

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
ANTRACITO	SC	CAPIVARI DE BAIXO	FTC	SC	1,91738%
ANTRACITO	SC	CRICIUMA	FTC	SC	13,34804%
ANTRACITO	SC	FORQUILHINHA	FTC	SC	0,05911%
ANTRACITO	SC	ICARA	FTC	SC	18,06576%
ANTRACITO	SC	JAGUARUNA	FTC	SC	22,50846%
ANTRACITO	SC	MORRO DA FUMACA	FTC	SC	4,10943%
ANTRACITO	SC	SANGAO	FTC	SC	13,91626%
ANTRACITO	SC	SIDEROPOLIS	FTC	SC	8,28790%
ANTRACITO	SC	TUBARAO	FTC	SC	14,54938%
ANTRACITO	SC	URUSSANGA	FTC	SC	3,23827%
AREIA	CE	CARIRE	FTL	CE, MA, PI	3,82577%
AREIA	CE	CAUCAIA	FTL	CE, MA, PI	5,81231%
AREIA	CE	CRATEUS	FTL	CE, MA, PI	9,51301%
AREIA	CE	FORTALEZA	FTL	CE, MA, PI	0,39250%
AREIA	CE	GROAIRAS	FTL	CE, MA, PI	0,08500%
AREIA	CE	IPU	FTL	CE, MA, PI	2,81826%
AREIA	CE	IPUEIRAS	FTL	CE, MA, PI	3,62226%
AREIA	CE	ITAPIPOCA	FTL	CE, MA, PI	6,27011%
AREIA	CE	MARACANAU	FTL	CE, MA, PI	0,99637%
AREIA	CE	MIRAIMA	FTL	CE, MA, PI	4,13735%
AREIA	CE	NOVA RUSSAS	FTL	CE, MA, PI	3,96697%
AREIA	CE	PIRES FERREIRA	FTL	CE, MA, PI	1,90288%
AREIA	CE	RERIUTABA	FTL	CE, MA, PI	2,86197%
AREIA	CE	SANTANA DO ACARAU	FTL	CE, MA, PI	2,07775%
AREIA	CE	SAO GONCALO DO AMARANTE	FTL	CE, MA, PI	5,00084%
AREIA	CE	SAO LUIS DO CURU	FTL	CE, MA, PI	0,87871%
AREIA	CE	SOBRAL	FTL	CE, MA, PI	6,69992%
AREIA	CE	TAMBORIL	FTL	CE, MA, PI	2,61513%
AREIA	CE	TURURU	FTL	CE, MA, PI	1,81362%
AREIA	CE	UMIRIM	FTL	CE, MA, PI	1,87932%
AREIA	DF	BRASILIA	FCA	DF, GO	17,57443%
AREIA	GO	LUZIANIA	FCA	DF, GO	52,44049%
AREIA	GO	ORIZONA	FCA	DF, GO	21,18687%
AREIA	GO	PIRES DO RIO	FCA	DF, GO	3,60185%
AREIA	GO	VALPARAISO DE GOIAS	FCA	DF, GO	5,19637%
AREIA	MA	BACABEIRA	FTL	CE, MA, PI	0,42974%
AREIA	MA	CANTANHEDE	FTL	CE, MA, PI	0,38893%
AREIA	MA	CAXIAS	FTL	CE, MA, PI	1,95397%
AREIA	MA	CODO	FTL	CE, MA, PI	1,46934%
AREIA	MA	COROATA	FTL	CE, MA, PI	1,00088%
AREIA	MA	ITAPECURU MIRIM	FTL	CE, MA, PI	0,35585%
AREIA	MA	MIRANDA DO NORTE	FTL	CE, MA, PI	0,13795%
AREIA	MA	PIRAPEMAS	FTL	CE, MA, PI	0,32690%
AREIA	MA	ROSARIO	FTL	CE, MA, PI	0,14298%
AREIA	MA	SANTA RITA	FTL	CE, MA, PI	0,32112%
AREIA	MA	SAO LUIS	FTL	CE, MA, PI	0,35091%
AREIA	MA	TIMBIRAS	FTL	CE, MA, PI	0,32569%
AREIA	MA	TIMON	FTL	CE, MA, PI	0,77023%
AREIA	MG	ANDRELANDIA	MRS	MG, RJ, SP	0,40818%
AREIA	MG	ARANTINA	MRS	MG, RJ, SP	0,03792%
AREIA	MG	BELO HORIZONTE	MRS	MG, RJ, SP	0,26100%
AREIA	MG	BELO VALE	MRS	MG, RJ, SP	0,23344%
AREIA	MG	BOM JARDIM DE MINAS	MRS	MG, RJ, SP	0,13316%
AREIA	MG	BRUMADINHO	MRS	MG, RJ, SP	0,29270%
AREIA	MG	CONCEICAO DA BARRA DE MINAS	MRS	MG, RJ, SP	0,02738%
AREIA	MG	CONGONHAS	MRS	MG, RJ, SP	0,05915%
AREIA	MG	CONTAGEM	MRS	MG, RJ, SP	0,00845%
AREIA	MG	CORONEL XAVIER CHAVES	MRS	MG, RJ, SP	0,08719%
AREIA	MG	ENTRE RIOS DE MINAS	MRS	MG, RJ, SP	0,20730%
AREIA	MG	IBIRITE	MRS	MG, RJ, SP	0,08024%
AREIA	MG	JECEABA	MRS	MG, RJ, SP	0,16726%
AREIA	MG	LAGOA DOURADA	MRS	MG, RJ, SP	0,21533%
AREIA	MG	MADRE DE DEUS DE MINAS	MRS	MG, RJ, SP	0,24674%
AREIA	MG	MARIO CAMPOS	MRS	MG, RJ, SP	0,05516%
AREIA	MG	MATOZINHOS	MRS	MG, RJ, SP	0,07115%
AREIA	MG	MOEDA	MRS	MG, RJ, SP	0,03433%
AREIA	MG	PASSA-VINTE	MRS	MG, RJ, SP	0,24515%
AREIA	MG	PEDRO LEOPOLDO	MRS	MG, RJ, SP	0,08392%
AREIA	MG	PRUDENTE DE MORAIS	MRS	MG, RJ, SP	0,04877%
AREIA	MG	RESENDE COSTA	MRS	MG, RJ, SP	0,09070%
AREIA	MG	RITAPOLIS	MRS	MG, RJ, SP	0,02884%
AREIA	MG	SABARA	MRS	MG, RJ, SP	0,06167%
AREIA	MG	SANTA LUZIA	MRS	MG, RJ, SP	0,13107%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
AREIA	MG	SANTA RITA DE JACUTINGA	MRS	MG, RJ, SP	0,16481%
AREIA	MG	SAO BRAS DO SUACUI	MRS	MG, RJ, SP	0,09077%
AREIA	MG	SAO JOAO DEL REI	MRS	MG, RJ, SP	0,55261%
AREIA	MG	SAO JOAQUIM DE BICAS	MRS	MG, RJ, SP	0,01556%
AREIA	MG	SAO JOSE DA LAPA	MRS	MG, RJ, SP	0,06478%
AREIA	MG	SAO VICENTE DE MINAS	MRS	MG, RJ, SP	0,04358%
AREIA	MG	SARZEDO	MRS	MG, RJ, SP	0,09005%
AREIA	MG	VESPASIANO	MRS	MG, RJ, SP	0,05541%
AREIA	MG	NAZARENO	MRS	MG, RJ, SP	0,01532%
AREIA	PI	ALTO LONGA	FTL	CE, MA, PI	2,00953%
AREIA	PI	ALTOS	FTL	CE, MA, PI	3,13760%
AREIA	PI	BURITI DOS MONTES	FTL	CE, MA, PI	5,69289%
AREIA	PI	CAMPO MAIOR	FTL	CE, MA, PI	0,55262%
AREIA	PI	CASTELO DO PIAUI	FTL	CE, MA, PI	6,29258%
AREIA	PI	COIVARAS	FTL	CE, MA, PI	2,24403%
AREIA	PI	NOVO SANTO ANTONIO	FTL	CE, MA, PI	2,52966%
AREIA	PI	TERESINA	FTL	CE, MA, PI	2,39654%
AREIA	RJ	BARRA MANSA	MRS	MG, RJ, SP	0,32316%
AREIA	RJ	ITATIAIA	MRS	MG, RJ, SP	0,25732%
AREIA	RJ	PORTO REAL	MRS	MG, RJ, SP	0,08026%
AREIA	RJ	QUATIS	MRS	MG, RJ, SP	0,26631%
AREIA	RJ	RESENDE	MRS	MG, RJ, SP	0,49080%
AREIA	SP	APARECIDA	MRS	MG, RJ, SP	2,16973%
AREIA	SP	CACAPAVA	MRS	MG, RJ, SP	6,48640%
AREIA	SP	CACHOEIRA PAULISTA	MRS	MG, RJ, SP	2,13671%
AREIA	SP	CANAS	MRS	MG, RJ, SP	1,64780%
AREIA	SP	CRUZEIRO	MRS	MG, RJ, SP	2,24169%
AREIA	SP	GUARAREMA	MRS	MG, RJ, SP	4,31397%
AREIA	SP	GUARATINGUETA	MRS	MG, RJ, SP	2,86881%
AREIA	SP	ITAQUAQUECETUBA	MRS	MG, RJ, SP	5,33909%
AREIA	SP	JACAREI	MRS	MG, RJ, SP	8,37431%
AREIA	SP	LAVRINHAS	MRS	MG, RJ, SP	0,11157%
AREIA	SP	LORENA	MRS	MG, RJ, SP	2,74987%
AREIA	SP	MOGI DAS CRUZES	MRS	MG, RJ, SP	9,91420%
AREIA	SP	PINDAMONHANGABA	MRS	MG, RJ, SP	8,52142%
AREIA	SP	QUELUZ	MRS	MG, RJ, SP	0,19184%
AREIA	SP	ROSEIRA	MRS	MG, RJ, SP	2,71842%
AREIA	SP	SANTO ANDRE	MRS	MG, RJ, SP	0,05736%
AREIA	SP	SAO CAETANO DO SUL	MRS	MG, RJ, SP	0,04766%
AREIA	SP	SAO JOSE DOS CAMPOS	MRS	MG, RJ, SP	11,22251%
AREIA	SP	SAO PAULO	MRS	MG, RJ, SP	15,19041%
AREIA	SP	TAUBATE	MRS	MG, RJ, SP	6,01089%
AREIA	SP	TREMEMBE	MRS	MG, RJ, SP	1,85836%
CALCÁRIO DOLOMÍTICO	ES	BAIXO GUANDU	EFVM, FCA, MRS	ES, MG, RJ	0,68203%
CALCÁRIO DOLOMÍTICO	ES	CARIACICA	EFVM, FCA, MRS	ES, MG, RJ	0,05989%
CALCÁRIO DOLOMÍTICO	ES	COLATINA	EFVM, FCA, MRS	ES, MG, RJ	1,56575%
CALCÁRIO DOLOMÍTICO	ES	FUNDAO	EFVM, FCA, MRS	ES, MG, RJ	0,36782%
CALCÁRIO DOLOMÍTICO	ES	IBIRACU	EFVM, FCA, MRS	ES, MG, RJ	0,47365%
CALCÁRIO DOLOMÍTICO	ES	JOAO NEIVA	EFVM, FCA, MRS	ES, MG, RJ	0,54238%
CALCÁRIO DOLOMÍTICO	ES	SANTA LEOPOLDINA	EFVM, FCA, MRS	ES, MG, RJ	0,25143%
CALCÁRIO DOLOMÍTICO	ES	SERRA	EFVM, FCA, MRS	ES, MG, RJ	0,70855%
CALCÁRIO DOLOMÍTICO	MG	AIMORES	EFVM, FCA, MRS	ES, MG, RJ	0,39246%
CALCÁRIO DOLOMÍTICO	MG	ANDRELANDIA	EFVM, FCA, MRS	ES, MG, RJ	5,66873%
CALCÁRIO DOLOMÍTICO	MG	ANTONIO DIAS	EFVM, FCA, MRS	ES, MG, RJ	3,55138%
CALCÁRIO DOLOMÍTICO	MG	ARANTINA	EFVM, FCA, MRS	ES, MG, RJ	1,81083%
CALCÁRIO DOLOMÍTICO	MG	ARCOS	EFVM, FCA, MRS	ES, MG, RJ	1,71424%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	EFVM, FCA, MRS	ES, MG, RJ	2,06796%
CALCÁRIO DOLOMÍTICO	MG	BELA VISTA DE MINAS	EFVM, FCA, MRS	ES, MG, RJ	0,40830%
CALCÁRIO DOLOMÍTICO	MG	BELO HORIZONTE	EFVM, FCA, MRS	ES, MG, RJ	0,66749%
CALCÁRIO DOLOMÍTICO	MG	BELO ORIENTE	EFVM, FCA, MRS	ES, MG, RJ	0,49312%
CALCÁRIO DOLOMÍTICO	MG	BETIM	EFVM, FCA, MRS	ES, MG, RJ	0,27710%
CALCÁRIO DOLOMÍTICO	MG	BOM JARDIM DE MINAS	EFVM, FCA, MRS	ES, MG, RJ	0,81563%
CALCÁRIO DOLOMÍTICO	MG	BUGRE	EFVM, FCA, MRS	ES, MG, RJ	0,02649%
CALCÁRIO DOLOMÍTICO	MG	CAETE	EFVM, FCA, MRS	ES, MG, RJ	1,51798%
CALCÁRIO DOLOMÍTICO	MG	CAMPO BELO	EFVM, FCA, MRS	ES, MG, RJ	3,15578%
CALCÁRIO DOLOMÍTICO	MG	CANA VERDE	EFVM, FCA, MRS	ES, MG, RJ	1,46171%
CALCÁRIO DOLOMÍTICO	MG	CANDEIAS	EFVM, FCA, MRS	ES, MG, RJ	5,28049%
CALCÁRIO DOLOMÍTICO	MG	CARMO DO CAJURU	EFVM, FCA, MRS	ES, MG, RJ	0,15159%
CALCÁRIO DOLOMÍTICO	MG	CARRANCAS	EFVM, FCA, MRS	ES, MG, RJ	1,82659%
CALCÁRIO DOLOMÍTICO	MG	CATAS ALTAS	EFVM, FCA, MRS	ES, MG, RJ	0,01035%
CALCÁRIO DOLOMÍTICO	MG	CONSELHEIRO PENA	EFVM, FCA, MRS	ES, MG, RJ	0,78439%
CALCÁRIO DOLOMÍTICO	MG	CONTAGEM	EFVM, FCA, MRS	ES, MG, RJ	0,06327%
CALCÁRIO DOLOMÍTICO	MG	CORONEL FABRICIANO	EFVM, FCA, MRS	ES, MG, RJ	0,53676%

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CALCÁRIO DOLOMÍTICO	MG	CRUZILIA	EFVM, FCA, MRS	ES, MG, RJ	0,699514%
CALCÁRIO DOLOMÍTICO	MG	DIVINOPOLIS	EFVM, FCA, MRS	ES, MG, RJ	0,449455%
CALCÁRIO DOLOMÍTICO	MG	ESMERALDAS	EFVM, FCA, MRS	ES, MG, RJ	0,023566%
CALCÁRIO DOLOMÍTICO	MG	FORMIGA	EFVM, FCA, MRS	ES, MG, RJ	6,967288%
CALCÁRIO DOLOMÍTICO	MG	GOVERNADOR VALADARES	EFVM, FCA, MRS	ES, MG, RJ	2,436866%
CALCÁRIO DOLOMÍTICO	MG	IGUATAMA	EFVM, FCA, MRS	ES, MG, RJ	0,114544%
CALCÁRIO DOLOMÍTICO	MG	INGAI	EFVM, FCA, MRS	ES, MG, RJ	2,665400%
CALCÁRIO DOLOMÍTICO	MG	IPATINGA	EFVM, FCA, MRS	ES, MG, RJ	0,501933%
CALCÁRIO DOLOMÍTICO	MG	ITAUNA	EFVM, FCA, MRS	ES, MG, RJ	0,314022%
CALCÁRIO DOLOMÍTICO	MG	ITUETA	EFVM, FCA, MRS	ES, MG, RJ	0,368888%
CALCÁRIO DOLOMÍTICO	MG	ITUMIRIM	EFVM, FCA, MRS	ES, MG, RJ	1,277611%
CALCÁRIO DOLOMÍTICO	MG	JAPARAIBA	EFVM, FCA, MRS	ES, MG, RJ	0,077744%
CALCÁRIO DOLOMÍTICO	MG	JOAO MONLEVADE	EFVM, FCA, MRS	ES, MG, RJ	1,038800%
CALCÁRIO DOLOMÍTICO	MG	JUATUBA	EFVM, FCA, MRS	ES, MG, RJ	0,066944%
CALCÁRIO DOLOMÍTICO	MG	LAGOA DA PRATA	EFVM, FCA, MRS	ES, MG, RJ	0,205644%
CALCÁRIO DOLOMÍTICO	MG	LAVRAS	EFVM, FCA, MRS	ES, MG, RJ	4,787044%
CALCÁRIO DOLOMÍTICO	MG	LIBERDADE	EFVM, FCA, MRS	ES, MG, RJ	2,787700%
CALCÁRIO DOLOMÍTICO	MG	LUMINARIAS	EFVM, FCA, MRS	ES, MG, RJ	1,398644%
CALCÁRIO DOLOMÍTICO	MG	MADRE DE DEUS DE MINAS	EFVM, FCA, MRS	ES, MG, RJ	0,516300%
CALCÁRIO DOLOMÍTICO	MG	MATEUS LEME	EFVM, FCA, MRS	ES, MG, RJ	0,134777%
CALCÁRIO DOLOMÍTICO	MG	MATOZINHOS	EFVM, FCA, MRS	ES, MG, RJ	0,225711%
CALCÁRIO DOLOMÍTICO	MG	MINDURI	EFVM, FCA, MRS	ES, MG, RJ	2,244466%
CALCÁRIO DOLOMÍTICO	MG	NAQUE	EFVM, FCA, MRS	ES, MG, RJ	0,300011%
CALCÁRIO DOLOMÍTICO	MG	NOVA ERA	EFVM, FCA, MRS	ES, MG, RJ	1,743288%
CALCÁRIO DOLOMÍTICO	MG	PASSA-VINTE	EFVM, FCA, MRS	ES, MG, RJ	4,330222%
CALCÁRIO DOLOMÍTICO	MG	PEDRO LEOPOLDO	EFVM, FCA, MRS	ES, MG, RJ	0,555333%
CALCÁRIO DOLOMÍTICO	MG	PERDOES	EFVM, FCA, MRS	ES, MG, RJ	2,274599%
CALCÁRIO DOLOMÍTICO	MG	PERIQUITO	EFVM, FCA, MRS	ES, MG, RJ	0,672588%
CALCÁRIO DOLOMÍTICO	MG	RESPLENDOR	EFVM, FCA, MRS	ES, MG, RJ	0,680477%
CALCÁRIO DOLOMÍTICO	MG	RIBEIRAO VERMELHO	EFVM, FCA, MRS	ES, MG, RJ	1,508699%
CALCÁRIO DOLOMÍTICO	MG	RIO PIRACICABA	EFVM, FCA, MRS	ES, MG, RJ	1,091366%
CALCÁRIO DOLOMÍTICO	MG	SABARA	EFVM, FCA, MRS	ES, MG, RJ	1,371788%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	EFVM, FCA, MRS	ES, MG, RJ	2,467900%
CALCÁRIO DOLOMÍTICO	MG	SANTA LUZIA	EFVM, FCA, MRS	ES, MG, RJ	1,258233%
CALCÁRIO DOLOMÍTICO	MG	SANTA RITA DE JACUTINGA	EFVM, FCA, MRS	ES, MG, RJ	0,344866%
CALCÁRIO DOLOMÍTICO	MG	SANTANA DO PARAISO	EFVM, FCA, MRS	ES, MG, RJ	0,595922%
CALCÁRIO DOLOMÍTICO	MG	SANTO ANTANIO DO MONTE	EFVM, FCA, MRS	ES, MG, RJ	0,067911%
CALCÁRIO DOLOMÍTICO	MG	SANTO ANTONIO DO MONTE	EFVM, FCA, MRS	ES, MG, RJ	0,309899%
CALCÁRIO DOLOMÍTICO	MG	SAO GONCALO DO RIO ABAIXO	EFVM, FCA, MRS	ES, MG, RJ	0,397711%
CALCÁRIO DOLOMÍTICO	MG	SAO JOAO DEL REI	EFVM, FCA, MRS	ES, MG, RJ	0,494944%
CALCÁRIO DOLOMÍTICO	MG	SAO JOSE DA LAPA	EFVM, FCA, MRS	ES, MG, RJ	0,447688%
CALCÁRIO DOLOMÍTICO	MG	SAO VICENTE DE MINAS	EFVM, FCA, MRS	ES, MG, RJ	3,567688%
CALCÁRIO DOLOMÍTICO	MG	TIMOTEO	EFVM, FCA, MRS	ES, MG, RJ	0,483966%
CALCÁRIO DOLOMÍTICO	MG	TUMIRITINGA	EFVM, FCA, MRS	ES, MG, RJ	0,837366%
CALCÁRIO DOLOMÍTICO	MG	VESPASIANO	EFVM, FCA, MRS	ES, MG, RJ	0,531488%
CALCÁRIO DOLOMÍTICO	MG	NAZARENO	EFVM, FCA, MRS	ES, MG, RJ	0,032855%
CALCÁRIO DOLOMÍTICO	PR	ALMIRANTE TAMANDARE	RMS	PR	2,603888%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	PR	5,092355%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	PR	4,408133%
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	PR	4,468488%
CALCÁRIO DOLOMÍTICO	PR	CALIFORNIA	RMS	PR	2,088744%
CALCÁRIO DOLOMÍTICO	PR	CAMBIRA	RMS	PR	0,929911%
CALCÁRIO DOLOMÍTICO	PR	CONTENDA	RMS	PR	0,155244%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	PR	7,147588%
CALCÁRIO DOLOMÍTICO	PR	FAXINAL	RMS	PR	3,969255%
CALCÁRIO DOLOMÍTICO	PR	IMBAU	RMS	PR	0,523511%
CALCÁRIO DOLOMÍTICO	PR	IPIRANGA	RMS	PR	8,889099%
CALCÁRIO DOLOMÍTICO	PR	IVAI	RMS	PR	0,324677%
CALCÁRIO DOLOMÍTICO	PR	JANDAIA DO SUL	RMS	PR	1,087888%
CALCÁRIO DOLOMÍTICO	PR	LAPA	RMS	PR	0,368444%
CALCÁRIO DOLOMÍTICO	PR	MANDAGUARI	RMS	PR	2,060888%
CALCÁRIO DOLOMÍTICO	PR	MARIALVA	RMS	PR	2,919833%
CALCÁRIO DOLOMÍTICO	PR	MARILANDIA DO SUL	RMS	PR	4,703911%
CALCÁRIO DOLOMÍTICO	PR	MARINGA	RMS	PR	2,094733%
CALCÁRIO DOLOMÍTICO	PR	MAUA DA SERRA	RMS	PR	1,350844%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	PR	9,734533%
CALCÁRIO DOLOMÍTICO	PR	PALMEIRA	RMS	PR	3,477022%
CALCÁRIO DOLOMÍTICO	PR	PINHAIAS	RMS	PR	0,173022%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	PR	14,597955%
CALCÁRIO DOLOMÍTICO	PR	PORTO AMAZONAS	RMS	PR	2,557544%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	PR	9,097166%
CALCÁRIO DOLOMÍTICO	PR	SARANDI	RMS	PR	0,838955%
CALCÁRIO DOLOMÍTICO	PR	TIBAGI	RMS	PR	4,336499%

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CALCÁRIO DOLOMÍTICO	RJ	BARRA MANSA	EFVM, FCA, MRS	ES, MG, RJ	2,12409%
CALCÁRIO DOLOMÍTICO	RJ	QUATIS	EFVM, FCA, MRS	ES, MG, RJ	4,19256%
CALCÁRIO DOLOMÍTICO	RJ	RESENDE	EFVM, FCA, MRS	ES, MG, RJ	0,57459%
CALCÁRIO DOLOMÍTICO	RJ	VOLTA REDONDA	EFVM, FCA, MRS	ES, MG, RJ	0,10514%
DOLOMITO	MG	ANDRELANDIA	EFVM, FCA	MG, RJ	8,05290%
DOLOMITO	MG	ANTONIO DIAS	EFVM, FCA	MG, RJ	0,04399%
DOLOMITO	MG	ARANTINA	EFVM, FCA	MG, RJ	2,89606%
DOLOMITO	MG	ARCOS	EFVM, FCA	MG, RJ	2,45211%
DOLOMITO	MG	BELA VISTA DE MINAS	EFVM, FCA	MG, RJ	0,00506%
DOLOMITO	MG	BOM JARDIM DE MINAS	EFVM, FCA	MG, RJ	0,89816%
DOLOMITO	MG	CAMPO BELO	EFVM, FCA	MG, RJ	5,27834%
DOLOMITO	MG	CANA VERDE	EFVM, FCA	MG, RJ	2,44485%
DOLOMITO	MG	CANDEIAS	EFVM, FCA	MG, RJ	8,83211%
DOLOMITO	MG	CARRANCAS	EFVM, FCA	MG, RJ	3,05515%
DOLOMITO	MG	CATAS ALTAS	EFVM, FCA	MG, RJ	0,02557%
DOLOMITO	MG	CORONEL FABRICIANO	EFVM, FCA	MG, RJ	0,00198%
DOLOMITO	MG	CRUZILIA	EFVM, FCA	MG, RJ	1,17000%
DOLOMITO	MG	FORMIGA	EFVM, FCA	MG, RJ	11,65343%
DOLOMITO	MG	INGAI	EFVM, FCA	MG, RJ	4,45812%
DOLOMITO	MG	ITUMIRIM	EFVM, FCA	MG, RJ	2,13692%
DOLOMITO	MG	JOAO MONLEVADE	EFVM, FCA	MG, RJ	0,01287%
DOLOMITO	MG	LAVRAS	EFVM, FCA	MG, RJ	8,00677%
DOLOMITO	MG	LIBERDADE	EFVM, FCA	MG, RJ	4,66270%
DOLOMITO	MG	LUMINARIAS	EFVM, FCA	MG, RJ	2,33936%
DOLOMITO	MG	MARIANA	EFVM, FCA	MG, RJ	0,01510%
DOLOMITO	MG	MINDURI	EFVM, FCA	MG, RJ	3,75407%
DOLOMITO	MG	NOVA ERA	EFVM, FCA	MG, RJ	0,02159%
DOLOMITO	MG	OURO PRETO	EFVM, FCA	MG, RJ	0,02991%
DOLOMITO	MG	PASSA-VINTE	EFVM, FCA	MG, RJ	6,38470%
DOLOMITO	MG	PERDOES	EFVM, FCA	MG, RJ	3,80447%
DOLOMITO	MG	RIBEIRAO VERMELHO	EFVM, FCA	MG, RJ	2,52343%
DOLOMITO	MG	RIO PIRACICABA	EFVM, FCA	MG, RJ	0,01352%
DOLOMITO	MG	SANTA BARBARA	EFVM, FCA	MG, RJ	0,01861%
DOLOMITO	MG	SAO VICENTE DE MINAS	EFVM, FCA	MG, RJ	5,81476%
DOLOMITO	MG	TIMOTEO	EFVM, FCA	MG, RJ	0,00105%
DOLOMITO	RJ	BARRA MANSA	EFVM, FCA	MG, RJ	2,75491%
