658	0,00209%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	972.896	3,003	2.921.607	109.087.901.658	0,00268%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	972.896	8,423	8.194.703	109.087.901.658	0,00751%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	972.896	9,983	9.712.421	109.087.901.658	0,00890%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	972.896	2,117	2.059.621	109.087.901.658	0,00189%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.044.080	3,003	3.135.372	109.087.901.658	0,00287%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	1.044.080	8,423	8.794.286	109.087.901.658	0,00806%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	1.044.080	9,983	10.423.051	109.087.901.658	0,00955%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.044.080	2,117	2.210.317	109.087.901.658	0,00203%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	855.456	3,003	2.568.934	109.087.901.658	0,00235%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	855.456	8,423	7.205.506	109.087.901.658	0,00661%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	855.456	9,983	8.540.017	109.087.901.658	0,00783%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	855.456	2,117	1.811.000	109.087.901.658	0,00166%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	14.457	3,003	43.414	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	14.457	8,423	121.771	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	14.457	9,983	144.324	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	14.457	2,117	30.605	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	190.241	3,003	571.294	109.087.901.658	0,00052%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	190.241	8,423	1.602.400	109.087.901.658	0,00147%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	190.241	9,983	1.899.176	109.087.901.658	0,00174%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	190.241	2,117	402.740	109.087.901.658	0,00037%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	14.817	3,003	44.495	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	14.817	8,423	124.804	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	14.817	9,983	147.918	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	14.817	2,117	31.368	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	1.085.334	3,003	3.259.258	109.087.901.658	0,00299%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	1.085.334	8,423	9.141.768	109.087.901.658	0,00838%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	1.085.334	9,983	10.834.889	109.087.901.658	0,00993%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	1.085.334	2,117	2.297.652	109.087.901.658	0,00211%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	233.772	3,003	702.017	109.087.901.658	0,00064%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	233.772	8,423	1.969.062	109.087.901.658	0,00181%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	233.772	9,983	2.333.746	109.087.901.658	0,00214%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	233.772	2,117	494.895	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	240.592	3,003	722.498	109.087.901.658	0,00066%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	240.592	8,423	2.026.506	109.087.901.658	0,00186%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	240.592	9,983	2.401.830	109.087.901.658	0,00220%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	240.592	2,117	509.333	109.087.901.658	0,00047%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	269.202	3,003	808.414	109.087.901.658	0,00074%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	269.202	8,423	2.267.488	109.087.901.658	0,00208%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	269.202	9,983	2.687.444	109.087.901.658	0,00246%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	269.202	2,117	569.901	109.087.901.658	0,00052%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOS	346.347	2,117	733.217	109.087.901.658	0,00067%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FFX	346.347	9,983	3.457.582	109.087.901.658	0,00317%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FGD	346.347	8,423	2.917.281	109.087.901.658	0,00267%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FQS	346.347	3,003	1.040.080	109.087.901.658	0,00095%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	174.123	3,003	522.891	109.087.901.658	0,00048%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	174.123	8,423	1.466.638	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	174.123	9,983	1.738.270	109.087.901.658	0,00159%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	174.123	2,117	368.618	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	24.259	3,003	72.850	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	24.259	8,423	204.334	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	24.259	9,983	242.178	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	SEROPEDICA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	24.259	