DOLOMITO	RJ	QUATIS	EFVM, FCA	MG, RJ	6,08040%
DOLOMITO	RJ	RESENDE	EFVM, FCA	MG, RJ	0,35704%
FOSFATO	GO	CATALAO	FCA	GO, MG	3,80782%
FOSFATO	GO	CUMARI	FCA	GO, MG	8,27183%
FOSFATO	GO	GOIANDIRA	FCA	GO, MG	8,24724%
FOSFATO	MG	ARAGUARI	FCA	GO, MG	19,35077%
FOSFATO	MG	UBERABA	FCA	GO, MG	39,18644%
FOSFATO	MG	UBERLANDIA	FCA	GO, MG	21,13590%
MAGNESITA	BA	ARACATU	FCA	BA, MG	0,64025%
MAGNESITA	BA	BARRA DA ESTIVA	FCA	BA, MG	0,80433%
MAGNESITA	BA	BRUMADO	FCA	BA, MG	2,45035%
MAGNESITA	BA	CABACEIRAS DO PARAGUACU	FCA	BA, MG	0,23879%
MAGNESITA	BA	CACHOEIRA	FCA	BA, MG	0,49282%
MAGNESITA	BA	CACULE	FCA	BA, MG	2,56676%
MAGNESITA	BA	CANDEIAS	FCA	BA, MG	0,97386%
MAGNESITA	BA	CASTRO ALVES	FCA	BA, MG	2,05688%
MAGNESITA	BA	CONCEICAO DA FEIRA	FCA	BA, MG	0,96768%
MAGNESITA	BA	CONTENDAS DO SINCORA	FCA	BA, MG	2,97163%
MAGNESITA	BA	CRUZ DAS ALMAS	FCA	BA, MG	0,64261%
MAGNESITA	BA	IACU	FCA	BA, MG	4,85532%
MAGNESITA	BA	IRAMAIA	FCA	BA, MG	3,12089%
MAGNESITA	BA	ITATIM	FCA	BA, MG	0,86402%
MAGNESITA	BA	ITUACU	FCA	BA, MG	0,07429%
MAGNESITA	BA	JACARACI	FCA	BA, MG	0,05744%
MAGNESITA	BA	LICINIO DE ALMEIDA	FCA	BA, MG	2,45161%
MAGNESITA	BA	MALHADA DE PEDRAS	FCA	BA, MG	1,67840%
MAGNESITA	BA	MARCIONILIO SOUZA	FCA	BA, MG	3,66633%
MAGNESITA	BA	MURITIBA	FCA	BA, MG	0,80517%
MAGNESITA	BA	RIO DO ANTONIO	FCA	BA, MG	2,45365%
MAGNESITA	BA	SANTA TERESINHA	FCA	BA, MG	1,03873%
MAGNESITA	BA	SANTO AMARO	FCA	BA, MG	1,50055%
MAGNESITA	BA	SAO FELIX	FCA	BA, MG	0,25277%
MAGNESITA	BA	SAO GONCALO DOS CAMPOS	FCA	BA, MG	0,73214%
MAGNESITA	BA	SAO SEBASTIAO DO PASSE	FCA	BA, MG	0,87758%
MAGNESITA	BA	SAPEACU	FCA	BA, MG	0,07612%
MAGNESITA	BA	TANHACU	FCA	BA, MG	1,75615%
MAGNESITA	BA	URANDI	FCA	BA, MG	3,25928%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MAGNESITA	MG	ARACAI	FCA	BA, MG	1,53429%
MAGNESITA	MG	AUGUSTO DE LIMA	FCA	BA, MG	2,58256%
MAGNESITA	MG	BELO HORIZONTE	FCA	BA, MG	1,85329%
MAGNESITA	MG	BOCAIUVA	FCA	BA, MG	5,04611%
MAGNESITA	MG	BUENOPOLIS	FCA	BA, MG	1,41752%
MAGNESITA	MG	CAPITAO ENEAS	FCA	BA, MG	3,78430%
MAGNESITA	MG	CATUTI	FCA	BA, MG	0,29262%
MAGNESITA	MG	CONTAGEM	FCA	BA, MG	0,13237%
MAGNESITA	MG	CORDISBURGO	FCA	BA, MG	1,33695%
MAGNESITA	MG	CORINTO	FCA	BA, MG	3,19601%
MAGNESITA	MG	CURVELO	FCA	BA, MG	5,11305%
MAGNESITA	MG	ENGENHEIRO NAVARRO	FCA	BA, MG	1,69074%
MAGNESITA	MG	ESPINOSA	FCA	BA, MG	1,79884%
MAGNESITA	MG	FRANCISCO SA	FCA	BA, MG	1,72024%
MAGNESITA	MG	GLAUCILANDIA	FCA	BA, MG	0,01946%
MAGNESITA	MG	JANAUBA	FCA	BA, MG	2,81388%
MAGNESITA	MG	JOAQUIM FELICIO	FCA	BA, MG	3,36805%
MAGNESITA	MG	MATO VERDE	FCA	BA, MG	0,45103%
MAGNESITA	MG	MATOZINHOS	FCA	BA, MG	0,65664%
MAGNESITA	MG	MONTE AZUL	FCA	BA, MG	2,99996%
MAGNESITA	MG	MONTES CLAROS	FCA	BA, MG	3,65579%
MAGNESITA	MG	NOVA PORTEIRINHA	FCA	BA, MG	0,89270%
MAGNESITA	MG	PAI PEDRO	FCA	BA, MG	1,78209%
MAGNESITA	MG	PEDRO LEOPOLDO	FCA	BA, MG	0,77450%
MAGNESITA	MG	PORTEIRINHA	FCA	BA, MG	1,29871%
MAGNESITA	MG	PRUDENTE DE MORAIS	FCA	BA, MG	0,51735%
MAGNESITA	MG	SABARA	FCA	BA, MG	0,56923%
MAGNESITA	MG	SANTA LUZIA	FCA	BA, MG	1,20974%
MAGNESITA	MG	SAO JOSE DA LAPA	FCA	BA, MG	0,59792%
MAGNESITA	MG	SETE LAGOAS	FCA	BA, MG	2,05619%
MAGNESITA	MG	VESPASIANO	FCA	BA, MG	0,51145%
MINÉRIO DE ALUMÍNIO	DF	BRASILIA	FCA, MRS	DF, GO, MG, RJ, SP	2,54680%
MINÉRIO DE ALUMÍNIO	GO	CATALAO	FCA, MRS	DF, GO, MG, RJ, SP	0,20172%
MINÉRIO DE ALUMÍNIO	GO	CUMARI	FCA, MRS	DF, GO, MG, RJ, SP	1,47022%
MINÉRIO DE ALUMÍNIO	GO	GOIANDIRA	FCA, MRS	DF, GO, MG, RJ, SP	1,84154%
MINÉRIO DE ALUMÍNIO	GO	IPAMERI	FCA, MRS	DF, GO, MG, RJ, SP	2,67441%
MINÉRIO DE ALUMÍNIO	GO	LUZIANIA	FCA, MRS	DF, GO, MG, RJ, SP	7,59943%
MINÉRIO DE ALUMÍNIO	GO	ORIZONA	FCA, MRS	DF, GO, MG, RJ, SP	3,07030%
MINÉRIO DE ALUMÍNIO	GO	PIRES DO RIO	FCA, MRS	DF, GO, MG, RJ, SP	0,59719%
MINÉRIO DE ALUMÍNIO	GO	URUTAI	FCA, MRS	DF, GO, MG, RJ, SP	1,57699%
MINÉRIO DE ALUMÍNIO	GO	VALPARAISO DE GOIAS	FCA, MRS	DF, GO, MG, RJ, SP	0,75303%
MINÉRIO DE ALUMÍNIO	MG	ARAGUARI	FCA, MRS	DF, GO, MG, RJ, SP	3,43938%
MINÉRIO DE ALUMÍNIO	MG	POCOS DE CALDAS	FCA, MRS	DF, GO, MG, RJ, SP	0,11360%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA, MRS	DF, GO, MG, RJ, SP	7,45265%
MINÉRIO DE ALUMÍNIO	MG	UBERLANDIA	FCA, MRS	DF, GO, MG, RJ, SP	3,75666%
MINÉRIO DE ALUMÍNIO	RJ	BARRA DO PIRAI	FCA, MRS	DF, GO, MG, RJ, SP	0,85028%
MINÉRIO DE ALUMÍNIO	RJ	BARRA MANSA	FCA, MRS	DF, GO, MG, RJ, SP	0,89142%
MINÉRIO DE ALUMÍNIO	RJ	ITATIAIA	FCA, MRS	DF, GO, MG, RJ, SP	0,94303%
MINÉRIO DE ALUMÍNIO	RJ	PARAIBA DO SUL	FCA, MRS	DF, GO, MG, RJ, SP	0,75473%
MINÉRIO DE ALUMÍNIO	RJ	PINHEIRAL	FCA, MRS	DF, GO, MG, RJ, SP	0,47673%
MINÉRIO DE ALUMÍNIO	RJ	PORTO REAL	FCA, MRS	DF, GO, MG, RJ, SP	0,29415%
MINÉRIO DE ALUMÍNIO	RJ	RESENDE	FCA, MRS	DF, GO, MG, RJ, SP	1,16623%
MINÉRIO DE ALUMÍNIO	RJ	RIO DAS FLORES	FCA, MRS	DF, GO, MG, RJ, SP	0,02270%
MINÉRIO DE ALUMÍNIO	RJ	VALENCA	FCA, MRS	DF, GO, MG, RJ, SP	0,21363%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	FCA, MRS	DF, GO, MG, RJ, SP	2,14321%
MINÉRIO DE ALUMÍNIO	RJ	VOLTA REDONDA	FCA, MRS	DF, GO, MG, RJ, SP	0,56782%
MINÉRIO DE ALUMÍNIO	SP	AGUAI	FCA, MRS	DF, GO, MG, RJ, SP	1,70709%
MINÉRIO DE ALUMÍNIO	SP	AGUAS DA PRATA	FCA, MRS	DF, GO, MG, RJ, SP	0,38138%
MINÉRIO DE ALUMÍNIO	SP	ALUMINIO	FCA, MRS	DF, GO, MG, RJ, SP	0,49494%
MINÉRIO DE ALUMÍNIO	SP	APARECIDA	FCA, MRS	DF, GO, MG, RJ, SP	0,31151%
MINÉRIO DE ALUMÍNIO	SP	ARAMINA	FCA, MRS	DF, GO, MG, RJ, SP	0,82130%
MINÉRIO DE ALUMÍNIO	SP	CACAPAVA	FCA, MRS	DF, GO, MG, RJ, SP	0,59084%
MINÉRIO DE ALUMÍNIO	SP	CACHOEIRA PAULISTA	FCA, MRS	DF, GO, MG, RJ, SP	0,30677%
MINÉRIO DE ALUMÍNIO	SP	CAIEIRAS	FCA, MRS	DF, GO, MG, RJ, SP	0,16152%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	FCA, MRS	DF, GO, MG, RJ, SP	3,61260%
MINÉRIO DE ALUMÍNIO	SP	CAMPO LIMPO PAULISTA	FCA, MRS	DF, GO, MG, RJ, SP	0,37049%
MINÉRIO DE ALUMÍNIO	SP	CANAS	FCA, MRS	DF, GO, MG, RJ, SP	0,23658%
MINÉRIO DE ALUMÍNIO	SP	CASA BRANCA	FCA, MRS	DF, GO, MG, RJ, SP	3,14441%
MINÉRIO DE ALUMÍNIO	SP	CRAVINHOS	FCA, MRS	DF, GO, MG, RJ, SP	0,80447%
MINÉRIO DE ALUMÍNIO	SP	CRUZEIRO	FCA, MRS	DF, GO, MG, RJ, SP	0,49738%
MINÉRIO DE ALUMÍNIO	SP	ESTIVA GERBI	FCA, MRS	DF, GO, MG, RJ, SP	0,98296%
MINÉRIO DE ALUMÍNIO	SP	FRANCISCO MORATO	FCA, MRS	DF, GO, MG, RJ, SP	0,26687%
MINÉRIO DE ALUMÍNIO	SP	FRANCO DA ROCHA	FCA, MRS	DF, GO, MG, RJ, SP	0,27860%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE ALUMÍNIO	SP	GUARA	FCA, MRS	DF, GO, MG, RJ, SP	0,47336%
MINÉRIO DE ALUMÍNIO	SP	GUARACAI	FCA, MRS	DF, GO, MG, RJ, SP	0,41083%
MINÉRIO DE ALUMÍNIO	SP	GUARAREMA	FCA, MRS	DF, GO, MG, RJ, SP	0,39296%
MINÉRIO DE ALUMÍNIO	SP	GUARATINGUETA	FCA, MRS	DF, GO, MG, RJ, SP	0,41188%
MINÉRIO DE ALUMÍNIO	SP	IGARAPAVA	FCA, MRS	DF, GO, MG, RJ, SP	0,08474%
MINÉRIO DE ALUMÍNIO	SP	INDAIATUBA	FCA, MRS	DF, GO, MG, RJ, SP	2,31139%
MINÉRIO DE ALUMÍNIO	SP	ITAQUAQUECETUBA	FCA, MRS	DF, GO, MG, RJ, SP	0,48633%
MINÉRIO DE ALUMÍNIO	SP	ITU	FCA, MRS	DF, GO, MG, RJ, SP	3,52664%
MINÉRIO DE ALUMÍNIO	SP	ITUVERAVA	FCA, MRS	DF, GO, MG, RJ, SP	1,51262%
MINÉRIO DE ALUMÍNIO	SP	JACAREI	FCA, MRS	DF, GO, MG, RJ, SP	0,76281%
MINÉRIO DE ALUMÍNIO	SP	JAGUARIUNA	FCA, MRS	DF, GO, MG, RJ, SP	1,52101%
MINÉRIO DE ALUMÍNIO	SP	JARDINOPOLIS	FCA, MRS	DF, GO, MG, RJ, SP	1,48245%
MINÉRIO DE ALUMÍNIO	SP	JUNDIAI	FCA, MRS	DF, GO, MG, RJ, SP	0,66686%
MINÉRIO DE ALUMÍNIO	SP	LAVRINHAS	FCA, MRS	DF, GO, MG, RJ, SP	0,40887%
MINÉRIO DE ALUMÍNIO	SP	LORENA	FCA, MRS	DF, GO, MG, RJ, SP	0,39480%
MINÉRIO DE ALUMÍNIO	SP	LOUVEIRA	FCA, MRS	DF, GO, MG, RJ, SP	0,17940%
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	FCA, MRS	DF, GO, MG, RJ, SP	2,03765%
MINÉRIO DE ALUMÍNIO	SP	MOGI DAS CRUZES	FCA, MRS	DF, GO, MG, RJ, SP	0,90307%
MINÉRIO DE ALUMÍNIO	SP	MOGI GUACU	FCA, MRS	DF, GO, MG, RJ, SP	1,36242%
MINÉRIO DE ALUMÍNIO	SP	MOJI MIRIM	FCA, MRS	DF, GO, MG, RJ, SP	1,59885%
MINÉRIO DE ALUMÍNIO	SP	ORLANDIA	FCA, MRS	DF, GO, MG, RJ, SP	1,21813%
MINÉRIO DE ALUMÍNIO	SP	PAULINIA	FCA, MRS	DF, GO, MG, RJ, SP	0,76777%
MINÉRIO DE ALUMÍNIO	SP	PINDAMONHANGABA	FCA, MRS	DF, GO, MG, RJ, SP	0,78085%
MINÉRIO DE ALUMÍNIO	SP	QUELUZ	FCA, MRS	DF, GO, MG, RJ, SP	0,70306%
MINÉRIO DE ALUMÍNIO	SP	RIBEIRAO PRETO	FCA, MRS	DF, GO, MG, RJ, SP	1,54799%
MINÉRIO DE ALUMÍNIO	SP	ROSEIRA	FCA, MRS	DF, GO, MG, RJ, SP	0,31758%
MINÉRIO DE ALUMÍNIO	SP	SALES OLIVEIRA	FCA, MRS	DF, GO, MG, RJ, SP	0,76478%
MINÉRIO DE ALUMÍNIO	SP	SALTO	FCA, MRS	DF, GO, MG, RJ, SP	0,96999%
MINÉRIO DE ALUMÍNIO	SP	SANTA RITA DO PASSA QUATRO	FCA, MRS	DF, GO, MG, RJ, SP	0,24076%
MINÉRIO DE ALUMÍNIO	SP	SANTA ROSA DE VITERBO	FCA, MRS	DF, GO, MG, RJ, SP	0,44012%
MINÉRIO DE ALUMÍNIO	SP	SANTO ANTONIO DE POSSE	FCA, MRS	DF, GO, MG, RJ, SP	0,81111%
MINÉRIO DE ALUMÍNIO	SP	SAO JOAO DA BOA VISTA	FCA, MRS	DF, GO, MG, RJ, SP	0,60464%
MINÉRIO DE ALUMÍNIO	SP	SAO JOAQUIM DA BARRA	FCA, MRS	DF, GO, MG, RJ, SP	0,99910%
MINÉRIO DE ALUMÍNIO	SP	SAO JOSE DOS CAMPOS	FCA, MRS	DF, GO, MG, RJ, SP	1,02225%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	FCA, MRS	DF, GO, MG, RJ, SP	2,29417%
MINÉRIO DE ALUMÍNIO	SP	SAO SIMAO	FCA, MRS	DF, GO, MG, RJ, SP	1,96154%
MINÉRIO DE ALUMÍNIO	SP	SERRANA	FCA, MRS	DF, GO, MG, RJ, SP	0,32189%
MINÉRIO DE ALUMÍNIO	SP	TAMBAU	FCA, MRS	DF, GO, MG, RJ, SP	1,26673%
MINÉRIO DE ALUMÍNIO	SP	TAUBATE	FCA, MRS	DF, GO, MG, RJ, SP	0,54753%
MINÉRIO DE ALUMÍNIO	SP	TREMEMBE	FCA, MRS	DF, GO, MG, RJ, SP	0,16928%
MINÉRIO DE ALUMÍNIO	SP	VALINHOS	FCA, MRS	DF, GO, MG, RJ, SP	0,37021%
MINÉRIO DE ALUMÍNIO	SP	VARZEA PAULISTA	FCA, MRS	DF, GO, MG, RJ, SP	0,21862%
MINÉRIO DE ALUMÍNIO	SP	VINHEDO	FCA, MRS	DF, GO, MG, RJ, SP	0,34538%
MINÉRIO DE COBRE	MA	ACAILANDIA	EFC	MA, PA	13,12313%
MINÉRIO DE COBRE	MA	ALTO ALEGRE DO PINDARE	EFC	MA, PA	9,85664%
MINÉRIO DE COBRE	MA	ANAJATUBA	EFC	MA, PA	2,36362%
MINÉRIO DE COBRE	MA	ARARI	EFC	MA, PA	3,06789%
MINÉRIO DE COBRE	MA	BACABEIRA	EFC	MA, PA	4,61465%
MINÉRIO DE COBRE	MA	BOM JARDIM	EFC	MA, PA	0,67391%
MINÉRIO DE COBRE	MA	BOM JESUS DAS SELVAS	EFC	MA, PA	5,65587%
MINÉRIO DE COBRE	MA	BURITICUPU	EFC	MA, PA	3,26143%
MINÉRIO DE COBRE	MA	CIDELANDIA	EFC	MA, PA	5,39114%
MINÉRIO DE COBRE	MA	IGARAPE DO MEIO	EFC	MA, PA	3,00901%
MINÉRIO DE COBRE	MA	ITAPECURU MIRIM	EFC	MA, PA	1,51296%
MINÉRIO DE COBRE	MA	ITINGA DO MARANHAO	EFC	MA, PA	0,87171%
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	1,46144%
MINÉRIO DE COBRE	MA	SANTA INES	EFC	MA, PA	1,28847%
MINÉRIO DE COBRE	MA	SANTA LUZIA	EFC	MA, PA	0,49336%
MINÉRIO DE COBRE	MA	SANTA RITA	EFC	MA, PA	1,70834%
MINÉRIO DE COBRE	MA	SAO FRANCISCO DO BREJAO	EFC	MA, PA	0,57984%
MINÉRIO DE COBRE	MA	SAO LUIS	EFC	MA, PA	3,36057%
MINÉRIO DE COBRE	MA	SAO PEDRO DA AGUA BRANCA	EFC	MA, PA	5,56859%
MINÉRIO DE COBRE	MA	TUFILANDIA	EFC	MA, PA	1,65786%
MINÉRIO DE COBRE	MA	VILA NOVA DOS MARTIROS	EFC	MA, PA	4,02010%
MINÉRIO DE COBRE	MA	VITORIA DO MEARIM	EFC	MA, PA	2,47011%
MINÉRIO DE COBRE	PA	BOM JESUS DO TO	EFC	MA, PA	4,93804%
MINÉRIO DE COBRE	PA	CURIONOPOLIS	EFC	MA, PA	0,61480%
MINÉRIO DE COBRE	PA	MARABA	EFC	MA, PA	14,11352%
MINÉRIO DE COBRE	PA	PARAUPEBAS	EFC	MA, PA	1,88073%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	BA	13,56048%
MINÉRIO DE CROMO	BA	ALAGOINHAS	FCA	BA	7,39973%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE CROMO	BA	ANTONIO GONCALVES	FCA	BA	1,09487%
MINÉRIO DE CROMO	BA	ARACI	FCA	BA	0,02091%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	BA	8,47268%
MINÉRIO DE CROMO	BA	BARROCAS	FCA	BA	4,73701%
MINÉRIO DE CROMO	BA	CAMPO FORMOSO	FCA	BA	0,08404%
MINÉRIO DE CROMO	BA	CATU	FCA	BA	6,62370%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	BA	7,59398%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	BA	13,19340%
MINÉRIO DE CROMO	BA	LAMARAO	FCA	BA	3,14723%
MINÉRIO DE CROMO	BA	OURICANGAS	FCA	BA	0,17682%
MINÉRIO DE CROMO	BA	POJUCA	FCA	BA	1,36574%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	BA	8,12507%
MINÉRIO DE CROMO	BA	SANTALUZ	FCA	BA	13,40869%
MINÉRIO DE CROMO	BA	SENHOR DO BONFIM	FCA	BA	2,53721%
MINÉRIO DE CROMO	BA	SERRINHA	FCA	BA	8,45842%
MINÉRIO DE FERRO	BA	ARACATU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00553%
MINÉRIO DE FERRO	BA	BARRA DA ESTIVA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00694%
MINÉRIO DE FERRO	BA	BRUMADO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,02049%
MINÉRIO DE FERRO	BA	CACULE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01711%
MINÉRIO DE FERRO	BA	CASTRO ALVES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01659%
MINÉRIO DE FERRO	BA	CONTENDAS DO SINCORA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,02566%
MINÉRIO DE FERRO	BA	IACU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,04192%
MINÉRIO DE FERRO	BA	IRAMAIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,02694%
MINÉRIO DE FERRO	BA	ITATIM	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00746%
MINÉRIO DE FERRO	BA	ITUACU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00064%
MINÉRIO DE FERRO	BA	JACARACI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00038%
MINÉRIO DE FERRO	BA	LICINIO DE ALMEIDA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00888%
MINÉRIO DE FERRO	BA	MALHADA DE PEDRAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01119%
MINÉRIO DE FERRO	BA	MARCIONILIO SOUZA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,03165%
MINÉRIO DE FERRO	BA	RIO DO ANTONIO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01635%
MINÉRIO DE FERRO	BA	SANTA TERESINHA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00897%
MINÉRIO DE FERRO	BA	TANHACU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01516%
MINÉRIO DE FERRO	ES	BAIXO GUANDU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,94166%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,17429%
MINÉRIO DE FERRO	ES	COLATINA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	4,45748%
MINÉRIO DE FERRO	ES	FUNDAO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,04617%
MINÉRIO DE FERRO	ES	IBIRACU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,34715%
MINÉRIO DE FERRO	ES	JOAO NEIVA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,54398%
MINÉRIO DE FERRO	ES	SANTA LEOPOLDINA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,71513%
MINÉRIO DE FERRO	ES	SERRA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,01685%
MINÉRIO DE FERRO	MA	ACAILANDIA	EFC	MA, PA	12,37182%
MINÉRIO DE FERRO	MA	ALTO ALEGRE DO PINDARE	EFC	MA, PA	9,27924%
MINÉRIO DE FERRO	MA	ANAJATUBA	EFC	MA, PA	2,22516%