2,117	51.356	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBN-FCQ	28.449	3,448	98.092	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBN-FCQ	28.449	1,119	31.834	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCQ-FTR	28.449	1,452	41.308	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCQ-FTR	28.449	1,458	41.479	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTR-FFP	28.449	4,828	137.352	109.087.901.658	0,00013%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBN-FCQ	22.579	1,119	25.266	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBN-FCQ	22.579	3,448	77.852	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCQ-FTR	22.579	1,452	32.785	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCQ-FTR	22.579	1,458	32.920	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	TRES RIOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTR-FFP	22.579	4,828	109.011	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	VALENCA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVS-FBJ	28.449	2,737	77.865	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	VALENCA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBJ-FBL	28.449	2,580	73.398	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	VALENCA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVS-FBJ	22.579	2,737	61.799	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	VALENCA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBJ-FBL	22.579	2,580	58.254	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDQ-FAT	28.449	0,097	2.760	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAT-FDR	28.449	7,341	208.844	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDR-FVS	28.449	7,100	201.988	109.087.901.658	0,00019%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVS-FBJ	28.449	1,356	38.577	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBJ-FBL	28.449	11,886	338.145	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBL-FAI	28.449	7,795	221.760	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAI-FSL	28.449	4,748	135.076	109.087.901.658	0,00012%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSL-FNC	28.449	2,731	77.694	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FNC-FNY	28.449	2,758	78.462	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FNY-FAP	28.449	4,252	120.965	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAP-FVC	28.449	3,277	93.227	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDQ-FAT	22.579	0,097	2.190	109.087.901.658	0,00000%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAT-FDR	22.579	7,341	165.752	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDR-FVS	22.579	7,100	160.311	109.087.901.658	0,00015%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVS-FBJ	22.579	1,356	30.617	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBJ-FBL	22.579	11,886	268.374	109.087.901.658	0,00025%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBL-FAI	22.579	7,795	176.003	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAI-FSL	22.579	4,748	107.205	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSL-FNC	22.579	2,731	61.663	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FNC-FNY	22.579	2,758	62.273	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FNY-FAP	22.579	4,252	96.006	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	VASSOURAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAP-FVC	22.579	3,277	73.991	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	452.578	1,396	631.799	109.087.901.658	0,00058%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	452.578	3,187	1.442.366	109.087.901.658	0,00132%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	452.578	6,757	3.058.070	109.087.901.658	0,00280%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	452.578	2,792	1.263.598	109.087.901.658	0,00116%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	471.355	1,396	658.012	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	471.355	3,187	1.502.208	109.087.901.658	0,00138%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	471.355	6,757	3.184.946	109.087.901.658	0,00292%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	471.355	2,792	1.316.023	109.087.901.658	0,00121%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	9.636.141	1,396	13.452.053	109.087.901.658	0,01233%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	9.636.141	3,187	30.710.381	109.087.901.658	0,02815%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	9.636.141	6,757	65.111.405	109.087.901.658	0,05969%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	9.636.141	2,792	26.904.106	109.087.901.658	0,02466%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.040.246	1,396	1.452.183	109.087.901.658	0,00133%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	1.040.246	3,187	3.315.264	109.087.901.658	0,00304%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	1.040.246	6,757	7.028.942	109.087.901.658	