MINÉRIO DE FERRO	MA	ARARI	EFC	MA, PA	2,88817%
MINÉRIO DE FERRO	MA	BACABEIRA	EFC	MA, PA	4,34433%
MINÉRIO DE FERRO	MA	BOM JARDIM	EFC	MA, PA	0,63443%
MINÉRIO DE FERRO	MA	BOM JESUS DAS SELVAS	EFC	MA, PA	5,32455%
MINÉRIO DE FERRO	MA	BURITICUPU	EFC	MA, PA	3,07038%
MINÉRIO DE FERRO	MA	CIDELANDIA	EFC	MA, PA	5,11411%
MINÉRIO DE FERRO	MA	IGARAPE DO MEIO	EFC	MA, PA	2,83274%
MINÉRIO DE FERRO	MA	ITAPECURU MIRIM	EFC	MA, PA	1,42433%
MINÉRIO DE FERRO	MA	ITINGA DO MARANHÃO	EFC	MA, PA	0,82064%
MINÉRIO DE FERRO	MA	MIRANDA DO NORTE	EFC	MA, PA	0,90098%
MINÉRIO DE FERRO	MA	MONCAO	EFC	MA, PA	1,39824%
MINÉRIO DE FERRO	MA	PINDARE-MIRIM	EFC	MA, PA	1,37582%
MINÉRIO DE FERRO	MA	SANTA INES	EFC	MA, PA	1,21299%
MINÉRIO DE FERRO	MA	SANTA LUZIA	EFC	MA, PA	0,46445%
MINÉRIO DE FERRO	MA	SANTA RITA	EFC	MA, PA	1,60827%
MINÉRIO DE FERRO	MA	SAO FRANCISCO DO BREJAO	EFC	MA, PA	0,55004%
MINÉRIO DE FERRO	MA	SAO LUIS	EFC	MA, PA	2,01794%
MINÉRIO DE FERRO	MA	SAO PEDRO DA AGUA BRANCA	EFC	MA, PA	5,28244%
MINÉRIO DE FERRO	MA	TUFILANDIA	EFC	MA, PA	1,56074%
MINÉRIO DE FERRO	MA	VILA NOVA DOS MARTIROS	EFC	MA, PA	3,81352%
MINÉRIO DE FERRO	MA	VITORIA DO MEARIM	EFC	MA, PA	2,32541%
MINÉRIO DE FERRO	MG	AIMORES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,11727%
MINÉRIO DE FERRO	MG	ALFREDO VASCONCELOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00408%
MINÉRIO DE FERRO	MG	ANDRELANDIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	3,99817%
MINÉRIO DE FERRO	MG	ANTONIO CARLOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00367%
MINÉRIO DE FERRO	MG	ANTONIO DIAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	3,44484%
MINÉRIO DE FERRO	MG	ARANTINA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,37147%
MINÉRIO DE FERRO	MG	ARAXA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,31608%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,07422%
MINÉRIO DE FERRO	MG	BARBACENA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00372%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE FERRO	MG	BELA VISTA DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,25871%
MINÉRIO DE FERRO	MG	BELMIRO BRAGA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00057%
MINÉRIO DE FERRO	MG	BELO HORIZONTE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,07706%
MINÉRIO DE FERRO	MG	BELO ORIENTE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,40383%
MINÉRIO DE FERRO	MG	BELO VALE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,00826%
MINÉRIO DE FERRO	MG	BETIM	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,05974%
MINÉRIO DE FERRO	MG	BOM JARDIM DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,30437%
MINÉRIO DE FERRO	MG	BRUMADINHO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,25403%
MINÉRIO DE FERRO	MG	BUGRE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,07541%
MINÉRIO DE FERRO	MG	CAETE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,05448%
MINÉRIO DE FERRO	MG	CARANAIBA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00068%
MINÉRIO DE FERRO	MG	CARANDAI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00565%
MINÉRIO DE FERRO	MG	CARMO DO CAJURU	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00100%
MINÉRIO DE FERRO	MG	CATAS ALTAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,68631%
MINÉRIO DE FERRO	MG	CONCEICAO DA BARRA DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,26711%
MINÉRIO DE FERRO	MG	CONGONHAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,24530%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01004%
MINÉRIO DE FERRO	MG	CONSELHEIRO PENA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,23304%
MINÉRIO DE FERRO	MG	CONTAGEM	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01364%
MINÉRIO DE FERRO	MG	CORONEL FABRICIANO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,52449%
MINÉRIO DE FERRO	MG	CORONEL XAVIER CHAVES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,85073%
MINÉRIO DE FERRO	MG	CRISTIANO OTONI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00221%
MINÉRIO DE FERRO	MG	DIVINOPOLIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00141%
MINÉRIO DE FERRO	MG	ENTRE RIOS DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,02264%
MINÉRIO DE FERRO	MG	ESMERALDAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00508%
MINÉRIO DE FERRO	MG	EWBANK DA CAMARA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00219%
MINÉRIO DE FERRO	MG	GOVERNADOR VALADARES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	6,93741%
MINÉRIO DE FERRO	MG	IBIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,36561%
MINÉRIO DE FERRO	MG	IBIRITE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,04524%
MINÉRIO DE FERRO	MG	IPATINGA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,81658%
MINÉRIO DE FERRO	MG	ITABIRA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,70222%
MINÉRIO DE FERRO	MG	ITABIRITO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,78063%
MINÉRIO DE FERRO	MG	ITAUNA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00432%
MINÉRIO DE FERRO	MG	ITUETA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,05016%
MINÉRIO DE FERRO	MG	JECEABA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,97189%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,65820%
MINÉRIO DE FERRO	MG	JUATUBA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01443%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00439%
MINÉRIO DE FERRO	MG	LAGOA DOURADA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,10094%
MINÉRIO DE FERRO	MG	MADRE DE DEUS DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,41683%
MINÉRIO DE FERRO	MG	MARIANA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,23012%
MINÉRIO DE FERRO	MG	MARIO CAMPOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,17337%
MINÉRIO DE FERRO	MG	MATEUS LEME	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,02905%
MINÉRIO DE FERRO	MG	MATIAS BARBOSA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00081%
MINÉRIO DE FERRO	MG	MATOZINHOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00002%
MINÉRIO DE FERRO	MG	MOEDA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,14830%
MINÉRIO DE FERRO	MG	NAQUE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,85409%
MINÉRIO DE FERRO	MG	NOVA ERA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,76212%
MINÉRIO DE FERRO	MG	OURO BRANCO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00013%
MINÉRIO DE FERRO	MG	OURO PRETO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,61968%
MINÉRIO DE FERRO	MG	PASSA-VINTE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,40126%
MINÉRIO DE FERRO	MG	PATROCINIO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,05929%
MINÉRIO DE FERRO	MG	PEDRO LEOPOLDO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00003%
MINÉRIO DE FERRO	MG	PERIQUITO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,91473%
MINÉRIO DE FERRO	MG	PRUDENTE DE MORAIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00001%
MINÉRIO DE FERRO	MG	RESENDE COSTA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,88499%
MINÉRIO DE FERRO	MG	RESPLENDOR	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,93721%
MINÉRIO DE FERRO	MG	RESSAQUINHA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00151%
MINÉRIO DE FERRO	MG	RIO ACIMA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01030%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,69081%
MINÉRIO DE FERRO	MG	RITAPOLIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,28142%
MINÉRIO DE FERRO	MG	SABARA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,05583%
MINÉRIO DE FERRO	MG	SANTA BARBARA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,23962%
MINÉRIO DE FERRO	MG	SANTA LUZIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00119%
MINÉRIO DE FERRO	MG	SANTA RITA DE JACUTINGA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,61430%
MINÉRIO DE FERRO	MG	SANTANA DO DESERTO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00026%
MINÉRIO DE FERRO	MG	SANTANA DO PARAISO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,69650%
MINÉRIO DE FERRO	MG	SANTOS DUMONT	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00760%
MINÉRIO DE FERRO	MG	SAO BRAS DO SUACUI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,91132%
MINÉRIO DE FERRO	MG	SAO GONCALO DO RIO ABAIXO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,10779%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	5,40089%
MINÉRIO DE FERRO	MG	SAO JOAQUIM DE BICAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,04891%
MINÉRIO DE FERRO	MG	SAO JOSE DA LAPA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00002%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE FERRO	MG	SAO SEBASTIAO DO OESTE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00008%
MINÉRIO DE FERRO	MG	SAO VICENTE DE MINAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,42688%
MINÉRIO DE FERRO	MG	SARZEDO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,10925%
MINÉRIO DE FERRO	MG	SENHORA DOS REMEDIOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00133%
MINÉRIO DE FERRO	MG	SERRA DO SALITRE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,23712%
MINÉRIO DE FERRO	MG	SIMAO PEREIRA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00115%
MINÉRIO DE FERRO	MG	TIMOTEO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,47350%
MINÉRIO DE FERRO	MG	TUMIRITINGA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,38386%
MINÉRIO DE FERRO	MG	VESPASIANO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00002%
MINÉRIO DE FERRO	MG	NAZARENO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,14944%
MINÉRIO DE FERRO	MS	CORUMBA	RMO	MS	100,00000%
MINÉRIO DE FERRO	PA	BOM JESUS DO TO	EFC	MA, PA	4,68429%
MINÉRIO DE FERRO	PA	CANAL DOS CARAJAS	EFC	MA, PA	2,53122%
MINÉRIO DE FERRO	PA	CURIONOPOLIS	EFC	MA, PA	0,56904%
MINÉRIO DE FERRO	PA	MARABA	EFC	MA, PA	13,39858%
MINÉRIO DE FERRO	PA	PARAUAPEBAS	EFC	MA, PA	5,97614%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,52257%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,25300%
MINÉRIO DE FERRO	RJ	COMENDADOR LEVY GASPARIAN	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00064%
MINÉRIO DE FERRO	RJ	ENGENHEIRO PAULO DE FRONTIN	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,99598%
MINÉRIO DE FERRO	RJ	ITAGUAI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,25688%
MINÉRIO DE FERRO	RJ	ITATIAIA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01282%
MINÉRIO DE FERRO	RJ	MANGARATIBA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,71121%
MINÉRIO DE FERRO	RJ	MENDES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,10547%
MINÉRIO DE FERRO	RJ	PARACAMBI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,58867%
MINÉRIO DE FERRO	RJ	PARAIBA DO SUL	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00118%
MINÉRIO DE FERRO	RJ	PINHEIRAL	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,22394%
MINÉRIO DE FERRO	RJ	PORTO REAL	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00664%
MINÉRIO DE FERRO	RJ	QUATIS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,60853%
MINÉRIO DE FERRO	RJ	RESENDE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,70954%
MINÉRIO DE FERRO	RJ	RIO DAS FLORES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00004%
MINÉRIO DE FERRO	RJ	RIO DE JANEIRO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,07851%
MINÉRIO DE FERRO	RJ	SEROPEDICA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	2,42537%
MINÉRIO DE FERRO	RJ	TRES RIOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00077%
MINÉRIO DE FERRO	RJ	VALENCA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00033%
MINÉRIO DE FERRO	RJ	VASSOURAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00332%
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	1,48136%
MINÉRIO DE FERRO	SP	APARECIDA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00703%
MINÉRIO DE FERRO	SP	CACAPAVA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01284%
MINÉRIO DE FERRO	SP	CACHOEIRA PAULISTA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00692%
MINÉRIO DE FERRO	SP	CANAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00534%
MINÉRIO DE FERRO	SP	CRUZEIRO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01123%
MINÉRIO DE FERRO	SP	GUARAREMA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00854%
MINÉRIO DE FERRO	SP	GUARATINGUETA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00930%
MINÉRIO DE FERRO	SP	ITAQUAQUECETUBA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01285%
MINÉRIO DE FERRO	SP	JACAREI	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01657%
MINÉRIO DE FERRO	SP	LAVRINHAS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00923%
MINÉRIO DE FERRO	SP	LORENA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00891%
MINÉRIO DE FERRO	SP	MOGI DAS CRUZES	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01962%
MINÉRIO DE FERRO	SP	PINDAMONHANGABA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01720%
MINÉRIO DE FERRO	SP	POA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00228%
MINÉRIO DE FERRO	SP	QUELUZ	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01587%
MINÉRIO DE FERRO	SP	ROSEIRA	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00717%
MINÉRIO DE FERRO	SP	SAO JOSE DOS CAMPOS	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,02221%
MINÉRIO DE FERRO	SP	SUZANO	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00546%
MINÉRIO DE FERRO	SP	TAUBATE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,01190%
MINÉRIO DE FERRO	SP	TREMEMBE	EFVM, FCA, MRS	BA, ES, MG, RJ, SP	0,00368%
MINÉRIO DE MANGANÊS	MA	ACAILANDIA	EFC	MA, PA	15,23516%
MINÉRIO DE MANGANÊS	MA	ALTO ALEGRE DO PINDARE	EFC	MA, PA	11,44296%
MINÉRIO DE MANGANÊS	MA	ANAJATUBA	EFC	MA, PA	2,74402%
MINÉRIO DE MANGANÊS	MA	ARARI	EFC	MA, PA	3,56163%
MINÉRIO DE MANGANÊS	MA	BACABEIRA	EFC	MA, PA	5,35733%
MINÉRIO DE MANGANÊS	MA	BOM JARDIM	EFC	MA, PA	0,78237%
MINÉRIO DE MANGANÊS	MA	BOM JESUS DAS SELVAS	EFC	MA, PA	6,56613%
MINÉRIO DE MANGANÊS	MA	BURITICUPU	EFC	MA, PA	3,78633%
MINÉRIO DE MANGANÊS	MA	CIDELANDIA	EFC	MA, PA	6,25879%
MINÉRIO DE MANGANÊS	MA	IGARAPE DO MEIO	EFC	MA, PA	3,49327%
MINÉRIO DE MANGANÊS	MA	ITAPECURU MIRIM	EFC	MA, PA	1,75645%
MINÉRIO DE MANGANÊS	MA	ITINGA DO MARANHÃO	EFC	MA, PA	1,01200%
MINÉRIO DE MANGANÊS	MA	MIRANDA DO NORTE	EFC	MA, PA	1,11107%
MINÉRIO DE MANGANÊS	MA	MONCAO	EFC	MA, PA	1,72427%
MINÉRIO DE MANGANÊS	MA	PINDARE-MIRIM	EFC	MA, PA	1,69664%
MINÉRIO DE MANGANÊS	MA	SANTA INES	EFC	MA, PA	1,49584%

Substância	UF	Município	Ferr. conj.	UF conj.	Índice_Ferrovias
MINÉRIO DE MANGANÊS	MA	SANTA LUZIA	EFC	MA, PA	0,57276%
MINÉRIO DE MANGANÊS	MA	SANTA RITA	EFC	MA, PA	1,98328%
MINÉRIO DE MANGANÊS	MA	SAO FRANCISCO DO BREJAO	EFC	MA, PA	0,67315%
MINÉRIO DE MANGANÊS	MA	SAO LUIS	EFC	MA, PA	4,13532%
MINÉRIO DE MANGANÊS	MA	SAO PEDRO DA AGUA BRANCA	EFC	MA, PA	6,46479%
MINÉRIO DE MANGANÊS	MA	TUFILANDIA	EFC	MA, PA	1,92467%
MINÉRIO DE MANGANÊS	MA	VILA NOVA DOS MARTIROS	EFC	MA, PA	4,66709%
MINÉRIO DE MANGANÊS	MA	VITORIA DO MEARIM	EFC	MA, PA	2,86765%
MINÉRIO DE MANGANÊS	PA	BOM JESUS DO TO	EFC	MA, PA	5,73276%
MINÉRIO DE MANGANÊS	PA	MARABA	EFC	MA, PA	2,95430%

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	2.780.591	1,38	3.848.337,94	200.707.919,39	1,91738%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MRF-MPF	1.765.493	8,00	14.125.709,49	200.707.919,39	7,03794%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MPF-MCT	1.793.526	3,71	6.650.394,41	200.707.919,39	3,31347%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MCT-MNH	1.793.526	1,40	2.518.110,50	200.707.919,39	1,25461%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MNH-MIC	2.141.760	1,57	3.356.137,92	200.707.919,39	1,67215%
ANTRACITO	SC	CRICIUMA	FTC	1	SC	FTC	MSA-MPF	28.033	5,00	140.221,07	200.707.919,39	0,06986%
ANTRACITO	SC	FORQUILHINHA	FTC	1	SC	FTC	MSA-MPF	28.033	4,23	118.635,66	200.707.919,39	0,05911%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MIC-MEX	2.141.760	12,31	26.369.349,12	200.707.919,39	13,13817%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MNH-MIC	2.141.760	3,26	6.986.421,12	200.707.919,39	3,48089%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MEX-MMG	2.780.591	0,69	1.910.266,02	200.707.919,39	0,95176%
ANTRACITO	SC	ICARA	FTC	1	SC	FTC	MUR-MEX	638.831	1,56	993.382,21	200.707.919,39	0,49494%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MJA-MK3	2.780.591	8,88	24.697.209,26	200.707.919,39	12,30505%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MDR-MJA	2.780.591	4,43	12.329.140,49	200.707.919,39	6,14283%
ANTRACITO	SC	JAGUARUNA	FTC	1	SC	FTC	MMG-MDR	2.780.591	2,93	8.149.912,22	200.707.919,39	4,06058%
ANTRACITO	SC	MORRO DA FUMACA	FTC	1	SC	FTC	MUR-MEX	638.831	12,91	8.247.947,04	200.707.919,39	4,10943%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MEX-MMG	2.780.591	7,29	20.267.727,80	200.707.919,39	10,09812%
ANTRACITO	SC	SANGAO	FTC	1	SC	FTC	MMG-MDR	2.780.591	2,76	7.663.308,80	200.707.919,39	3,81814%
ANTRACITO	SC	SIDEROPOLIS	FTC	1	SC	FTC	MRF-MPF	1.765.493	9,42	16.634.475,05	200.707.919,39	8,28790%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MJA-MK3	2.780.591	4,12	11.442.131,97	200.707.919,39	5,70089%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MK3-MTB	2.780.591	3,37	9.376.152,85	200.707.919,39	4,67154%
ANTRACITO	SC	TUBARAO	FTC	1	SC	FTC	MTB-MCP	2.780.591	3,02	8.383.481,87	200.707.919,39	4,17696%
ANTRACITO	SC	URUSSANGA	FTC	1	SC	FTC	MUR-MEX	638.831	10,17	6.499.466,59	200.707.919,39	3,23827%
AREIA	DF	BRASILIA	FCA	2	DF, GO	FCA	EJI-EJK	41.741	29,69	1.239.415,51	10.243.324,88	12,09974%
AREIA	DF	BRASILIA	FCA	2	DF, GO	FCA	EJK-EBZ	41.741	13,44	560.790,34	10.243.324,88	5,47469%
AREIA	GO	LUZIANIA	FCA	2	DF, GO	FCA	EBW-EJI	41.741	60,97	2.544.781,81	10.243.324,88	24,84332%
AREIA	GO	LUZIANIA	FCA	2	DF, GO	FCA	EYZ-EBW	41.741	38,19	1.593.921,83	10.243.324,88	15,56059%
AREIA	GO	LUZIANIA	FCA	2	DF, GO	FCA	EBU-EYZ	41.741	26,43	1.103.005,93	10.243.324,88	10,76805%
AREIA	GO	LUZIANIA	FCA	2	DF, GO	FCA	EJI-EJK	41.741	3,11	129.939,73	10.243.324,88	1,26853%
AREIA	GO	ORIZONA	FCA	2	DF, GO	FCA	EPZ-EBU	41.741	46,64	1.946.841,98	10.243.324,88	19,00596%
AREIA	GO	ORIZONA	FCA	2	DF, GO	FCA	EBU-EYZ	41.741	5,35	223.397,83	10.243.324,88	2,18091%
AREIA	GO	PIRES DO RIO	FCA	2	DF, GO	FCA	EPZ-EBU	41.741	8,84	368.948,70	10.243.324,88	3,60185%
AREIA	GO	VALPARAISO DE GOIAS	FCA	2	DF, GO	FCA	EJI-EJK	41.741	12,75	532.281,23	10.243.324,88	5,19637%
AREIA	CE	CARIRE	FTL	3	CE, MA, PI	FTL	BNS-BKI	1.639	16,89	27.679,43	1.286.130,12	2,15215%
AREIA	CE	CARIRE	FTL	3	CE, MA, PI	FTL	BKI-BVK	1.639	13,13	21.524,99	1.286.130,12	1,67362%
AREIA	CE	CAUCAIA	FTL	3	CE, MA, PI	FTL	BAR-BCI	1.760	8,17	14.375,68	1.286.130,12	1,11775%
AREIA	CE	CAUCAIA	FTL	3	CE, MA, PI	FTL	BCI-BGE	1.882	16,10	30.307,73	1.286.130,12	2,35651%
AREIA	CE	CAUCAIA	FTL	3	CE, MA, PI	FTL	BGE-BPI	1.882	8,61	16.198,37	1.286.130,12	1,25947%
AREIA	CE	CAUCAIA	FTL	3	CE, MA, PI	FTL	BPI-BQT	1.882	6,82	12.837,12	1.286.130,12	0,99812%
AREIA	CE	CAUCAIA	FTL	3	CE, MA, PI	FTL	BOF-BCI	122	8,48	1.034,93	1.286.130,12	0,08047%
AREIA	CE	CRATEUS	FTL	3	CE, MA, PI	FTL	BZS-BCK	1.639	22,04	36.123,56	1.286.130,12	2,80870%
AREIA	CE	CRATEUS	FTL	3	CE, MA, PI	FTL	BCK-BIB	1.379	37,05	51.094,71	1.286.130,12	3,97275%
AREIA	CE	CRATEUS	FTL	3	CE, MA, PI	FTL	BIB-BOC	1.379	21,02	28.981,06	1.286.130,12	2,25335%
AREIA	CE	CRATEUS	FTL	3	CE, MA, PI	FTL	BOC-BBV	1.379	4,46	6.150,34	1.286.130,12	0,47821%
AREIA	CE	FORTALEZA	FTL	3	CE, MA, PI	FTL	BAR-BCI	1.760	0,84	1.469,60	1.286.130,12	0,11427%
AREIA	CE	FORTALEZA	FTL	3	CE, MA, PI	FTL	BJF-BOF	137	4,10	561,84	1.286.130,12	0,04368%
AREIA	CE	FORTALEZA	FTL	3	CE, MA, PI	FTL	BOF-BCI	122	6,84	834,11	1.286.130,12	0,06485%
AREIA	CE	FORTALEZA	FTL	3	CE, MA, PI	FTL	BPR-BJF	137	9,07	1.242,45	1.286.130,12	0,09660%
AREIA	CE	FORTALEZA	FTL	3	CE, MA, PI	FTL	BAR-BPR	137	6,86	940,09	1.286.130,12	0,07309%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	CE	GROAIRAS	FTL	3	CE, MA, PI	FTL	BNS-BKI	1.639	0,67	1.093,21	1.286.130,12	0,08500%
AREIA	CE	IPU	FTL	3	CE, MA, PI	FTL	BIU-BIS	1.639	17,87	29.293,85	1.286.130,12	2,27767%
AREIA	CE	IPU	FTL	3	CE, MA, PI	FTL	BVK-BIU	1.639	4,24	6.952,64	1.286.130,12	0,54059%
AREIA	CE	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	1.639	19,49	31.942,47	1.286.130,12	2,48361%
AREIA	CE	IPUEIRAS	FTL	3	CE, MA, PI	FTL	BIU-BIS	1.639	8,94	14.644,47	1.286.130,12	1,13865%
AREIA	CE	ITAPIOCA	FTL	3	CE, MA, PI	FTL	BIT-BRW	1.882	18,42	34.670,20	1.286.130,12	2,69570%
AREIA	CE	ITAPIOCA	FTL	3	CE, MA, PI	FTL	BIW-BIT	1.882	2,87	5.399,46	1.286.130,12	0,41982%
AREIA	CE	ITAPIOCA	FTL	3	CE, MA, PI	FTL	BTR-BIW	1.882	21,56	40.572,16	1.286.130,12	3,15459%
AREIA	CE	MARACANAU	FTL	3	CE, MA, PI	FTL	BAR-BCI	1.760	7,28	12.814,56	1.286.130,12	0,99637%
AREIA	CE	MIRAIMA	FTL	3	CE, MA, PI	FTL	BIT-BRW	1.882	25,34	47.691,76	1.286.130,12	3,70816%
AREIA	CE	MIRAIMA	FTL	3	CE, MA, PI	FTL	BRW-BSB	1.882	2,93	5.519,91	1.286.130,12	0,42919%
AREIA	CE	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BIS-BNR	1.639	13,95	22.859,13	1.286.130,12	1,77736%
AREIA	CE	NOVA RUSSAS	FTL	3	CE, MA, PI	FTL	BNR-BZS	1.639	17,18	28.161,30	1.286.130,12	2,18961%
AREIA	CE	PIRES FERREIRA	FTL	3	CE, MA, PI	FTL	BVK-BIU	1.639	14,93	24.473,55	1.286.130,12	1,90288%
AREIA	CE	REIUTABA	FTL	3	CE, MA, PI	FTL	BKI-BVK	1.639	13,78	22.580,50	1.286.130,12	1,75569%
AREIA	CE	REIUTABA	FTL	3	CE, MA, PI	FTL	BVK-BIU	1.639	8,68	14.228,16	1.286.130,12	1,10628%
AREIA	CE	SANTANA DO ACARAU	FTL	3	CE, MA, PI	FTL	BRW-BSB	1.882	14,20	26.722,52	1.286.130,12	2,07775%
AREIA	CE	SAO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BPI-BQT	1.882	22,05	41.503,75	1.286.130,12	3,22703%
AREIA	CE	SAO GONCALO DO AMARANTE	FTL	3	CE, MA, PI	FTL	BQT-BTR	1.882	12,12	22.813,60	1.286.130,12	1,77382%
AREIA	CE	SAO LUIS DO CURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	1.882	6,01	11.301,41	1.286.130,12	0,87871%
AREIA	CE	SOBRAL	FTL	3	CE, MA, PI	FTL	BNS-BKI	1.639	11,65	19.094,35	1.286.130,12	1,48464%
AREIA	CE	SOBRAL	FTL	3	CE, MA, PI	FTL	BRW-BSB	1.882	32,51	61.178,17	1.286.130,12	4,75676%
AREIA	CE	SOBRAL	FTL	3	CE, MA, PI	FTL	BSB-BNS	1.639	3,60	5.897,12	1.286.130,12	0,45852%
AREIA	CE	TAMBORIL	FTL	3	CE, MA, PI	FTL	BNR-BZS	1.639	11,26	18.456,78	1.286.130,12	1,43506%
AREIA	CE	TAMBORIL	FTL	3	CE, MA, PI	FTL	BZS-BCK	1.639	9,26	15.177,14	1.286.130,12	1,18006%
AREIA	CE	TURURU	FTL	3	CE, MA, PI	FTL	BQT-BTR	1.882	11,05	20.786,69	1.286.130,12	1,61622%
AREIA	CE	TURURU	FTL	3	CE, MA, PI	FTL	BTR-BIW	1.882	1,35	2.538,82	1.286.130,12	0,19740%
AREIA	CE	UMIRIM	FTL	3	CE, MA, PI	FTL	BQT-BTR	1.882	12,84	24.170,53	1.286.130,12	1,87932%
AREIA	MA	BACABEIRA	FTL	3	CE, MA, PI	FTL	ATO-A26	166	20,59	3.418,60	1.286.130,12	0,26581%
AREIA	MA	BACABEIRA	FTL	3	CE, MA, PI	FTL	AEA-ARS	166	6,14	1.018,74	1.286.130,12	0,07921%
AREIA	MA	BACABEIRA	FTL	3	CE, MA, PI	FTL	ARS-ATO	166	6,56	1.089,62	1.286.130,12	0,08472%
AREIA	MA	CANTANHEDE	FTL	3	CE, MA, PI	FTL	AXK-ANJ	166	30,13	5.002,16	1.286.130,12	0,38893%
AREIA	MA	CAXIAS	FTL	3	CE, MA, PI	FTL	AYM-ACQ	306	10,16	3.108,35	1.286.130,12	0,24168%
AREIA	MA	CAXIAS	FTL	3	CE, MA, PI	FTL	ACQ-ACS	306	29,96	9.168,07	1.286.130,12	0,71284%
AREIA	MA	CAXIAS	FTL	3	CE, MA, PI	FTL	ACS-ACX	306	4,37	1.338,44	1.286.130,12	0,10407%
AREIA	MA	CAXIAS	FTL	3	CE, MA, PI	FTL	ACX-ABB	306	37,63	11.515,70	1.286.130,12	0,89538%
AREIA	MA	CODO	FTL	3	CE, MA, PI	FTL	ACX-ABB	306	4,96	1.518,37	1.286.130,12	0,11806%
AREIA	MA	CODO	FTL	3	CE, MA, PI	FTL	ABB-ACD	306	38,91	11.907,68	1.286.130,12	0,92585%
AREIA	MA	CODO	FTL	3	CE, MA, PI	FTL	ACD-AXA	306	17,88	5.471,59	1.286.130,12	0,42543%
AREIA	MA	COROATA	FTL	3	CE, MA, PI	FTL	AXA-AOA	306	23,23	7.107,16	1.286.130,12	0,55260%
AREIA	MA	COROATA	FTL	3	CE, MA, PI	FTL	AOA-AJI	166	26,15	4.340,07	1.286.130,12	0,33745%
AREIA	MA	COROATA	FTL	3	CE, MA, PI	FTL	AJI-AXK	166	8,59	1.425,44	1.286.130,12	0,11083%
AREIA	MA	ITAPECURU MIRIM	FTL	3	CE, MA, PI	FTL	AHP-AEA	166	19,58	3.250,78	1.286.130,12	0,25276%
AREIA	MA	ITAPECURU MIRIM	FTL	3	CE, MA, PI	FTL	AXK-ANJ	166	7,99	1.325,92	1.286.130,12	0,10309%
AREIA	MA	MIRANDA DO NORTE	FTL	3	CE, MA, PI	FTL	AXK-ANJ	166	10,69	1.774,16	1.286.130,12	0,13795%
AREIA	MA	PIRAPEMAS	FTL	3	CE, MA, PI	FTL	AJI-AXK	166	19,62	3.256,92	1.286.130,12	0,25323%
AREIA	MA	PIRAPEMAS	FTL	3	CE, MA, PI	FTL	AXK-ANJ	166	5,71	947,45	1.286.130,12	0,07367%
AREIA	MA	ROSARIO	FTL	3	CE, MA, PI	FTL	AEA-ARS	166	6,78	1.125,48	1.286.130,12	0,08751%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	MA	ROSARIO	FTL	3	CE, MA, PI	FTL	ARS-ATO	166	4,30	713,47	1.286.130,12	0,05547%
AREIA	MA	SANTA RITA	FTL	3	CE, MA, PI	FTL	AHP-AEA	166	13,96	2.317,36	1.286.130,12	0,18018%
AREIA	MA	SANTA RITA	FTL	3	CE, MA, PI	FTL	AEA-ARS	166	10,92	1.812,72	1.286.130,12	0,14094%
AREIA	MA	SAO LUIS	FTL	3	CE, MA, PI	FTL	AXR-A02	166	1,21	201,36	1.286.130,12	0,01566%
AREIA	MA	SAO LUIS	FTL	3	CE, MA, PI	FTL	A26-A04	166	4,65	771,57	1.286.130,12	0,05999%
AREIA	MA	SAO LUIS	FTL	3	CE, MA, PI	FTL	ATO-A26	166	4,48	744,18	1.286.130,12	0,05786%
AREIA	MA	SAO LUIS	FTL	3	CE, MA, PI	FTL	A04-ALM	166	1,07	177,45	1.286.130,12	0,01380%
AREIA	MA	SAO LUIS	FTL	3	CE, MA, PI	FTL	A02-ASL	166	14,46	2.400,53	1.286.130,12	0,18665%
AREIA	MA	SAO LUIS	FTL	3	CE, MA, PI	FTL	ALM-AXR	166	1,31	218,12	1.286.130,12	0,01696%
AREIA	MA	TIMBIRAS	FTL	3	CE, MA, PI	FTL	AXA-AOA	306	5,54	1.696,46	1.286.130,12	0,13190%
AREIA	MA	TIMBIRAS	FTL	3	CE, MA, PI	FTL	ACD-AXA	306	8,15	2.492,37	1.286.130,12	0,19379%
AREIA	MA	TIMON	FTL	3	CE, MA, PI	FTL	AYM-ACQ	306	31,07	9.508,64	1.286.130,12	0,73932%
AREIA	MA	TIMON	FTL	3	CE, MA, PI	FTL	ATZ-AYM	306	1,30	397,49	1.286.130,12	0,03091%
AREIA	PI	ALTO LONGA	FTL	3	CE, MA, PI	FTL	BOS-BLY	1.379	18,74	25.845,22	1.286.130,12	2,00953%
AREIA	PI	ALTOS	FTL	3	CE, MA, PI	FTL	BLY-ALT	1.379	12,04	16.608,68	1.286.130,12	1,29137%
AREIA	PI	ALTOS	FTL	3	CE, MA, PI	FTL	ALT-AIT	1.379	17,22	23.745,00	1.286.130,12	1,84624%
AREIA	PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BOC-BBV	1.379	14,85	20.475,39	1.286.130,12	1,59202%
AREIA	PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BBV-BAB	1.379	17,97	24.784,77	1.286.130,12	1,92708%
AREIA	PI	BURITI DOS MONTES	FTL	3	CE, MA, PI	FTL	BAB-BKS	1.379	20,27	27.957,85	1.286.130,12	2,17380%
AREIA	PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BOS-BLY	1.379	3,94	5.433,26	1.286.130,12	0,42245%
AREIA	PI	CAMPO MAIOR	FTL	3	CE, MA, PI	FTL	BLY-ALT	1.379	1,21	1.674,11	1.286.130,12	0,13017%
AREIA	PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BAB-BKS	1.379	19,74	27.215,94	1.286.130,12	2,11611%
AREIA	PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BKS-BRE	1.379	35,37	48.771,09	1.286.130,12	3,79208%
AREIA	PI	CASTELO DO PIAUI	FTL	3	CE, MA, PI	FTL	BRE-BOS	1.379	3,59	4.943,72	1.286.130,12	0,38439%
AREIA	PI	COIVARAS	FTL	3	CE, MA, PI	FTL	BLY-ALT	1.379	20,93	28.861,09	1.286.130,12	2,24403%
AREIA	PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BOS-BLY	1.379	0,90	1.243,86	1.286.130,12	0,09671%
AREIA	PI	NOVO SANTO ANTONIO	FTL	3	CE, MA, PI	FTL	BRE-BOS	1.379	22,69	31.290,89	1.286.130,12	2,43295%
AREIA	PI	TERESINA	FTL	3	CE, MA, PI	FTL	ALT-AIT	1.379	18,76	25.875,56	1.286.130,12	2,01189%
AREIA	PI	TERESINA	FTL	3	CE, MA, PI	FTL	AIT-ATZ	1.379	1,89	2.610,45	1.286.130,12	0,20297%
AREIA	PI	TERESINA	FTL	3	CE, MA, PI	FTL	ATZ-AYM	306	7,64	2.336,62	1.286.130,12	0,18168%
AREIA	MG	ANDRELANDIA	MRS	4	MG, RJ, SP	MRS	FAU-FFR	10.854	11,29	122.509,10	98.999.876,06	0,12375%
AREIA	MG	ANDRELANDIA	MRS	4	MG, RJ, SP	MRS	FGO-FAU	10.854	8,69	94.288,70	98.999.876,06	0,09524%
AREIA	MG	ANDRELANDIA	MRS	4	MG, RJ, SP	MRS	FIN-FIR	10.854	7,55	81.904,28	98.999.876,06	0,08273%
AREIA	MG	ANDRELANDIA	MRS	4	MG, RJ, SP	MRS	FFR-FIN	10.854	5,64	61.238,27	98.999.876,06	0,06186%
AREIA	MG	ANDRELANDIA	MRS	4	MG, RJ, SP	MRS	FIR-FOJ	10.854	4,07	44.154,07	98.999.876,06	0,04460%