0,00644%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.040.246	2,792	2.904.367	109.087.901.658	0,00266%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	175.991	1,396	245.683	109.087.901.658	0,00023%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	175.991	3,187	560.883	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	175.991	6,757	1.189.171	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	175.991	2,792	491.367	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	16.754.022	1,396	23.388.615	109.087.901.658	0,02144%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	16.754.022	3,187	53.395.068	109.087.901.658	0,04895%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	16.754.022	6,757	113.206.927	109.087.901.658	0,10378%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	16.754.022	2,792	46.777.229	109.087.901.658	0,04288%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	5.195.905	1,396	7.253.483	109.087.901.658	0,00665%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	5.195.905	3,187	16.559.349	109.087.901.658	0,01518%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	5.195.905	6,757	35.108.730	109.087.901.658	0,03218%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	5.195.905	2,792	14.506.967	109.087.901.658	0,01330%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	9.694.113	1,396	13.532.982	109.087.901.658	0,01241%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	9.694.113	3,187	30.895.138	109.087.901.658	0,02832%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	9.694.113	6,757	65.503.122	109.087.901.658	0,06005%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	9.694.113	2,792	27.065.963	109.087.901.658	0,02481%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	753.441	1,396	1.051.804	109.087.901.658	0,00096%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	753.441	3,187	2.401.216	109.087.901.658	0,00220%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	753.441	6,757	5.091.001	109.087.901.658	0,00467%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	753.441	2,792	2.103.607	109.087.901.658	0,00193%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.632.345	1,396	3.674.754	109.087.901.658	0,00337%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	2.632.345	3,187	8.389.284	109.087.901.658	0,00769%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	2.632.345	6,757	17.786.755	109.087.901.658	0,01630%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.632.345	2,792	7.349.507	109.087.901.658	0,00674%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	3.225.523	1,396	4.502.830	109.087.901.658	0,00413%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	3.225.523	3,187	10.279.742	109.087.901.658	0,00942%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	11.042.972	1,396	15.415.989	109.087.901.658	0,01413%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	11.042.972	3,187	35.193.952	109.087.901.658	0,03226%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	11.042.972	6,757	74.617.362	109.087.901.658	0,06840%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	11.042.972	2,792	30.831.978	109.087.901.658	0,02826%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.360.110	1,396	1.898.714	109.087.901.658	0,00174%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	1.360.110	3,187	4.334.671	109.087.901.658	0,00397%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.915.189	1,396	4.069.604	109.087.901.658	0,00373%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	2.915.189	3,187	9.290.707	109.087.901.658	0,00852%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	2.915.189	6,757	19.697.932	109.087.901.658	0,01806%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.915.189	2,792	8.139.208	109.087.901.658	0,00746%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.208.569	1,396	3.083.162	109.087.901.658	0,00283%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	2.208.569	3,187	7.038.709	109.087.901.658	0,00645%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	2.208.569	6,757	14.923.301	109.087.901.658	0,01368%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.208.569	2,792	6.166.325	109.087.901.658	0,00565%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	140.317	1,396	195.883	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	140.317	3,187	447.190	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	16.481.129	1,396	23.007.656	109.087.901.658	0,02109%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	16.481.129	3,187	52.525.358	109.087.901.658	0,04815%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	16.481.129	6,757	111.362.989	109.087.901.658	0,10209%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	16.481.129	2,792	46.015.312	109.087.901.658	0,04218%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	3.218.053	1,396	4.492.402	109.087.901.658	0,00412%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	3.218.053	3,187	10.255.935	109.087.901.658	