AREIA	MG	ARANTINA	MRS	4	MG, RJ, SP	MRS	FIR-FOJ	10.854	3,46	37.543,99	98.999.876,06	0,03792%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	ECE-VWI	1.022	7,04	7.191,81	98.999.876,06	0,00726%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	VWI-ECE	6.252	7,04	43.995,32	98.999.876,06	0,04444%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	OCR-EHF	1.022	4,12	4.212,68	98.999.876,06	0,00426%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	EHF-EBH	1.022	2,86	2.924,96	98.999.876,06	0,00295%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	EBH-ECL	1.022	6,47	6.614,38	98.999.876,06	0,00668%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	ECL-EBH	6.252	6,47	40.462,94	98.999.876,06	0,04087%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	EBH-EHF	6.252	2,86	17.893,22	98.999.876,06	0,01807%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	EHF-OCR	6.252	4,12	25.770,74	98.999.876,06	0,02603%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	EFR-EGM	6.252	5,43	33.954,61	98.999.876,06	0,03430%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	EGM-ECL	6.252	2,15	13.435,55	98.999.876,06	0,01357%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	FBO-EFR	6.252	3,33	20.800,40	98.999.876,06	0,02101%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	F49-FBO	6.252	1,28	7.983,80	98.999.876,06	0,00806%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	FIE-F49	6.252	2,85	17.793,19	98.999.876,06	0,01797%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	EGM-EFR	1.022	5,43	5.550,48	98.999.876,06	0,00561%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	ECL-EGM	1.022	2,15	2.196,28	98.999.876,06	0,00222%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	EFR-FBO	1.022	3,33	3.400,19	98.999.876,06	0,00343%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	FBO-F49	1.022	1,28	1.305,09	98.999.876,06	0,00132%
AREIA	MG	BELO HORIZONTE	MRS	4	MG, RJ, SP	MRS	F49-FIE	1.022	2,85	2.908,61	98.999.876,06	0,00294%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FAL-FQZ	6.252	6,95	43.426,39	98.999.876,06	0,04387%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FBV-FTC	6.252	6,64	41.519,53	98.999.876,06	0,04194%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FQZ-FQV	6.252	5,60	35.023,70	98.999.876,06	0,03538%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FJR-FAL	6.252	5,20	32.535,41	98.999.876,06	0,03286%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FTC-FMD	6.252	4,75	29.715,76	98.999.876,06	0,03002%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FQV-FBV	6.252	2,63	16.411,50	98.999.876,06	0,01658%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FQZ-FAL	1.022	6,95	7.098,81	98.999.876,06	0,00717%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FTC-FBV	1.022	6,64	6.787,10	98.999.876,06	0,00686%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FQV-FQZ	1.022	5,60	5.725,24	98.999.876,06	0,00578%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FAL-FJR	1.022	5,20	5.318,49	98.999.876,06	0,00537%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FMD-FTC	1.022	4,75	4.857,57	98.999.876,06	0,00491%
AREIA	MG	BELO VALE	MRS	4	MG, RJ, SP	MRS	FBV-FQV	1.022	2,63	2.682,75	98.999.876,06	0,00271%
AREIA	MG	BOM JARDIM DE MINAS	MRS	4	MG, RJ, SP	MRS	FIR-FOJ	10.854	3,75	40.680,79	98.999.876,06	0,04109%
AREIA	MG	BOM JARDIM DE MINAS	MRS	4	MG, RJ, SP	MRS	FOJ-FJT	10.854	8,40	91.151,89	98.999.876,06	0,09207%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FMD-FMS	6.252	7,31	45.670,86	98.999.876,06	0,04613%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FML-FAF	6.252	6,99	43.688,98	98.999.876,06	0,04413%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FLC-FML	6.252	6,48	40.481,70	98.999.876,06	0,04089%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FMS-FLC	6.252	6,14	38.381,03	98.999.876,06	0,03877%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FBR-FSN	6.252	5,54	34.636,08	98.999.876,06	0,03499%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FCC-FBR	6.252	5,02	31.353,78	98.999.876,06	0,03167%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FAF-FCC	6.252	1,20	7.471,14	98.999.876,06	0,00755%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FSN-FMC	6.252	1,18	7.377,36	98.999.876,06	0,00745%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FMS-FMD	1.022	7,31	7.465,71	98.999.876,06	0,00754%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FAF-FML	1.022	6,99	7.141,74	98.999.876,06	0,00721%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FML-FLC	1.022	6,48	6.617,45	98.999.876,06	0,00668%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FLC-FMS	1.022	6,14	6.274,06	98.999.876,06	0,00634%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FSN-FBR	1.022	5,54	5.661,88	98.999.876,06	0,00572%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FBR-FCC	1.022	5,02	5.125,33	98.999.876,06	0,00518%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FCC-FAF	1.022	1,20	1.221,29	98.999.876,06	0,00123%
AREIA	MG	BRUMADINHO	MRS	4	MG, RJ, SP	MRS	FMC-FSN	1.022	1,18	1.205,96	98.999.876,06	0,00122%
AREIA	MG	CONCEICAO DA BARRA DE MINAS	MRS	4	MG, RJ, SP	MRS	FDE-FGT	10.854	2,50	27.102,44	98.999.876,06	0,02738%
AREIA	MG	CONGONHAS	MRS	4	MG, RJ, SP	MRS	FFV-FLP	16.084	3,52	56.647,85	98.999.876,06	0,05722%
AREIA	MG	CONGONHAS	MRS	4	MG, RJ, SP	MRS	FLP-FJR	6.252	0,31	1.913,11	98.999.876,06	0,00193%
AREIA	MG	CONTAGEM	MRS	4	MG, RJ, SP	MRS	F49-FBO	6.252	1,15	7.189,80	98.999.876,06	0,00726%
AREIA	MG	CONTAGEM	MRS	4	MG, RJ, SP	MRS	FBO-F49	1.022	1,15	1.175,30	98.999.876,06	0,00119%
AREIA	MG	CORONEL XAVIER CHAVES	MRS	4	MG, RJ, SP	MRS	FIC-FXA	10.854	3,97	43.079,53	98.999.876,06	0,04351%
AREIA	MG	CORONEL XAVIER CHAVES	MRS	4	MG, RJ, SP	MRS	FXA-FVT	10.854	3,98	43.239,73	98.999.876,06	0,04368%
AREIA	MG	ENTRE RIOS DE MINAS	MRS	4	MG, RJ, SP	MRS	FJC-FJO	10.854	9,58	103.927,05	98.999.876,06	0,10498%
AREIA	MG	ENTRE RIOS DE MINAS	MRS	4	MG, RJ, SP	MRS	FJO-FRL	10.854	9,06	98.293,82	98.999.876,06	0,09929%
AREIA	MG	ENTRE RIOS DE MINAS	MRS	4	MG, RJ, SP	MRS	FRL-FRC	10.854	0,28	3.006,56	98.999.876,06	0,00304%
AREIA	MG	IBIRITE	MRS	4	MG, RJ, SP	MRS	FPO-FIE	6.252	4,75	29.703,25	98.999.876,06	0,03000%
AREIA	MG	IBIRITE	MRS	4	MG, RJ, SP	MRS	FIE-F49	6.252	6,17	38.574,84	98.999.876,06	0,03896%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	MG	IBIRITE	MRS	4	MG, RJ, SP	MRS	FIE-FPO	1.022	4,75	4.855,52	98.999.876,06	0,00490%
AREIA	MG	IBIRITE	MRS	4	MG, RJ, SP	MRS	F49-FIE	1.022	6,17	6.305,74	98.999.876,06	0,00637%
AREIA	MG	JECEABA	MRS	4	MG, RJ, SP	MRS	FJR-FAL	6.252	5,48	34.267,21	98.999.876,06	0,03461%
AREIA	MG	JECEABA	MRS	4	MG, RJ, SP	MRS	FLP-FJR	6.252	5,36	33.491,96	98.999.876,06	0,03383%
AREIA	MG	JECEABA	MRS	4	MG, RJ, SP	MRS	FLA-FJC	10.854	5,54	60.163,72	98.999.876,06	0,06077%
AREIA	MG	JECEABA	MRS	4	MG, RJ, SP	MRS	FAL-FJR	1.022	5,48	5.601,58	98.999.876,06	0,00566%
AREIA	MG	JECEABA	MRS	4	MG, RJ, SP	MRS	FLP-FLA	9.832	2,96	29.102,72	98.999.876,06	0,02940%
AREIA	MG	JECEABA	MRS	4	MG, RJ, SP	MRS	FJR-FLA	1.022	2,89	2.957,67	98.999.876,06	0,00299%
AREIA	MG	LAGOA DOURADA	MRS	4	MG, RJ, SP	MRS	FRL-FRC	10.854	16,55	179.655,41	98.999.876,06	0,18147%
AREIA	MG	LAGOA DOURADA	MRS	4	MG, RJ, SP	MRS	FRC-FIC	10.854	3,09	33.517,15	98.999.876,06	0,03386%
AREIA	MG	MADRE DE DEUS DE MINAS	MRS	4	MG, RJ, SP	MRS	FPZ-FGO	10.854	13,89	150.718,64	98.999.876,06	0,15224%
AREIA	MG	MADRE DE DEUS DE MINAS	MRS	4	MG, RJ, SP	MRS	FRN-FPZ	10.854	5,23	56.755,57	98.999.876,06	0,05733%
AREIA	MG	MADRE DE DEUS DE MINAS	MRS	4	MG, RJ, SP	MRS	FGO-FAU	10.854	3,39	36.795,06	98.999.876,06	0,03717%
AREIA	MG	MARIO CAMPOS	MRS	4	MG, RJ, SP	MRS	FSN-FMC	6.252	5,10	31.872,70	98.999.876,06	0,03219%
AREIA	MG	MARIO CAMPOS	MRS	4	MG, RJ, SP	MRS	FMC-FZN	6.252	2,41	15.067,32	98.999.876,06	0,01522%
AREIA	MG	MARIO CAMPOS	MRS	4	MG, RJ, SP	MRS	FMC-FSN	1.022	5,10	5.210,16	98.999.876,06	0,00526%
AREIA	MG	MARIO CAMPOS	MRS	4	MG, RJ, SP	MRS	FZN-FMC	1.022	2,41	2.463,02	98.999.876,06	0,00249%
AREIA	MG	MATOZINHOS	MRS	4	MG, RJ, SP	MRS	EWL-EMS	6.252	4,42	27.615,08	98.999.876,06	0,02789%
AREIA	MG	MATOZINHOS	MRS	4	MG, RJ, SP	MRS	EMS-EPM	6.252	5,04	31.516,33	98.999.876,06	0,03183%
AREIA	MG	MATOZINHOS	MRS	4	MG, RJ, SP	MRS	EPL-EWL	6.252	0,23	1.406,70	98.999.876,06	0,00142%
AREIA	MG	MATOZINHOS	MRS	4	MG, RJ, SP	MRS	EMS-EWL	1.022	4,42	4.514,17	98.999.876,06	0,00456%
AREIA	MG	MATOZINHOS	MRS	4	MG, RJ, SP	MRS	EPM-EMS	1.022	5,04	5.151,90	98.999.876,06	0,00520%
AREIA	MG	MATOZINHOS	MRS	4	MG, RJ, SP	MRS	EWL-EPL	1.022	0,23	229,95	98.999.876,06	0,00023%
AREIA	MG	MOEDA	MRS	4	MG, RJ, SP	MRS	FMD-FMS	6.252	2,73	17.036,70	98.999.876,06	0,01721%
AREIA	MG	MOEDA	MRS	4	MG, RJ, SP	MRS	FTC-FMD	6.252	1,95	12.178,90	98.999.876,06	0,01230%
AREIA	MG	MOEDA	MRS	4	MG, RJ, SP	MRS	FMS-FMD	1.022	2,73	2.784,95	98.999.876,06	0,00281%
AREIA	MG	MOEDA	MRS	4	MG, RJ, SP	MRS	FMD-FTC	1.022	1,95	1.990,86	98.999.876,06	0,00201%
AREIA	MG	PASSA-VINTE	MRS	4	MG, RJ, SP	MRS	FSH-FRP	10.854	12,28	133.276,27	98.999.876,06	0,13462%
AREIA	MG	PASSA-VINTE	MRS	4	MG, RJ, SP	MRS	FJT-FSH	10.854	6,39	69.302,79	98.999.876,06	0,07000%
AREIA	MG	PASSA-VINTE	MRS	4	MG, RJ, SP	MRS	FRP-FFU	10.854	3,70	40.116,38	98.999.876,06	0,04052%
AREIA	MG	PEDRO LEOPOLDO	MRS	4	MG, RJ, SP	MRS	EPL-EWL	6.252	5,39	33.685,78	98.999.876,06	0,03403%
AREIA	MG	PEDRO LEOPOLDO	MRS	4	MG, RJ, SP	MRS	ELD-EPL	6.252	5,04	31.491,32	98.999.876,06	0,03181%
AREIA	MG	PEDRO LEOPOLDO	MRS	4	MG, RJ, SP	MRS	ENG-ELD	6.252	1,00	6.226,99	98.999.876,06	0,00629%
AREIA	MG	PEDRO LEOPOLDO	MRS	4	MG, RJ, SP	MRS	EWL-EPL	1.022	5,39	5.506,54	98.999.876,06	0,00556%
AREIA	MG	PEDRO LEOPOLDO	MRS	4	MG, RJ, SP	MRS	EPL-ELD	1.022	5,04	5.147,81	98.999.876,06	0,00520%
AREIA	MG	PEDRO LEOPOLDO	MRS	4	MG, RJ, SP	MRS	ELD-ENG	1.022	1,00	1.017,91	98.999.876,06	0,00103%
AREIA	MG	PRUDENTE DE MORAIS	MRS	4	MG, RJ, SP	MRS	EMS-EPM	6.252	6,64	41.500,78	98.999.876,06	0,04192%
AREIA	MG	PRUDENTE DE MORAIS	MRS	4	MG, RJ, SP	MRS	EPM-EMS	1.022	6,64	6.784,04	98.999.876,06	0,00685%
AREIA	MG	RESENDE COSTA	MRS	4	MG, RJ, SP	MRS	FRC-FIC	10.854	6,80	73.839,76	98.999.876,06	0,07459%
AREIA	MG	RESENDE COSTA	MRS	4	MG, RJ, SP	MRS	FIC-FXA	10.854	1,47	15.955,38	98.999.876,06	0,01612%
AREIA	MG	RITAPOLIS	MRS	4	MG, RJ, SP	MRS	FXA-FVT	10.854	2,63	28.554,16	98.999.876,06	0,02884%
AREIA	MG	SABARA	MRS	4	MG, RJ, SP	MRS	VWI-ECE	6.252	1,92	11.997,59	98.999.876,06	0,01212%
AREIA	MG	SABARA	MRS	4	MG, RJ, SP	MRS	EHF-OCR	6.252	4,13	25.833,26	98.999.876,06	0,02609%
AREIA	MG	SABARA	MRS	4	MG, RJ, SP	MRS	EGC-VWI	6.252	1,27	7.915,03	98.999.876,06	0,00799%
AREIA	MG	SABARA	MRS	4	MG, RJ, SP	MRS	OCR-EGC	6.252	1,08	6.733,40	98.999.876,06	0,00680%
AREIA	MG	SABARA	MRS	4	MG, RJ, SP	MRS	ECE-VWI	1.022	1,92	1.961,22	98.999.876,06	0,00198%
AREIA	MG	SABARA	MRS	4	MG, RJ, SP	MRS	OCR-EHF	1.022	4,13	4.222,90	98.999.876,06	0,00427%
AREIA	MG	SABARA	MRS	4	MG, RJ, SP	MRS	VWI-EGC	1.022	1,27	1.293,85	98.999.876,06	0,00131%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	MG	SABARA	MRS	4	MG, RJ, SP	MRS	EGC-OCR	1.022	1,08	1.100,69	98.999.876,06	0,00111%
AREIA	MG	SANTA LUZIA	MRS	4	MG, RJ, SP	MRS	VWI-ECE	6.252	1,04	6.495,83	98.999.876,06	0,00656%
AREIA	MG	SANTA LUZIA	MRS	4	MG, RJ, SP	MRS	ECE-ECA	6.252	8,80	55.030,10	98.999.876,06	0,05559%
AREIA	MG	SANTA LUZIA	MRS	4	MG, RJ, SP	MRS	ECA-ERE	6.252	6,40	40.025,30	98.999.876,06	0,04043%
AREIA	MG	SANTA LUZIA	MRS	4	MG, RJ, SP	MRS	ERE-EVP	6.252	1,60	9.978,19	98.999.876,06	0,01008%
AREIA	MG	SANTA LUZIA	MRS	4	MG, RJ, SP	MRS	ECE-VWI	1.022	1,04	1.061,86	98.999.876,06	0,00107%
AREIA	MG	SANTA LUZIA	MRS	4	MG, RJ, SP	MRS	ECA-ECE	1.022	8,80	8.995,64	98.999.876,06	0,00909%
AREIA	MG	SANTA LUZIA	MRS	4	MG, RJ, SP	MRS	ERE-ECA	1.022	6,40	6.542,84	98.999.876,06	0,00661%
AREIA	MG	SANTA LUZIA	MRS	4	MG, RJ, SP	MRS	EVP-ERE	1.022	1,60	1.631,11	98.999.876,06	0,00165%
AREIA	MG	SANTA RITA DE JACUTINGA	MRS	4	MG, RJ, SP	MRS	FJT-FSH	10.854	9,29	100.855,37	98.999.876,06	0,10187%
AREIA	MG	SANTA RITA DE JACUTINGA	MRS	4	MG, RJ, SP	MRS	FOJ-FJT	10.854	5,74	62.301,96	98.999.876,06	0,06293%
AREIA	MG	SAO BRAS DO SUACUI	MRS	4	MG, RJ, SP	MRS	FJC-FJO	10.854	8,28	89.860,27	98.999.876,06	0,09077%
AREIA	MG	SAO JOAO DEL REI	MRS	4	MG, RJ, SP	MRS	FGT-FRN	10.854	14,86	161.333,86	98.999.876,06	0,16296%
AREIA	MG	SAO JOAO DEL REI	MRS	4	MG, RJ, SP	MRS	FDE-FGT	10.854	7,24	78.561,25	98.999.876,06	0,07935%
AREIA	MG	SAO JOAO DEL REI	MRS	4	MG, RJ, SP	MRS	FRN-FPZ	10.854	6,71	72.830,34	98.999.876,06	0,07357%
AREIA	MG	SAO JOAO DEL REI	MRS	4	MG, RJ, SP	MRS	FBU-FEI	10.854	13,59	147.451,59	98.999.876,06	0,14894%
AREIA	MG	SAO JOAO DEL REI	MRS	4	MG, RJ, SP	MRS	FXA-FVT	10.854	8,01	86.909,28	98.999.876,06	0,08779%
AREIA	MG	SAO JOAQUIM DE BICAS	MRS	4	MG, RJ, SP	MRS	FSN-FMC	6.252	2,12	13.241,74	98.999.876,06	0,01338%
AREIA	MG	SAO JOAQUIM DE BICAS	MRS	4	MG, RJ, SP	MRS	FMC-FSN	1.022	2,12	2.164,60	98.999.876,06	0,00219%
AREIA	MG	SAO JOSE DA LAPA	MRS	4	MG, RJ, SP	MRS	ENG-ELD	6.252	7,95	49.697,15	98.999.876,06	0,05020%
AREIA	MG	SAO JOSE DA LAPA	MRS	4	MG, RJ, SP	MRS	EVP-ENG	6.252	0,87	5.426,74	98.999.876,06	0,00548%
AREIA	MG	SAO JOSE DA LAPA	MRS	4	MG, RJ, SP	MRS	ELD-ENG	1.022	7,95	8.123,88	98.999.876,06	0,00821%
AREIA	MG	SAO JOSE DA LAPA	MRS	4	MG, RJ, SP	MRS	ENG-EVP	1.022	0,87	887,10	98.999.876,06	0,00090%
AREIA	MG	SAO VICENTE DE MINAS	MRS	4	MG, RJ, SP	MRS	FAU-FFR	10.854	2,83	30.705,97	98.999.876,06	0,03102%
AREIA	MG	SAO VICENTE DE MINAS	MRS	4	MG, RJ, SP	MRS	FGO-FAU	10.854	1,15	12.438,68	98.999.876,06	0,01256%
AREIA	MG	SARZEDO	MRS	4	MG, RJ, SP	MRS	FSO-FPO	6.252	5,60	35.023,70	98.999.876,06	0,03538%
AREIA	MG	SARZEDO	MRS	4	MG, RJ, SP	MRS	FZN-FSO	6.252	3,78	23.626,31	98.999.876,06	0,02386%
AREIA	MG	SARZEDO	MRS	4	MG, RJ, SP	MRS	FMC-FZN	6.252	1,87	11.672,48	98.999.876,06	0,01179%
AREIA	MG	SARZEDO	MRS	4	MG, RJ, SP	MRS	FPO-FIE	6.252	1,01	6.302,02	98.999.876,06	0,00637%
AREIA	MG	SARZEDO	MRS	4	MG, RJ, SP	MRS	FPO-FSO	1.022	5,60	5.725,24	98.999.876,06	0,00578%
AREIA	MG	SARZEDO	MRS	4	MG, RJ, SP	MRS	FSO-FZN	1.022	3,78	3.862,14	98.999.876,06	0,00390%
AREIA	MG	SARZEDO	MRS	4	MG, RJ, SP	MRS	FZN-FMC	1.022	1,87	1.908,07	98.999.876,06	0,00193%
AREIA	MG	SARZEDO	MRS	4	MG, RJ, SP	MRS	FIE-FPO	1.022	1,01	1.030,18	98.999.876,06	0,00104%
AREIA	MG	VESPASIANO	MRS	4	MG, RJ, SP	MRS	EVP-ENG	6.252	4,03	25.208,06	98.999.876,06	0,02546%
AREIA	MG	VESPASIANO	MRS	4	MG, RJ, SP	MRS	ERE-EVP	6.252	3,51	21.944,52	98.999.876,06	0,02217%
AREIA	MG	VESPASIANO	MRS	4	MG, RJ, SP	MRS	ENG-EVP	1.022	4,03	4.120,70	98.999.876,06	0,00416%
AREIA	MG	VESPASIANO	MRS	4	MG, RJ, SP	MRS	EVP-ERE	1.022	3,51	3.587,22	98.999.876,06	0,00362%
AREIA	RJ	BARRA MANSA	MRS	4	MG, RJ, SP	MRS	FPB-FFL	10.854	7,91	85.865,99	98.999.876,06	0,08673%
AREIA	RJ	BARRA MANSA	MRS	4	MG, RJ, SP	MRS	FSE-FPB	10.854	7,02	76.151,66	98.999.876,06	0,07692%
AREIA	RJ	BARRA MANSA	MRS	4	MG, RJ, SP	MRS	FFL-FAN	10.854	0,51	5.513,83	98.999.876,06	0,00557%
AREIA	RJ	BARRA MANSA	MRS	4	MG, RJ, SP	MRS	FPT-FEU	10.854	9,25	100.421,21	98.999.876,06	0,10144%
AREIA	RJ	BARRA MANSA	MRS	4	MG, RJ, SP	MRS	FEU-FSE	10.854	4,79	51.979,81	98.999.876,06	0,05250%
AREIA	RJ	ITATIAIA	MRS	4	MG, RJ, SP	MRS	FIA-FEP	10.854	5,95	64.603,01	98.999.876,06	0,06526%