0,00940%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	3.218.053	6,757	21.744.384	109.087.901.658	0,01993%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	3.218.053	2,792	8.984.804	109.087.901.658	0,00824%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.928.832	1,396	2.692.649	109.087.901.658	0,00247%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	1.928.832	3,187	6.147.188	109.087.901.658	0,00564%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	1.928.832	6,757	13.033.118	109.087.901.658	0,01195%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.928.832	2,792	5.385.299	109.087.901.658	0,00494%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	4.306.483	1,396	6.011.850	109.087.901.658	0,00551%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	4.306.483	3,187	13.724.761	109.087.901.658	0,01258%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	4.306.483	6,757	29.098.906	109.087.901.658	0,02667%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	4.306.483	2,792	12.023.701	109.087.901.658	0,01102%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.246.693	1,396	3.136.383	109.087.901.658	0,00288%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	2.246.693	3,187	7.160.211	109.087.901.658	0,00656%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	2.246.693	6,757	15.180.905	109.087.901.658	0,01392%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.246.693	2,792	6.272.767	109.087.901.658	0,00575%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.899.329	1,396	2.651.463	109.087.901.658	0,00243%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	1.899.329	3,187	6.053.162	109.087.901.658	0,00555%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	1.899.329	6,757	12.833.766	109.087.901.658	0,01176%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.899.329	2,792	5.302.927	109.087.901.658	0,00486%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	598.315	1,396	835.248	109.087.901.658	0,00077%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	598.315	3,187	1.906.830	109.087.901.658	0,00175%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	598.315	6,757	4.042.814	109.087.901.658	0,00371%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	598.315	2,792	1.670.495	109.087.901.658	0,00153%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	3.373.361	1,396	4.709.212	109.087.901.658	0,00432%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	3.373.361	3,187	10.750.902	109.087.901.658	0,00986%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	3.373.361	6,757	22.793.800	109.087.901.658	0,02089%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	3.373.361	2,792	9.418.424	109.087.901.658	0,00863%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	3.518.020	1,396	4.911.156	109.087.901.658	0,00450%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	3.518.020	3,187	11.211.930	109.087.901.658	0,01028%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	3.518.020	6,757	23.771.261	109.087.901.658	0,02179%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	3.518.020	2,792	9.822.312	109.087.901.658	0,00900%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	37.363	1,396	52.159	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	37.363	3,187	119.076	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.054.657	1,396	2.868.301	109.087.901.658	0,00263%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	2.054.657	3,187	6.548.192	109.087.901.658	0,00600%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	2.054.657	6,757	13.883.317	109.087.901.658	0,01273%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.054.657	2,792	5.736.602	109.087.901.658	0,00526%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	472.702	1,396	659.892	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	472.702	3,187	1.506.501	109.087.901.658	0,00138%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	472.702	6,757	3.194.047	109.087.901.658	0,00293%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	472.702	2,792	1.319.784	109.087.901.658	0,00121%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	2.357.294	1,396	3.290.782	109.087.901.658	0,00302%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	2.357.294	3,187	7.512.696	109.087.901.658	0,00689%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	2.357.294	6,757	15.928.236	109.087.901.658	0,01460%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	2.357.294	2,792	6.581.565	109.087.901.658	0,00603%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	809.514	1,396	1.130.082	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	809.514	3,187	2.579.921	109.087.901.658	0,00236%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	809.514	6,757	5.469.886	109.087.901.658	0,00501%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	809.514	2,792	2.260.163	109.087.901.658	0,00207%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.400.010	1,396	1.954.414	109.087.901.658	0,00179%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	1.400.010	3,187	4.461.832	109.087.901.658	0,00409%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	1.400.010	6,757	9.459.868	109.087.901.658	0,00867%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.400.010	2,792	3.908.828	109.087.901.658	0,00358%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FRK	321.691	2,792	898.161	109.087.901.658	0,00082%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FVR	321.691	6,757	2.173.666	109.087.901.658	0,00199%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.077.672	1,396	1.504.430	109.087.901.658	0,00138%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	1.077.672	3,187	3.434.541	109.087.901.658	0,00315%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	1.077.672	6,757	7.281.830	109.087.901.658	0,00668%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.077.672	2,792	3.008.860	109.087.901.658	0,00276%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	972.896	1,396	1.358.163	109.087.901.658	0,00125%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	972.896	3,187	3.100.620	109.087.901.658	0,00284%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	972.896	6,757	6.573.858	109.087.901.658	0,00603%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	972.896	2,792	2.716.326	109.087.901.658	0,00249%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.044.080	1,396	1.457.536	109.087.901.658	0,00134%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	1.044.080	3,187	3.327.483	109.087.901.658	0,00305%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	1.044.080	6,757	7.054.849	109.087.901.658	0,00647%



Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.044.080	2,792	2.915.071	109.087.901.658	0,00267%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	855.456	1,396	1.194.217	109.087.901.658	0,00109%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	855.456	3,187	2.726.338	109.087.901.658	0,00250%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	855.456	6,757	5.780.316	109.087.901.658	0,00530%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	855.456	2,792	2.388.433	109.087.901.658	0,00219%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	14.457	1,396	20.182	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	14.457	3,187	46.074	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	14.457	6,757	97.686	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	14.457	2,792	40.364	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	190.241	1,396	265.576	109.087.901.658	0,00024%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	190.241	3,187	606.298	109.087.901.658	0,00056%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	190.241	6,757	1.285.458	109.087.901.658	0,00118%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	190.241	2,792	531.153	109.087.901.658	0,00049%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	14.817	1,396	20.685	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	14.817	3,187	47.222	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	14.817	6,757	100.118	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	14.817	2,792	41.369	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	1.085.334	1,396	1.515.126	109.087.901.658	0,00139%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	1.085.334	3,187	3.458.959	109.087.901.658	0,00317%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	1.085.334	6,757	7.333.602	109.087.901.658	0,00672%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	1.085.334	2,792	3.030.253	109.087.901.658	0,00278%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	233.772	1,396	326.346	109.087.901.658	0,00030%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	233.772	3,187	745.031	109.087.901.658	0,00068%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	233.772	6,757	1.579.597	109.087.901.658	0,00145%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	233.772	2,792	652.691	109.087.901.658	0,00060%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	240.592	1,396	335.866	109.087.901.658	0,00031%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	240.592	3,187	766.767	109.087.901.658	0,00070%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	240.592	6,757	1.625.680	109.087.901.658	0,00149%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	240.592	2,792	671.733	109.087.901.658	0,00062%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	269.202	1,396	375.806	109.087.901.658	0,00034%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	269.202	3,187	857.947	109.087.901.658	0,00079%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	269.202	6,757	1.818.998	109.087.901.658	0,00167%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	269.202	2,792	751.612	109.087.901.658	0,00069%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FRK	346.347	2,792	967.001	109.087.901.658	0,00089%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FVR	346.347	6,757	2.340.267	109.087.901.658	