AREIA	RJ	ITATIAIA	MRS	4	MG, RJ, SP	MRS	FAN-FMU	10.854	4,67	50.687,09	98.999.876,06	0,05120%
AREIA	RJ	ITATIAIA	MRS	4	MG, RJ, SP	MRS	FAN-FMU	10.854	4,67	50.687,09	98.999.876,06	0,05120%
AREIA	RJ	ITATIAIA	MRS	4	MG, RJ, SP	MRS	FMU-FIA	10.854	3,51	38.084,73	98.999.876,06	0,03847%
AREIA	RJ	ITATIAIA	MRS	4	MG, RJ, SP	MRS	FAN-FMU	10.854	4,67	50.687,09	98.999.876,06	0,05120%
AREIA	RJ	PORTO REAL	MRS	4	MG, RJ, SP	MRS	FFL-FAN	10.854	7,32	79.462,13	98.999.876,06	0,08026%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	RJ	QUATIS	MRS	4	MG, RJ, SP	MRS	FOA-FJQ	10.854	11,45	124.278,30	98.999.876,06	0,12553%
AREIA	RJ	QUATIS	MRS	4	MG, RJ, SP	MRS	FPT-FEU	10.854	7,75	84.151,06	98.999.876,06	0,08500%
AREIA	RJ	QUATIS	MRS	4	MG, RJ, SP	MRS	FJQ-FPT	10.854	5,09	55.214,30	98.999.876,06	0,05577%
AREIA	RJ	RESENDE	MRS	4	MG, RJ, SP	MRS	FFL-FAN	10.854	8,08	87.743,74	98.999.876,06	0,08863%
AREIA	RJ	RESENDE	MRS	4	MG, RJ, SP	MRS	FIA-FEP	10.854	6,41	69.519,87	98.999.876,06	0,07022%
AREIA	RJ	RESENDE	MRS	4	MG, RJ, SP	MRS	FEP-FQU	10.854	2,58	27.981,61	98.999.876,06	0,02826%
AREIA	RJ	RESENDE	MRS	4	MG, RJ, SP	MRS	FFU-FOA	10.854	9,46	102.711,40	98.999.876,06	0,10375%
AREIA	RJ	RESENDE	MRS	4	MG, RJ, SP	MRS	FRP-FFU	10.854	3,64	39.486,85	98.999.876,06	0,03989%
AREIA	RJ	RESENDE	MRS	4	MG, RJ, SP	MRS	FOA-FJQ	10.854	2,64	28.654,56	98.999.876,06	0,02894%
AREIA	RJ	RESENDE	MRS	4	MG, RJ, SP	MRS	FAN-FMU	10.854	3,99	43.265,89	98.999.876,06	0,04370%
AREIA	RJ	RESENDE	MRS	4	MG, RJ, SP	MRS	FAN-FMU	10.854	3,99	43.265,89	98.999.876,06	0,04370%
AREIA	RJ	RESENDE	MRS	4	MG, RJ, SP	MRS	FAN-FMU	10.854	3,99	43.265,89	98.999.876,06	0,04370%
AREIA	SP	APARECIDA	MRS	4	MG, RJ, SP	MRS	FAD-FRA	277.058	5,88	1.627.715,75	98.999.876,06	1,64416%
AREIA	SP	APARECIDA	MRS	4	MG, RJ, SP	MRS	FGU-FAD	277.058	1,88	520.314,92	98.999.876,06	0,52557%
AREIA	SP	CACAPAVA	MRS	4	MG, RJ, SP	MRS	FUI-FCA	436.690	7,86	3.432.820,09	98.999.876,06	3,46750%
AREIA	SP	CACAPAVA	MRS	4	MG, RJ, SP	MRS	FCA-FEA	436.690	6,84	2.988.706,36	98.999.876,06	3,01890%
AREIA	SP	CACHOEIRA PAULISTA	MRS	4	MG, RJ, SP	MRS	FCZ-FCP	277.058	3,27	906.256,72	98.999.876,06	0,91541%
AREIA	SP	CACHOEIRA PAULISTA	MRS	4	MG, RJ, SP	MRS	FCP-FLR	277.058	4,36	1.209.081,11	98.999.876,06	1,22130%
AREIA	SP	CANAS	MRS	4	MG, RJ, SP	MRS	FCP-FLR	277.058	5,89	1.631.317,50	98.999.876,06	1,64780%
AREIA	SP	CRUZEIRO	MRS	4	MG, RJ, SP	MRS	FCZ-FCP	277.058	7,83	2.169.918,26	98.999.876,06	2,19184%
AREIA	SP	CRUZEIRO	MRS	4	MG, RJ, SP	MRS	FVQ-FCZ	10.854	4,55	49.353,14	98.999.876,06	0,04985%
AREIA	SP	GUARAREMA	MRS	4	MG, RJ, SP	MRS	FRE-FIP	436.690	9,78	4.270.828,20	98.999.876,06	4,31397%
AREIA	SP	GUARATINGUETA	MRS	4	MG, RJ, SP	MRS	FEN-FGU	277.058	5,06	1.401.636,42	98.999.876,06	1,41580%
AREIA	SP	GUARATINGUETA	MRS	4	MG, RJ, SP	MRS	FGU-FAD	277.058	2,93	811.502,88	98.999.876,06	0,81970%
AREIA	SP	GUARATINGUETA	MRS	4	MG, RJ, SP	MRS	FLR-FEN	277.058	2,26	626.982,25	98.999.876,06	0,63332%
AREIA	SP	ITAQUAQUECETUBA	MRS	4	MG, RJ, SP	MRS	FPI-IEF	436.690	6,88	3.003.117,13	98.999.876,06	3,03346%
AREIA	SP	ITAQUAQUECETUBA	MRS	4	MG, RJ, SP	MRS	FST-FPI	436.690	3,90	1.704.401,07	98.999.876,06	1,72162%
AREIA	SP	ITAQUAQUECETUBA	MRS	4	MG, RJ, SP	MRS	IEF-OCE	436.690	1,32	578.177,56	98.999.876,06	0,58402%
AREIA	SP	JACAREI	MRS	4	MG, RJ, SP	MRS	FPA-FRE	436.690	15,86	6.925.030,02	98.999.876,06	6,99499%
AREIA	SP	JACAREI	MRS	4	MG, RJ, SP	MRS	FSJ-FPA	436.690	2,59	1.131.900,48	98.999.876,06	1,14334%
AREIA	SP	JACAREI	MRS	4	MG, RJ, SP	MRS	FRE-FIP	436.690	0,54	233.629,15	98.999.876,06	0,23599%
AREIA	SP	LAVRINHAS	MRS	4	MG, RJ, SP	MRS	FVQ-FCZ	10.854	10,18	110.450,30	98.999.876,06	0,11157%
AREIA	SP	LORENA	MRS	4	MG, RJ, SP	MRS	FLR-FEN	277.058	5,10	1.413.272,86	98.999.876,06	1,42755%
AREIA	SP	LORENA	MRS	4	MG, RJ, SP	MRS	FCP-FLR	277.058	4,73	1.309.099,05	98.999.876,06	1,32232%
AREIA	SP	MOGI DAS CRUZES	MRS	4	MG, RJ, SP	MRS	FIP-FST	436.690	10,24	4.470.832,22	98.999.876,06	4,51600%
AREIA	SP	MOGI DAS CRUZES	MRS	4	MG, RJ, SP	MRS	FST-FPI	436.690	8,78	3.835.011,58	98.999.876,06	3,87375%
AREIA	SP	MOGI DAS CRUZES	MRS	4	MG, RJ, SP	MRS	FRE-FIP	436.690	3,46	1.509.200,64	98.999.876,06	1,52445%
AREIA	SP	PINDAMONHANGABA	MRS	4	MG, RJ, SP	MRS	FPG-FTA	436.690	6,41	2.797.436,14	98.999.876,06	2,82570%
AREIA	SP	PINDAMONHANGABA	MRS	4	MG, RJ, SP	MRS	FCT-FPG	436.690	6,28	2.741.103,13	98.999.876,06	2,76879%
AREIA	SP	PINDAMONHANGABA	MRS	4	MG, RJ, SP	MRS	FPR-FCT	429.219	5,97	2.560.291,34	98.999.876,06	2,58616%
AREIA	SP	PINDAMONHANGABA	MRS	4	MG, RJ, SP	MRS	FPR-FCT	429.219	0,79	337.366,13	98.999.876,06	0,34077%
AREIA	SP	QUELUZ	MRS	4	MG, RJ, SP	MRS	FQU-FVQ	10.854	8,89	96.448,64	98.999.876,06	0,09742%
AREIA	SP	QUELUZ	MRS	4	MG, RJ, SP	MRS	FEP-FQU	10.854	8,07	87.635,20	98.999.876,06	0,08852%
AREIA	SP	QUELUZ	MRS	4	MG, RJ, SP	MRS	FVQ-FCZ	10.854	0,54	5.839,45	98.999.876,06	0,00590%
AREIA	SP	ROSEIRA	MRS	4	MG, RJ, SP	MRS	FAD-FRA	277.058	4,61	1.276.960,32	98.999.876,06	1,28986%
AREIA	SP	ROSEIRA	MRS	4	MG, RJ, SP	MRS	FRA-FPR	429.219	3,30	1.414.276,61	98.999.876,06	1,42856%
AREIA	SP	SANTO ANDRE	MRS	4	MG, RJ, SP	MRS	OPS-ISA	13.386	1,77	23.626,29	98.999.876,06	0,02386%
AREIA	SP	SANTO ANDRE	MRS	4	MG, RJ, SP	MRS	IUT-OPS	13.386	1,54	20.641,21	98.999.876,06	0,02085%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
AREIA	SP	SANTO ANDRE	MRS	4	MG, RJ, SP	MRS	ISC-IUT	13.386	0,94	12.515,91	98.999.876,06	0,01264%
AREIA	SP	SAO CAETANO DO SUL	MRS	4	MG, RJ, SP	MRS	ISC-IUT	13.386	2,45	32.809,09	98.999.876,06	0,03314%
AREIA	SP	SAO CAETANO DO SUL	MRS	4	MG, RJ, SP	MRS	OTA-ISC	13.386	1,07	14.376,56	98.999.876,06	0,01452%
AREIA	SP	SAO JOSE DOS CAMPOS	MRS	4	MG, RJ, SP	MRS	FSJ-FPA	436.690	11,30	4.933.286,93	98.999.876,06	4,98312%
AREIA	SP	SAO JOSE DOS CAMPOS	MRS	4	MG, RJ, SP	MRS	FEM-FSJ	436.690	6,17	2.695.250,68	98.999.876,06	2,72248%
AREIA	SP	SAO JOSE DOS CAMPOS	MRS	4	MG, RJ, SP	MRS	FEG-FEM	436.690	5,01	2.186.506,83	98.999.876,06	2,20860%
AREIA	SP	SAO JOSE DOS CAMPOS	MRS	4	MG, RJ, SP	MRS	FEA-FEG	436.690	1,76	769.884,47	98.999.876,06	0,77766%
AREIA	SP	SAO JOSE DOS CAMPOS	MRS	4	MG, RJ, SP	MRS	FCA-FEA	436.690	1,20	525.338,07	98.999.876,06	0,53065%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	IEF-OCE	436.690	11,72	5.118.880,18	98.999.876,06	5,17059%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	OCE-OSG	436.690	11,42	4.988.746,56	98.999.876,06	5,03914%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	OSG-IES	436.690	4,45	1.941.960,43	98.999.876,06	1,96158%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	OLU-OBF	87.614	3,71	325.135,55	98.999.876,06	0,32842%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	OBF-IAB	87.614	3,65	320.053,94	98.999.876,06	0,32329%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	IES-OBR	436.690	1,85	808.749,88	98.999.876,06	0,81692%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	IPR-OLU	87.614	1,18	103.472,13	98.999.876,06	0,10452%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	ORO-IPR	87.614	0,84	73.420,53	98.999.876,06	0,07416%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	OBR-ORO	87.614	0,30	26.459,43	98.999.876,06	0,02673%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	OBR-IMO	349.076	3,66	1.278.316,31	98.999.876,06	1,29123%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	IIP-OTA	13.386	1,64	21.912,88	98.999.876,06	0,02213%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	OTA-ISC	13.386	1,44	19.316,00	98.999.876,06	0,01951%
AREIA	SP	SAO PAULO	MRS	4	MG, RJ, SP	MRS	IMO-IIP	13.386	0,90	12.060,79	98.999.876,06	0,01218%
AREIA	SP	TAUBATE	MRS	4	MG, RJ, SP	MRS	FTA-FUI	436.690	5,90	2.576.471,00	98.999.876,06	2,60250%
AREIA	SP	TAUBATE	MRS	4	MG, RJ, SP	MRS	FUI-FCA	436.690	4,01	1.750.690,21	98.999.876,06	1,76838%
AREIA	SP	TAUBATE	MRS	4	MG, RJ, SP	MRS	FPG-FTA	436.690	3,72	1.623.613,42	98.999.876,06	1,64002%
AREIA	SP	TREMEMBE	MRS	4	MG, RJ, SP	MRS	FPG-FTA	436.690	4,21	1.839.774,97	98.999.876,06	1,85836%
CALCÁRIO DOLOMÍTICO	ES	BAIXO GUANDU	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAY-VBG	192.512	4,09	786.796,54	726.767.418,64	0,10826%
CALCÁRIO DOLOMÍTICO	ES	BAIXO GUANDU	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VBG-VMC	192.512	10,94	2.105.503,74	726.767.418,64	0,28971%
CALCÁRIO DOLOMÍTICO	ES	BAIXO GUANDU	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VMC-VIA	192.512	10,72	2.064.498,69	726.767.418,64	0,28407%
CALCÁRIO DOLOMÍTICO	ES	CARIACICA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAB-V03	192.512	1,42	272.982,02	726.767.418,64	0,03756%
CALCÁRIO DOLOMÍTICO	ES	CARIACICA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	V03-VTU	192.512	0,84	162.287,62	726.767.418,64	0,02233%
CALCÁRIO DOLOMÍTICO	ES	COLATINA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VMC-VIA	192.512	0,83	159.784,96	726.767.418,64	0,02199%
CALCÁRIO DOLOMÍTICO	ES	COLATINA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VIA-VCL	192.512	20,94	4.031.586,30	726.767.418,64	0,55473%
CALCÁRIO DOLOMÍTICO	ES	COLATINA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VCL-VPA	192.512	37,34	7.188.013,06	726.767.418,64	0,98904%
CALCÁRIO DOLOMÍTICO	ES	FUNDAO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VFN-VAB	192.512	9,63	1.853.505,54	726.767.418,64	0,25503%
CALCÁRIO DOLOMÍTICO	ES	FUNDAO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAR-VFN	192.512	4,26	819.716,10	726.767.418,64	0,11279%
CALCÁRIO DOLOMÍTICO	ES	IBIRACU	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAR-VFN	192.512	9,95	1.914.531,84	726.767.418,64	0,26343%
CALCÁRIO DOLOMÍTICO	ES	IBIRACU	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VPA-VAR	192.512	7,94	1.527.775,23	726.767.418,64	0,21022%
CALCÁRIO DOLOMÍTICO	ES	JOAO NEIVA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VCL-VPA	192.512	18,84	3.626.156,03	726.767.418,64	0,49894%
CALCÁRIO DOLOMÍTICO	ES	JOAO NEIVA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VPA-VAR	192.512	1,64	315.719,68	726.767.418,64	0,04344%
CALCÁRIO DOLOMÍTICO	ES	SANTA LEOPOLDINA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAB-V03	192.512	5,26	1.013.190,66	726.767.418,64	0,13941%
CALCÁRIO DOLOMÍTICO	ES	SANTA LEOPOLDINA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VFN-VAB	192.512	4,23	814.133,25	726.767.418,64	0,11202%
CALCÁRIO DOLOMÍTICO	ES	SERRA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VFN-VAB	192.512	12,57	2.419.298,30	726.767.418,64	0,33288%
CALCÁRIO DOLOMÍTICO	ES	SERRA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	V03-VTU	192.512	11,59	2.230.251,52	726.767.418,64	0,30687%
CALCÁRIO DOLOMÍTICO	ES	SERRA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAB-V03	192.512	2,60	499.953,66	726.767.418,64	0,06879%
CALCÁRIO DOLOMÍTICO	MG	AIMORES	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VIU-VAY	192.512	13,21	2.542.891,01	726.767.418,64	0,34989%
CALCÁRIO DOLOMÍTICO	MG	AIMORES	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAY-VBG	192.512	1,61	309.366,78	726.767.418,64	0,04257%
CALCÁRIO DOLOMÍTICO	MG	ANDRELANDIA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ELN-EAT	927.874	22,18	20.577.461,70	726.767.418,64	2,83137%
CALCÁRIO DOLOMÍTICO	MG	ANDRELANDIA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ESV-ELN	927.874	15,53	14.413.594,72	726.767.418,64	1,98325%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	MG	ANDRELANDIA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FAU-FFR	166.731	11,29	1.881.892,80	726.767.418,64	0,25894%
CALCÁRIO DOLOMÍTICO	MG	ANDRELANDIA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FGO-FAU	166.731	8,69	1.448.392,20	726.767.418,64	0,19929%
CALCÁRIO DOLOMÍTICO	MG	ANDRELANDIA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FIN-FIR	166.731	7,55	1.258.152,13	726.767.418,64	0,17312%
CALCÁRIO DOLOMÍTICO	MG	ANDRELANDIA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FFR-FIN	166.731	5,64	940.696,30	726.767.418,64	0,12944%
CALCÁRIO DOLOMÍTICO	MG	ANDRELANDIA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FIR-FOJ	166.731	4,07	678.261,71	726.767.418,64	0,09333%
CALCÁRIO DOLOMÍTICO	MG	ANTONIO DIAS	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	7.925	14,83	117.496,05	726.767.418,64	0,01617%
CALCÁRIO DOLOMÍTICO	MG	ANTONIO DIAS	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	7.925	29,77	235.911,40	726.767.418,64	0,03246%
CALCÁRIO DOLOMÍTICO	MG	ANTONIO DIAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	570.858	14,83	8.463.540,71	726.767.418,64	1,16455%
CALCÁRIO DOLOMÍTICO	MG	ANTONIO DIAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	570.858	29,77	16.993.300,94	726.767.418,64	2,33820%
CALCÁRIO DOLOMÍTICO	MG	ARANTINA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ELN-EAT	927.874	3,07	2.844.861,68	726.767.418,64	0,39144%
CALCÁRIO DOLOMÍTICO	MG	ARANTINA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAT-EKW	927.874	10,50	9.738.965,50	726.767.418,64	1,34004%
CALCÁRIO DOLOMÍTICO	MG	ARANTINA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FIR-FOJ	166.731	3,46	576.722,53	726.767.418,64	0,07935%
CALCÁRIO DOLOMÍTICO	MG	ARCOS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAO-E67	58.711	18,93	1.111.399,23	726.767.418,64	0,15292%
CALCÁRIO DOLOMÍTICO	MG	ARCOS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EGS-EDS	58.711	11,47	673.415,17	726.767.418,64	0,09266%
CALCÁRIO DOLOMÍTICO	MG	ARCOS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	E67-EGS	58.711	0,32	18.963,65	726.767.418,64	0,00261%
CALCÁRIO DOLOMÍTICO	MG	ARCOS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAO-E13	927.874	11,48	10.654.777,14	726.767.418,64	1,46605%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	7.925	3,67	29.053,05	726.767.418,64	0,00400%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VGS-VME	7.925	9,81	77.712,55	726.767.418,64	0,01069%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VME-VDI	7.925	6,99	55.411,60	726.767.418,64	0,00762%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	7.925	5,50	43.611,28	726.767.418,64	0,00600%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	570.858	3,67	2.092.765,43	726.767.418,64	0,28796%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VGS-VME	570.858	9,81	5.597.833,55	726.767.418,64	0,77024%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VME-VDI	570.858	6,99	3.991.439,14	726.767.418,64	0,54920%
CALCÁRIO DOLOMÍTICO	MG	BARAO DE COCAIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	570.858	5,50	3.141.431,57	726.767.418,64	0,43225%
CALCÁRIO DOLOMÍTICO	MG	BELA VISTA DE MINAS	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	7.925	5,13	40.631,48	726.767.418,64	0,00559%
CALCÁRIO DOLOMÍTICO	MG	BELA VISTA DE MINAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	570.858	5,13	2.926.788,97	726.767.418,64	0,40271%
CALCÁRIO DOLOMÍTICO	MG	BELO HORIZONTE	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	7.925	7,04	55.768,23	726.767.418,64	0,00767%
CALCÁRIO DOLOMÍTICO	MG	BELO HORIZONTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	512.147	7,04	3.603.978,44	726.767.418,64	0,49589%
CALCÁRIO DOLOMÍTICO	MG	BELO HORIZONTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EEL-ECL	58.711	6,84	401.348,40	726.767.418,64	0,05522%
CALCÁRIO DOLOMÍTICO	MG	BELO HORIZONTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECL-EBH	58.711	6,47	379.977,59	726.767.418,64	0,05228%
CALCÁRIO DOLOMÍTICO	MG	BELO HORIZONTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EBH-EHF	58.711	2,86	168.030,88	726.767.418,64	0,02312%
CALCÁRIO DOLOMÍTICO	MG	BELO HORIZONTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EHF-OCR	58.711	4,12	242.006,74	726.767.418,64	0,03330%
CALCÁRIO DOLOMÍTICO	MG	BELO ORIENTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VJC-VFS	192.512	6,78	1.306.001,41	726.767.418,64	0,17970%
CALCÁRIO DOLOMÍTICO	MG	BELO ORIENTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	192.512	11,83	2.277.801,98	726.767.418,64	0,31342%
CALCÁRIO DOLOMÍTICO	MG	BETIM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EJU-EVN	58.711	6,18	362.657,85	726.767.418,64	0,04990%
CALCÁRIO DOLOMÍTICO	MG	BETIM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EVN-ECN	58.711	11,03	647.347,49	726.767.418,64	0,08907%
CALCÁRIO DOLOMÍTICO	MG	BETIM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECN-EYB	58.711	8,38	491.763,34	726.767.418,64	0,06766%
CALCÁRIO DOLOMÍTICO	MG	BETIM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EYB-EYU	58.711	3,94	231.203,92	726.767.418,64	0,03181%
CALCÁRIO DOLOMÍTICO	MG	BETIM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EYU-EBO	58.711	4,79	280.932,14	726.767.418,64	0,03866%
CALCÁRIO DOLOMÍTICO	MG	BOM JARDIM DE MINAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAT-EKW	927.874	4,21	3.902.638,04	726.767.418,64	0,53699%
CALCÁRIO DOLOMÍTICO	MG	BOM JARDIM DE MINAS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FIR-FOJ	166.731	3,75	624.907,79	726.767.418,64	0,08598%
CALCÁRIO DOLOMÍTICO	MG	BOM JARDIM DE MINAS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FOJ-FJT	166.731	8,40	1.400.206,94	726.767.418,64	0,19266%
CALCÁRIO DOLOMÍTICO	MG	BUGRE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VJC-VFS	192.512	1,00	192.512,00	726.767.418,64	0,02649%
CALCÁRIO DOLOMÍTICO	MG	CAETE	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	7.925	4,75	37.675,45	726.767.418,64	0,00518%
CALCÁRIO DOLOMÍTICO	MG	CAETE	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VTE-VQT	7.925	9,56	75.731,30	726.767.418,64	0,01042%
CALCÁRIO DOLOMÍTICO	MG	CAETE	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	7.925	4,75	37.651,68	726.767.418,64	0,00518%
CALCÁRIO DOLOMÍTICO	MG	CAETE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	570.858	4,75	2.713.858,93	726.767.418,64	0,37342%
CALCÁRIO DOLOMÍTICO	MG	CAETE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VTE-VQT	570.858	9,56	5.455.119,05	726.767.418,64	0,75060%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	MG	CAETE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VQT-VGS	570.858	4,75	2.712.146,36	726.767.418,64	0,37318%
CALCÁRIO DOLOMÍTICO	MG	CAMPO BELO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECX-ECB	927.874	7,83	7.267.109,17	726.767.418,64	0,99992%
CALCÁRIO DOLOMÍTICO	MG	CAMPO BELO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECB-ESM	927.874	3,10	2.875.481,53	726.767.418,64	0,39565%
CALCÁRIO DOLOMÍTICO	MG	CAMPO BELO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ESM-EKV	927.874	13,79	12.792.598,84	726.767.418,64	1,76021%
CALCÁRIO DOLOMÍTICO	MG	CANA VERDE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ESM-EKV	927.874	5,03	4.664.422,60	726.767.418,64	0,64180%
CALCÁRIO DOLOMÍTICO	MG	CANA VERDE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EKV-EPE	927.874	6,42	5.958.806,83	726.767.418,64	0,81991%
CALCÁRIO DOLOMÍTICO	MG	CANDEIAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	E69-EBG	927.874	5,45	5.060.624,80	726.767.418,64	0,69632%
CALCÁRIO DOLOMÍTICO	MG	CANDEIAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EBG-ECX	927.874	17,48	16.217.381,77	726.767.418,64	2,23144%
CALCÁRIO DOLOMÍTICO	MG	CANDEIAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECX-ECB	927.874	18,43	17.098.862,07	726.767.418,64	2,35273%
CALCÁRIO DOLOMÍTICO	MG	CARMO DO CAJURU	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EHT-ECJ	58.711	2,67	156.875,79	726.767.418,64	0,02159%
CALCÁRIO DOLOMÍTICO	MG	CARMO DO CAJURU	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECJ-EYE	58.711	7,18	421.544,98	726.767.418,64	0,05800%
CALCÁRIO DOLOMÍTICO	MG	CARMO DO CAJURU	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EYE-EAG	58.711	8,41	493.876,93	726.767.418,64	0,06796%
CALCÁRIO DOLOMÍTICO	MG	CARMO DO CAJURU	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAG-EGD	58.711	0,50	29.414,21	726.767.418,64	0,00405%
CALCÁRIO DOLOMÍTICO	MG	CARRANCAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EPF-EKA	927.874	0,15	141.964,72	726.767.418,64	0,01953%
CALCÁRIO DOLOMÍTICO	MG	CARRANCAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EKA-ETU	927.874	13,68	12.692.388,45	726.767.418,64	1,74642%
CALCÁRIO DOLOMÍTICO	MG	CARRANCAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ETU-EAN	927.874	0,48	440.740,15	726.767.418,64	0,06064%
CALCÁRIO DOLOMÍTICO	MG	CATAS ALTAS	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	7.925	0,13	1.030,25	726.767.418,64	0,00014%
CALCÁRIO DOLOMÍTICO	MG	CATAS ALTAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	570.858	0,13	74.211,54	726.767.418,64	0,01021%
CALCÁRIO DOLOMÍTICO	MG	CONSELHEIRO PENA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VST-VBC	192.512	0,71	137.261,06	726.767.418,64	0,01889%
CALCÁRIO DOLOMÍTICO	MG	CONSELHEIRO PENA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VBC-VCP	192.512	13,10	2.521.522,18	726.767.418,64	0,34695%
CALCÁRIO DOLOMÍTICO	MG	CONSELHEIRO PENA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VCP-VCN	192.512	15,80	3.041.882,11	726.767.418,64	0,41855%
CALCÁRIO DOLOMÍTICO	MG	CONTAGEM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EYU-EBO	58.711	0,54	31.703,94	726.767.418,64	0,00436%
CALCÁRIO DOLOMÍTICO	MG	CONTAGEM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EBO-EEL	58.711	6,60	387.257,76	726.767.418,64	0,05328%
CALCÁRIO DOLOMÍTICO	MG	CONTAGEM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EEL-ECL	58.711	0,70	40.862,86	726.767.418,64	0,00562%
CALCÁRIO DOLOMÍTICO	MG	CORONEL FABRICIANO	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	7.925	0,69	5.428,63	726.767.418,64	0,00075%
CALCÁRIO DOLOMÍTICO	MG	CORONEL FABRICIANO	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	7.925	1,32	10.445,15	726.767.418,64	0,00144%
CALCÁRIO DOLOMÍTICO	MG	CORONEL FABRICIANO	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	7.925	4,74	37.540,73	726.767.418,64	0,00517%
CALCÁRIO DOLOMÍTICO	MG	CORONEL FABRICIANO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAD-VAC	570.858	0,69	391.037,73	726.767.418,64	0,05381%
CALCÁRIO DOLOMÍTICO	MG	CORONEL FABRICIANO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	570.858	1,32	752.390,84	726.767.418,64	0,10353%
CALCÁRIO DOLOMÍTICO	MG	CORONEL FABRICIANO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	570.858	4,74	2.704.154,35	726.767.418,64	0,37208%
CALCÁRIO DOLOMÍTICO	MG	CRUZILIA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ETU-EAN	927.874	5,48	5.083.821,65	726.767.418,64	0,69951%
CALCÁRIO DOLOMÍTICO	MG	DIVINOPOLIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EFB-EAF	58.711	1,00	58.417,45	726.767.418,64	0,00804%
CALCÁRIO DOLOMÍTICO	MG	DIVINOPOLIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAF-EDY	58.711	14,73	864.519,48	726.767.418,64	0,11895%
CALCÁRIO DOLOMÍTICO	MG	DIVINOPOLIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EDY-EED	58.711	10,31	605.427,83	726.767.418,64	0,08330%
CALCÁRIO DOLOMÍTICO	MG	DIVINOPOLIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EED-EDV	58.711	13,89	815.554,50	726.767.418,64	0,11222%
CALCÁRIO DOLOMÍTICO	MG	DIVINOPOLIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EDV-EHT	58.711	9,41	552.411,80	726.767.418,64	0,07601%
CALCÁRIO DOLOMÍTICO	MG	DIVINOPOLIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EHT-ECJ	58.711	6,30	370.114,14	726.767.418,64	0,05093%
CALCÁRIO DOLOMÍTICO	MG	ESMERALDAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EJU-EVN	58.711	2,92	171.201,28	726.767.418,64	0,02356%
CALCÁRIO DOLOMÍTICO	MG	FORMIGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	E13-EFG	927.874	18,13	16.826.067,12	726.767.418,64	2,31519%
CALCÁRIO DOLOMÍTICO	MG	FORMIGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	E68-ETI	927.874	17,74	16.460.484,76	726.767.418,64	2,26489%
CALCÁRIO DOLOMÍTICO	MG	FORMIGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ETI-E69	927.874	7,35	6.815.234,53	726.767.418,64	0,93775%
CALCÁRIO DOLOMÍTICO	MG	FORMIGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	E69-EBG	927.874	7,06	6.546.151,07	726.767.418,64	0,90072%
CALCÁRIO DOLOMÍTICO	MG	FORMIGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EFG-E68	927.874	2,41	2.231.536,97	726.767.418,64	0,30705%
CALCÁRIO DOLOMÍTICO	MG	FORMIGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAO-E13	927.874	1,89	1.756.465,48	726.767.418,64	0,24168%
CALCÁRIO DOLOMÍTICO	MG	GOVERNADOR VALADARES	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VGW-VTR	192.512	30,77	5.924.364,29	726.767.418,64	0,81517%
CALCÁRIO DOLOMÍTICO	MG	GOVERNADOR VALADARES	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VPC-VGV	192.512	30,61	5.892.984,83	726.767.418,64	0,81085%
CALCÁRIO DOLOMÍTICO	MG	GOVERNADOR VALADARES	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	192.512	30,61	5.892.984,83	726.767.418,64	0,81085%
CALCÁRIO DOLOMÍTICO	MG	IGUATAMA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	E67-EGS	58.711	8,13	477.085,59	726.767.418,64	0,06564%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	MG	IGUATAMA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EGS-EDS	58.711	6,05	355.318,97	726.767.418,64	0,04889%
CALCÁRIO DOLOMÍTICO	MG	INGAI	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EII-EPF	927.874	14,03	13.020.855,84	726.767.418,64	1,79161%
CALCÁRIO DOLOMÍTICO	MG	INGAI	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EPF-EKA	927.874	6,84	6.350.369,66	726.767.418,64	0,87378%
CALCÁRIO DOLOMÍTICO	MG	IPATINGA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	7.925	4,12	32.643,08	726.767.418,64	0,00449%
CALCÁRIO DOLOMÍTICO	MG	IPATINGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VIC-VJC	192.512	6,57	1.263.841,28	726.767.418,64	0,17390%
CALCÁRIO DOLOMÍTICO	MG	IPATINGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	570.858	4,12	2.351.364,10	726.767.418,64	0,32354%
CALCÁRIO DOLOMÍTICO	MG	ITAUNA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EEQ-ESQ	58.711	12,94	759.837,76	726.767.418,64	0,10455%
CALCÁRIO DOLOMÍTICO	MG	ITAUNA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EGD-ESS	58.711	11,60	680.871,47	726.767.418,64	0,09368%
CALCÁRIO DOLOMÍTICO	MG	ITAUNA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ESQ-EZU	58.711	1,33	78.144,34	726.767.418,64	0,01075%
CALCÁRIO DOLOMÍTICO	MG	ITAUNA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ESS-EEQ	58.711	7,58	444.794,54	726.767.418,64	0,06120%
CALCÁRIO DOLOMÍTICO	MG	ITAUNA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAG-EGD	58.711	5,43	318.565,89	726.767.418,64	0,04383%
CALCÁRIO DOLOMÍTICO	MG	ITUETA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VIU-VAY	192.512	7,20	1.385.508,86	726.767.418,64	0,19064%
CALCÁRIO DOLOMÍTICO	MG	ITUETA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VRD-VIU	192.512	6,73	1.295.413,25	726.767.418,64	0,17824%
CALCÁRIO DOLOMÍTICO	MG	ITUMIRIM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EII-EPF	927.874	7,70	7.141.846,18	726.767.418,64	0,98269%
CALCÁRIO DOLOMÍTICO	MG	ITUMIRIM	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EIR-EII	927.874	2,31	2.143.388,94	726.767.418,64	0,29492%
CALCÁRIO DOLOMÍTICO	MG	JAPARAIBA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EDS-ELX	58.711	4,95	290.502,03	726.767.418,64	0,03997%
CALCÁRIO DOLOMÍTICO	MG	JAPARAIBA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ELX-ELP	58.711	3,05	179.068,55	726.767.418,64	0,02464%
CALCÁRIO DOLOMÍTICO	MG	JAPARAIBA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EGS-EDS	58.711	1,63	95.405,38	726.767.418,64	0,01313%
CALCÁRIO DOLOMÍTICO	MG	JOAO MONLEVADE	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	7.925	8,06	63.907,20	726.767.418,64	0,00879%
CALCÁRIO DOLOMÍTICO	MG	JOAO MONLEVADE	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VJM-VBV	7.925	2,61	20.715,95	726.767.418,64	0,00285%
CALCÁRIO DOLOMÍTICO	MG	JOAO MONLEVADE	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	7.925	2,37	18.750,55	726.767.418,64	0,00258%
CALCÁRIO DOLOMÍTICO	MG	JOAO MONLEVADE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	570.858	8,06	4.603.398,91	726.767.418,64	0,63341%
CALCÁRIO DOLOMÍTICO	MG	JOAO MONLEVADE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VJM-VBV	570.858	2,61	1.492.222,81	726.767.418,64	0,20532%
CALCÁRIO DOLOMÍTICO	MG	JOAO MONLEVADE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	570.858	2,37	1.350.650,03	726.767.418,64	0,18584%
CALCÁRIO DOLOMÍTICO	MG	JUATUBA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EML-EJU	58.711	5,63	330.249,38	726.767.418,64	0,04544%
CALCÁRIO DOLOMÍTICO	MG	JUATUBA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EJU-EVN	58.711	2,66	156.229,97	726.767.418,64	0,02150%
CALCÁRIO DOLOMÍTICO	MG	LAGOA DA PRATA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ELP-EEJ	58.711	11,58	679.755,96	726.767.418,64	0,09353%