0,00215%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	346.347	3,187	1.103.808	109.087.901.658	0,00101%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FBB	346.347	1,396	483.500	109.087.901.658	0,00044%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	22.579	1,396	31.520	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	22.579	3,187	71.959	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	22.579	6,757	152.566	109.087.901.658	0,00014%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	22.579	2,792	63.041	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	174.123	1,396	243.076	109.087.901.658	0,00022%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	174.123	3,187	554.930	109.087.901.658	0,00051%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	174.123	6,757	1.176.549	109.087.901.658	0,00108%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	174.123	2,792	486.151	109.087.901.658	0,00045%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	24.259	1,396	33.866	109.087.901.658	0,00003%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	24.259	3,187	77.313	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	24.259	6,757	163.918	109.087.901.658	0,00015%



Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	VOLTA REDONDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	24.259	2,792	67.731	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	APARECIDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRA-FAD	240.592	5,875	1.413.478	109.087.901.658	0,00130%
MINÉRIO DE FERRO	BA, ES, MG	APARECIDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAD-FGU	240.592	1,878	451.832	109.087.901.658	0,00041%
MINÉRIO DE FERRO	BA, ES, MG	APARECIDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRA-FAD	22.579	5,875	132.652	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	APARECIDA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAD-FGU	22.579	1,878	42.403	109.087.901.658	0,00004%
MINÉRIO DE FERRO	BA, ES, MG	CACAPAVA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEA-FCA	240.592	6,844	1.646.612	109.087.901.658	0,00151%
MINÉRIO DE FERRO	BA, ES, MG	CACAPAVA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCA-FUI	240.592	7,861	1.891.294	109.087.901.658	0,00173%
MINÉRIO DE FERRO	BA, ES, MG	CACHOEIRA PAULISTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLR-FCP	240.592	4,364	1.049.943	109.087.901.658	0,00096%
MINÉRIO DE FERRO	BA, ES, MG	CACHOEIRA PAULISTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCP-FCZ	240.592	3,271	786.976	109.087.901.658	0,00072%
MINÉRIO DE FERRO	BA, ES, MG	CACHOEIRA PAULISTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLR-FCP	22.579	4,364	98.535	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	CACHOEIRA PAULISTA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCP-FCZ	22.579	3,271	73.856	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	CANAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLR-FCP	240.592	5,888	1.416.606	109.087.901.658	0,00130%
MINÉRIO DE FERRO	BA, ES, MG	CANAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLR-FCP	22.579	5,888	132.945	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	CRUZEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCP-FCZ	240.592	7,832	1.884.317	109.087.901.658	0,00173%
MINÉRIO DE FERRO	BA, ES, MG	CRUZEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCZ-FVQ	240.592	4,547	1.093.972	109.087.901.658	0,00100%
MINÉRIO DE FERRO	BA, ES, MG	CRUZEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCP-FCZ	22.579	7,832	176.839	109.087.901.658	0,00016%
MINÉRIO DE FERRO	BA, ES, MG	CRUZEIRO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCZ-FVQ	22.579	4,547	102.667	109.087.901.658	0,00009%
MINÉRIO DE FERRO	BA, ES, MG	GUARAREMA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIP-FRE	240.592	9,780	2.352.990	109.087.901.658	0,00216%
MINÉRIO DE FERRO	BA, ES, MG	GUARATINGUETA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAD-FGU	240.592	2,929	704.694	109.087.901.658	0,00065%
MINÉRIO DE FERRO	BA, ES, MG	GUARATINGUETA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGU-FEN	240.592	5,059	1.217.155	109.087.901.658	0,00112%
MINÉRIO DE FERRO	BA, ES, MG	GUARATINGUETA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEN-FLR	240.592	2,263	544.460	109.087.901.658	0,00050%
MINÉRIO DE FERRO	BA, ES, MG	GUARATINGUETA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAD-FGU	22.579	2,929	66.134	109.087.901.658	0,00006%
MINÉRIO DE FERRO	BA, ES, MG	GUARATINGUETA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGU-FEN	22.579	5,059	114.227	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	GUARATINGUETA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEN-FLR	22.579	2,263	51.096	109.087.901.658	0,00005%
MINÉRIO DE FERRO	BA, ES, MG	ITAQUAQUECETUBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ISU-IRA	240.592	0,903	217.255	109.087.901.658	0,00020%
MINÉRIO DE FERRO	BA, ES, MG	ITAQUAQUECETUBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	IRA-FPI	240.592	9,919	2.386.432	109.087.901.658	0,00219%
MINÉRIO DE FERRO	BA, ES, MG	ITAQUAQUECETUBA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPI-FST	240.592	3,903	939.031	109.087.901.658	0,00086%
MINÉRIO DE FERRO	BA, ES, MG	JACAREI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIP-FRE	240.592	0,535	128.717	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	JACAREI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRE-FPA	240.592	15,858	3.815.308	109.087.901.658	0,00350%
MINÉRIO DE FERRO	BA, ES, MG	JACAREI	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPA-FSJ	240.592	2,592	623.614	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	LAVRINHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCZ-FVQ	240.592	10,176	2.448.264	109.087.901.658	0,00224%
MINÉRIO DE FERRO	BA, ES, MG	LAVRINHAS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCZ-FVQ	22.579	10,176	229.764	109.087.901.658	0,00021%
MINÉRIO DE FERRO	BA, ES, MG	LORENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEN-FLR	240.592	5,101	1.227.260	109.087.901.658	0,00113%
MINÉRIO DE FERRO	BA, ES, MG	LORENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLR-FCP	240.592	4,725	1.136.797	109.087.901.658	0,00104%
MINÉRIO DE FERRO	BA, ES, MG	LORENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEN-FLR	22.579	5,101	115.175	109.087.901.658	0,00011%
MINÉRIO DE FERRO	BA, ES, MG	LORENA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLR-FCP	22.579	4,725	106.686	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	MOGI DAS CRUZES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPI-FST	240.592	8,782	2.112.879	109.087.901.658	0,00194%
MINÉRIO DE FERRO	BA, ES, MG	MOGI DAS CRUZES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FST-FIP	240.592	10,238	2.463.181	109.087.901.658	0,00226%
MINÉRIO DE FERRO	BA, ES, MG	MOGI DAS CRUZES	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIP-FRE	240.592	3,456	831.486	109.087.901.658	0,00076%
MINÉRIO DE FERRO	BA, ES, MG	PINDAMONHANGABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTA-FPG	240.592	6,406	1.541.232	109.087.901.658	0,00141%
MINÉRIO DE FERRO	BA, ES, MG	PINDAMONHANGABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPG-FCT	240.592	6,277	1.510.196	109.087.901.658	0,00138%
MINÉRIO DE FERRO	BA, ES, MG	PINDAMONHANGABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCT-FPR	240.592	0,786	189.105	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	PINDAMONHANGABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCT-FPR	240.592	5,965	1.435.131	109.087.901.658	0,00132%
MINÉRIO DE FERRO	BA, ES, MG	PINDAMONHANGABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCT-FPR	22.579	5,965	134.684	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	PINDAMONHANGABA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCT-FPR	22.579	0,786	17.747	109.087.901.658	0,00002%
MINÉRIO DE FERRO	BA, ES, MG	POA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ISU-IRA	240.592	2,607	627.223	109.087.901.658	0,00057%
MINÉRIO DE FERRO	BA, ES, MG	QUELUZ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCZ-FVQ	240.592	0,538	129.438	109.087.901.658	0,00012%
MINÉRIO DE FERRO	BA, ES, MG	QUELUZ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVQ-FQU	240.592	8,886	2.137.901	109.087.901.658	0,00196%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA, ES, MG	QUELUZ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQU-FEP	240.592	8,074	1.942.540	109.087.901.658	0,00178%
MINÉRIO DE FERRO	BA, ES, MG	QUELUZ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCZ-FVQ	22.579	0,538	12.148	109.087.901.658	0,00001%
MINÉRIO DE FERRO	BA, ES, MG	QUELUZ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVQ-FQU	22.579	8,886	200.637	109.087.901.658	0,00018%
MINÉRIO DE FERRO	BA, ES, MG	QUELUZ	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQU-FEP	22.579	8,074	182.303	109.087.901.658	0,00017%
MINÉRIO DE FERRO	BA, ES, MG	ROSEIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPR-FRA	240.592	3,295	792.751	109.087.901.658	0,00073%
MINÉRIO DE FERRO	BA, ES, MG	ROSEIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRA-FAD	240.592	4,609	1.108.889	109.087.901.658	0,00102%
MINÉRIO DE FERRO	BA, ES, MG	ROSEIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPR-FRA	22.579	3,295	74.398	109.087.901.658	0,00007%
MINÉRIO DE FERRO	BA, ES, MG	ROSEIRA	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRA-FAD	22.579	4,609	104.067	109.087.901.658	0,00010%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOSE DOS CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPA-FSJ	240.592	11,297	2.717.968	109.087.901.658	0,00249%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOSE DOS CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSJ-FEM	240.592	6,172	1.484.934	109.087.901.658	0,00136%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOSE DOS CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEM-FEG	240.592	5,007	1.204.644	109.087.901.658	0,00110%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOSE DOS CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEG-FEA	240.592	1,763	424.164	109.087.901.658	0,00039%
MINÉRIO DE FERRO	BA, ES, MG	SAO JOSE DOS CAMPOS	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEA-FCA	240.592	1,203	289.432	109.087.901.658	0,00027%
MINÉRIO DE FERRO	BA, ES, MG	SUZANO	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ISU-IRA	240.592	6,249	1.503.459	109.087.901.658	0,00138%
MINÉRIO DE FERRO	BA, ES, MG	TAUBATE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCA-FUI	240.592	4,009	964.533	109.087.901.658	0,00088%
MINÉRIO DE FERRO	BA, ES, MG	TAUBATE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FUI-FTA	240.592	5,900	1.419.493	109.087.901.658	0,00130%
MINÉRIO DE FERRO	BA, ES, MG	TAUBATE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTA-FPG	240.592	3,718	894.521	109.087.901.658	0,00082%
MINÉRIO DE FERRO	BA, ES, MG	TREMEMBE	MRS	13	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTA-FPG	240.592	4,213	1.013.614	109.087.901.658	0,00093%
MINÉRIO DE MANGANÊS	MA, PA	ACAILANDIA	EFC	15	MA, PA	EFC	QMA-QAL	134.095	21,089	2.827.929	100.439.032	2,81557%
MINÉRIO DE MANGANÊS	MA, PA	ACAILANDIA	EFC	15	MA, PA	EFC	QAL-QNV	134.095	93,024	12.474.053	100.439.032	12,41953%
MINÉRIO DE MANGANÊS	MA, PA	ALTO ALEGRE DO PINDARE	EFC	15	MA, PA	EFC	QNV-QSI	134.095	85,709	11.493.148	100.439.032	11,44291%
MINÉRIO DE MANGANÊS	MA, PA	ANAJATUBA	EFC	15	MA, PA	EFC	QSI-QRO	134.095	20,553	2.756.055	100.439.032	2,74401%
MINÉRIO DE MANGANÊS	MA, PA	ARARI	EFC	15	MA, PA	EFC	QSI-QRO	134.095	26,677	3.577.252	100.439.032	3,56162%
MINÉRIO DE MANGANÊS	MA, PA	BACABEIRA	EFC	15	MA, PA	EFC	QSI-QRO	134.095	19,722	2.644.622	100.439.032	2,63306%
MINÉRIO DE MANGANÊS	MA, PA	BACABEIRA	EFC	15	MA, PA	EFC	QRO-QPM	134.095	20,405	2.736.208	100.439.032	2,72425%
MINÉRIO DE MANGANÊS	MA, PA	BOM JARDIM	EFC	15	MA, PA	EFC	QNV-QSI	134.095	5,860	785.797	100.439.032	0,78236%
MINÉRIO DE MANGANÊS	MA, PA	BOM JESUS DAS SELVAS	EFC	15	MA, PA	EFC	QAL-QNV	134.095	28,940	3.880.709	100.439.032	3,86375%
MINÉRIO DE MANGANÊS	MA, PA	BOM JESUS DAS SELVAS	EFC	15	MA, PA	EFC	QNV-QSI	134.095	20,241	2.714.217	100.439.032	2,70235%
MINÉRIO DE MANGANÊS	MA, PA	BURITICUPU	EFC	15	MA, PA	EFC	QNV-QSI	134.095	28,360	3.802.934	100.439.032	3,78631%
MINÉRIO DE MANGANÊS	MA, PA	CIDELANDIA	EFC	15	MA, PA	EFC	QMA-QAL	134.095	46,879	6.286.240	100.439.032	6,25876%
MINÉRIO DE MANGANÊS	MA, PA	IGARAPE DO MEIO	EFC	15	MA, PA	EFC	QSI-QRO	134.095	26,165	3.508.596	100.439.032	3,49326%
MINÉRIO DE MANGANÊS	MA, PA	ITAPECURU MIRIM	EFC	15	MA, PA	EFC	QSI-QRO	134.095	13,156	1.764.154	100.439.032	1,75644%
MINÉRIO DE MANGANÊS	MA, PA	ITINGA DO MARANHÃO	EFC	15	MA, PA	EFC	QAL-QNV	134.095	7,583	1.016.842	100.439.032	1,01240%
MINÉRIO DE MANGANÊS	MA, PA	MIRANDA DO NORTE	EFC	15	MA, PA	EFC	QSI-QRO	134.095	8,322	1.115.939	100.439.032	1,11106%
MINÉRIO DE MANGANÊS	MA, PA	MONCAO	EFC	15	MA, PA	EFC	QSI-QRO	134.095	12,915	1.731.837	100.439.032	1,72427%
MINÉRIO DE MANGANÊS	MA, PA	PINDARE-MIRIM	EFC	15	MA, PA	EFC	QNV-QSI	134.095	12,708	1.704.079	100.439.032	1,69663%
MINÉRIO DE MANGANÊS	MA, PA	SANTA INES	EFC	15	MA, PA	EFC	QNV-QSI	134.095	1,614	216.429	100.439.032	0,21548%
MINÉRIO DE MANGANÊS	MA, PA	SANTA INES	EFC	15	MA, PA	EFC	QSI-QRO	134.095	9,590	1.285.971	100.439.032	1,28035%
MINÉRIO DE MANGANÊS	MA, PA	SANTA LUZIA	EFC	15	MA, PA	EFC	QNV-QSI	134.095	4,290	575.268	100.439.032	0,57275%
MINÉRIO DE MANGANÊS	MA, PA	SANTA RITA	EFC	15	MA, PA	EFC	QSI-QRO	134.095	14,855	1.991.981	100.439.032	1,98327%
MINÉRIO DE MANGANÊS	MA, PA	SAO FRANCISCO DO BREJAO	EFC	15	MA, PA	EFC	QMA-QAL	134.095	5,042	676.107	100.439.032	0,67315%
MINÉRIO DE MANGANÊS	MA, PA	SAO LUIS	EFC	15	MA, PA	EFC	QRO-QPM	134.095	18,639	2.499.397	100.439.032	2,48847%
MINÉRIO DE MANGANÊS	MA, PA	SAO LUIS	EFC	15	MA, PA	EFC	QPM-APB	134.095	7,100	952.075	100.439.032	0,94791%
MINÉRIO DE MANGANÊS	MA, PA	SAO LUIS	EFC	15	MA, PA	EFC	APB-ABL	134.095	0,700	93.867	100.439.032	0,09346%
MINÉRIO DE MANGANÊS	MA, PA	SAO LUIS	EFC	15	MA, PA	EFC	ABL-A03	134.095	0,300	40.229	100.439.032	0,04005%
MINÉRIO DE MANGANÊS	MA, PA	SAO LUIS	EFC	15	MA, PA	EFC	A03-A99	134.095	1,466	196.583	100.439.032	0,19572%
MINÉRIO DE MANGANÊS	MA, PA	SAO LUIS	EFC	15	MA, PA	EFC	A99-QPI	134.095	2,769	371.309	100.439.032	0,36969%
MINÉRIO DE MANGANÊS	MA, PA	SAO PEDRO DA AGUA BRANCA	EFC	15	MA, PA	EFC	QMA-QAL	134.095	48,422	6.493.148	100.439.032	6,46477%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE MANGANÊS	MA, PA	TUFILANDIA	EFC	15	MA, PA	EFC	QNV-QSI	134.095	14,416	1.933.114	100.439.032	1,92466%
MINÉRIO DE MANGANÊS	MA, PA	VILA NOVA DOS MARTIROS	EFC	15	MA, PA	EFC	QMA-QAL	134.095	34,957	4.687.559	100.439.032	4,66707%
MINÉRIO DE MANGANÊS	MA, PA	VITORIA DO MEARIM	EFC	15	MA, PA	EFC	QSI-QRO	134.095	21,479	2.880.227	100.439.032	2,86764%
MINÉRIO DE MANGANÊS	MA, PA	BOM JESUS DO TO	EFC	15	MA, PA	EFC	QMA-QAL	134.095	42,939	5.757.905	100.439.032	5,73274%
MINÉRIO DE MANGANÊS	MA, PA	MARABA	EFC	15	MA, PA	EFC	QMA-QAL	134.095	22,128	2.967.254	100.439.032	2,95428%