CALCÁRIO DOLOMÍTICO	MG	LAGOA DA PRATA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EEJ-EMG	58.711	10,02	588.225,51	726.767.418,64	0,08094%
CALCÁRIO DOLOMÍTICO	MG	LAGOA DA PRATA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ELX-ELP	58.711	2,76	162.101,07	726.767.418,64	0,02230%
CALCÁRIO DOLOMÍTICO	MG	LAGOA DA PRATA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EMG-EFY	58.711	1,10	64.405,97	726.767.418,64	0,00886%
CALCÁRIO DOLOMÍTICO	MG	LAVRAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EEB-EIR	927.874	14,58	13.532.114,42	726.767.418,64	1,86196%
CALCÁRIO DOLOMÍTICO	MG	LAVRAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ERV-ELS	927.874	8,91	8.264.573,72	726.767.418,64	1,13717%
CALCÁRIO DOLOMÍTICO	MG	LAVRAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EIR-EII	927.874	8,33	7.725.478,92	726.767.418,64	1,06299%
CALCÁRIO DOLOMÍTICO	MG	LAVRAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ELS-EEB	927.874	5,68	5.268.468,57	726.767.418,64	0,72492%
CALCÁRIO DOLOMÍTICO	MG	LIBERDADE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EKW-EEP	927.874	20,16	18.708.723,46	726.767.418,64	2,57424%
CALCÁRIO DOLOMÍTICO	MG	LIBERDADE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAT-EKW	927.874	1,45	1.340.777,93	726.767.418,64	0,18449%
CALCÁRIO DOLOMÍTICO	MG	LIBERDADE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EEP-EEU	927.874	0,23	210.627,40	726.767.418,64	0,02898%
CALCÁRIO DOLOMÍTICO	MG	LUMINARIAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EPF-EKA	927.874	10,96	10.164.859,67	726.767.418,64	1,39864%
CALCÁRIO DOLOMÍTICO	MG	MADRE DE DEUS DE MINAS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FPZ-FGO	166.731	13,89	2.315.226,67	726.767.418,64	0,31857%
CALCÁRIO DOLOMÍTICO	MG	MADRE DE DEUS DE MINAS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FRN-FPZ	166.731	5,23	871.836,40	726.767.418,64	0,11996%
CALCÁRIO DOLOMÍTICO	MG	MADRE DE DEUS DE MINAS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FGO-FAU	166.731	3,39	565.218,09	726.767.418,64	0,07777%
CALCÁRIO DOLOMÍTICO	MG	MATEUS LEME	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EML-EJU	58.711	5,89	345.690,37	726.767.418,64	0,04757%
CALCÁRIO DOLOMÍTICO	MG	MATEUS LEME	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EZU-EML	58.711	5,76	338.116,65	726.767.418,64	0,04652%
CALCÁRIO DOLOMÍTICO	MG	MATEUS LEME	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ESQ-EZU	58.711	5,04	295.668,60	726.767.418,64	0,04068%
CALCÁRIO DOLOMÍTICO	MG	MATOZINHOS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EMS-EWL	353.381	4,42	1.560.883,88	726.767.418,64	0,21477%
CALCÁRIO DOLOMÍTICO	MG	MATOZINHOS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EWL-EPL	353.381	0,23	79.510,73	726.767.418,64	0,01094%
CALCÁRIO DOLOMÍTICO	MG	MINDURI	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ETU-EAN	927.874	13,23	12.271.133,65	726.767.418,64	1,68845%
CALCÁRIO DOLOMÍTICO	MG	MINDURI	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAN-ESV	927.874	4,36	4.040.891,27	726.767.418,64	0,55601%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	MG	NAQUE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	192.512	11,33	2.180.390,91	726.767.418,64	0,30001%
CALCÁRIO DOLOMÍTICO	MG	NOVA ERA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	7.925	11,44	90.662,00	726.767.418,64	0,01247%
CALCÁRIO DOLOMÍTICO	MG	NOVA ERA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	7.925	7,17	56.806,40	726.767.418,64	0,00782%
CALCÁRIO DOLOMÍTICO	MG	NOVA ERA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VDD-DDC	7.925	3,28	26.009,85	726.767.418,64	0,00358%
CALCÁRIO DOLOMÍTICO	MG	NOVA ERA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VBV-VDD	570.858	11,44	6.530.615,52	726.767.418,64	0,89858%
CALCÁRIO DOLOMÍTICO	MG	NOVA ERA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	DDC-VAD	570.858	7,17	4.091.910,14	726.767.418,64	0,56303%
CALCÁRIO DOLOMÍTICO	MG	NOVA ERA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VDD-DDC	570.858	3,28	1.873.555,96	726.767.418,64	0,25779%
CALCÁRIO DOLOMÍTICO	MG	PASSA-VINTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EEP-EEU	927.874	11,34	10.523.019,03	726.767.418,64	1,44792%
CALCÁRIO DOLOMÍTICO	MG	PASSA-VINTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EEU-EPV	927.874	10,17	9.434.622,83	726.767.418,64	1,29816%
CALCÁRIO DOLOMÍTICO	MG	PASSA-VINTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EPV-EFL	927.874	8,39	7.784.862,86	726.767.418,64	1,07116%
CALCÁRIO DOLOMÍTICO	MG	PASSA-VINTE	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FSH-FRP	166.731	12,28	2.047.289,95	726.767.418,64	0,28170%
CALCÁRIO DOLOMÍTICO	MG	PASSA-VINTE	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FJT-FSH	166.731	6,39	1.064.577,44	726.767.418,64	0,14648%
CALCÁRIO DOLOMÍTICO	MG	PASSA-VINTE	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FRP-FFU	166.731	3,70	616.237,78	726.767.418,64	0,08479%
CALCÁRIO DOLOMÍTICO	MG	PEDRO LEOPOLDO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EWL-EPL	353.381	5,39	1.904.016,83	726.767.418,64	0,26198%
CALCÁRIO DOLOMÍTICO	MG	PEDRO LEOPOLDO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EPL-ELD	353.381	5,04	1.779.980,10	726.767.418,64	0,24492%
CALCÁRIO DOLOMÍTICO	MG	PEDRO LEOPOLDO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ELD-ENG	353.381	1,00	351.967,48	726.767.418,64	0,04843%
CALCÁRIO DOLOMÍTICO	MG	PERDOES	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EKV-EPE	927.874	9,49	8.807.380,01	726.767.418,64	1,21186%
CALCÁRIO DOLOMÍTICO	MG	PERDOES	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EPE-ERV	927.874	8,32	7.723.623,18	726.767.418,64	1,06274%
CALCÁRIO DOLOMÍTICO	MG	PERIQUITO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VFS-VPC	192.512	19,91	3.831.951,36	726.767.418,64	0,52726%
CALCÁRIO DOLOMÍTICO	MG	PERIQUITO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VPC-VGV	192.512	5,49	1.056.120,83	726.767.418,64	0,14532%
CALCÁRIO DOLOMÍTICO	MG	RESPLENDOR	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VCN-VRD	192.512	16,02	3.083.464,70	726.767.418,64	0,42427%
CALCÁRIO DOLOMÍTICO	MG	RESPLENDOR	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VRD-VIU	192.512	8,44	1.624.031,23	726.767.418,64	0,22346%
CALCÁRIO DOLOMÍTICO	MG	RESPLENDOR	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VCP-VCN	192.512	1,24	237.944,83	726.767.418,64	0,03274%
CALCÁRIO DOLOMÍTICO	MG	RIBEIRAO VERMELHO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EPE-ERV	927.874	11,50	10.671.478,87	726.767.418,64	1,46835%
CALCÁRIO DOLOMÍTICO	MG	RIBEIRAO VERMELHO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ERV-ELS	927.874	0,32	293.208,18	726.767.418,64	0,04034%
CALCÁRIO DOLOMÍTICO	MG	RIO PIRACICABA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	7.925	5,60	44.380,00	726.767.418,64	0,00611%
CALCÁRIO DOLOMÍTICO	MG	RIO PIRACICABA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	7.925	4,76	37.715,08	726.767.418,64	0,00519%
CALCÁRIO DOLOMÍTICO	MG	RIO PIRACICABA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VBS-VRP	7.925	3,35	26.509,13	726.767.418,64	0,00365%
CALCÁRIO DOLOMÍTICO	MG	RIO PIRACICABA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VRP-VJM	570.858	5,60	3.196.804,80	726.767.418,64	0,43987%
CALCÁRIO DOLOMÍTICO	MG	RIO PIRACICABA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	570.858	4,76	2.716.713,22	726.767.418,64	0,37381%
CALCÁRIO DOLOMÍTICO	MG	RIO PIRACICABA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VBS-VRP	570.858	3,35	1.909.520,01	726.767.418,64	0,26274%
CALCÁRIO DOLOMÍTICO	MG	SABARA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VWI-VDO	7.925	11,36	90.020,08	726.767.418,64	0,01239%
CALCÁRIO DOLOMÍTICO	MG	SABARA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	7.925	3,49	27.618,63	726.767.418,64	0,00380%
CALCÁRIO DOLOMÍTICO	MG	SABARA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	7.925	1,92	15.208,08	726.767.418,64	0,00209%
CALCÁRIO DOLOMÍTICO	MG	SABARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EHF-OCR	58.711	4,13	242.593,85	726.767.418,64	0,03338%
CALCÁRIO DOLOMÍTICO	MG	SABARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EGC-VWI	58.711	1,27	74.328,13	726.767.418,64	0,01023%
CALCÁRIO DOLOMÍTICO	MG	SABARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	OCR-EGC	58.711	1,08	63.231,75	726.767.418,64	0,00870%
CALCÁRIO DOLOMÍTICO	MG	SABARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VWI-VDO	570.858	11,36	6.484.376,02	726.767.418,64	0,89222%
CALCÁRIO DOLOMÍTICO	MG	SABARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VDO-VTE	570.858	3,49	1.989.440,13	726.767.418,64	0,27374%
CALCÁRIO DOLOMÍTICO	MG	SABARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWI	512.147	1,92	982.810,09	726.767.418,64	0,13523%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	OFI-OPT	7.925	8,82	69.858,88	726.767.418,64	0,00961%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VCS-OFI	7.925	7,59	60.134,90	726.767.418,64	0,00827%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	7.925	12,57	99.633,10	726.767.418,64	0,01371%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	7.925	2,01	15.960,95	726.767.418,64	0,00220%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	OFI-OPT	570.858	8,82	5.032.113,27	726.767.418,64	0,69240%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VCS-OFI	570.858	7,59	4.331.670,50	726.767.418,64	0,59602%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	570.858	12,57	7.176.826,78	726.767.418,64	0,98750%
CALCÁRIO DOLOMÍTICO	MG	SANTA BARBARA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	OPT-VBS	570.858	2,01	1.149.708,01	726.767.418,64	0,15819%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	MG	SANTA LUZIA	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWV	7.925	1,04	8.234,08	726.767.418,64	0,00113%
CALCÁRIO DOLOMÍTICO	MG	SANTA LUZIA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECE-VWV	512.147	1,04	532.120,73	726.767.418,64	0,07322%
CALCÁRIO DOLOMÍTICO	MG	SANTA LUZIA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ECA-ECE	512.147	8,80	4.507.917,89	726.767.418,64	0,62027%
CALCÁRIO DOLOMÍTICO	MG	SANTA LUZIA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ERE-ECA	512.147	6,40	3.278.765,09	726.767.418,64	0,45114%
CALCÁRIO DOLOMÍTICO	MG	SANTA LUZIA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EVV-ERE	512.147	1,60	817.386,61	726.767.418,64	0,11247%
CALCÁRIO DOLOMÍTICO	MG	SANTA RITA DE JACUTINGA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FJT-FSH	166.731	9,29	1.549.264,45	726.767.418,64	0,21317%
CALCÁRIO DOLOMÍTICO	MG	SANTA RITA DE JACUTINGA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FOJ-FJT	166.731	5,74	957.035,94	726.767.418,64	0,13168%
CALCÁRIO DOLOMÍTICO	MG	SANTANA DO PARAISO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VJC-VFS	192.512	21,78	4.193.103,87	726.767.418,64	0,57695%
CALCÁRIO DOLOMÍTICO	MG	SANTANA DO PARAISO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VIC-VJC	192.512	0,72	137.838,59	726.767.418,64	0,01897%
CALCÁRIO DOLOMÍTICO	MG	SANTO ANTONIO DO MONTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EMG-EFY	58.711	8,41	493.583,38	726.767.418,64	0,06791%
CALCÁRIO DOLOMÍTICO	MG	SANTO ANTONIO DO MONTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EFB-EAF	58.711	19,00	1.115.215,45	726.767.418,64	0,15345%
CALCÁRIO DOLOMÍTICO	MG	SANTO ANTONIO DO MONTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ESA-EFB	58.711	10,73	630.203,87	726.767.418,64	0,08671%
CALCÁRIO DOLOMÍTICO	MG	SANTO ANTONIO DO MONTE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EFY-ESA	58.711	8,63	506.793,35	726.767.418,64	0,06973%
CALCÁRIO DOLOMÍTICO	MG	SAO GONCALO DO RIO ABAIXO	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	7.925	4,43	35.123,60	726.767.418,64	0,00483%
CALCÁRIO DOLOMÍTICO	MG	SAO GONCALO DO RIO ABAIXO	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	7.925	0,56	4.453,85	726.767.418,64	0,00061%
CALCÁRIO DOLOMÍTICO	MG	SAO GONCALO DO RIO ABAIXO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VBR-VCS	570.858	4,43	2.530.042,66	726.767.418,64	0,34812%
CALCÁRIO DOLOMÍTICO	MG	SAO GONCALO DO RIO ABAIXO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VDI-VBR	570.858	0,56	320.822,20	726.767.418,64	0,04414%
CALCÁRIO DOLOMÍTICO	MG	SAO JOAO DEL REI	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FGT-FRN	166.731	14,86	2.478.289,58	726.767.418,64	0,34100%
CALCÁRIO DOLOMÍTICO	MG	SAO JOAO DEL REI	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FRN-FPZ	166.731	6,71	1.118.765,01	726.767.418,64	0,15394%
CALCÁRIO DOLOMÍTICO	MG	SAO JOSE DA LAPA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ELD-ENG	353.381	7,95	2.809.025,57	726.767.418,64	0,38651%
CALCÁRIO DOLOMÍTICO	MG	SAO JOSE DA LAPA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ENG-EVP	512.147	0,87	444.543,60	726.767.418,64	0,06117%
CALCÁRIO DOLOMÍTICO	MG	SAO VICENTE DE MINAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAN-ESV	927.874	21,81	20.240.643,44	726.767.418,64	2,78502%
CALCÁRIO DOLOMÍTICO	MG	SAO VICENTE DE MINAS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ESV-ELN	927.874	5,42	5.025.365,58	726.767.418,64	0,69147%
CALCÁRIO DOLOMÍTICO	MG	SAO VICENTE DE MINAS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FAU-FFR	166.731	2,83	471.682,00	726.767.418,64	0,06490%
CALCÁRIO DOLOMÍTICO	MG	SAO VICENTE DE MINAS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FGO-FAU	166.731	1,15	191.073,73	726.767.418,64	0,02629%
CALCÁRIO DOLOMÍTICO	MG	TIMOTEO	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	7.925	5,02	39.759,73	726.767.418,64	0,00547%
CALCÁRIO DOLOMÍTICO	MG	TIMOTEO	EFVM	5	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	7.925	1,06	8.400,50	726.767.418,64	0,00116%
CALCÁRIO DOLOMÍTICO	MG	TIMOTEO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VMR-VIC	570.858	5,02	2.863.994,59	726.767.418,64	0,39407%
CALCÁRIO DOLOMÍTICO	MG	TIMOTEO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VAC-VMR	570.858	1,06	605.109,48	726.767.418,64	0,08326%
CALCÁRIO DOLOMÍTICO	MG	TUMIRITINGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VTR-VST	192.512	12,45	2.396.966,91	726.767.418,64	0,32981%
CALCÁRIO DOLOMÍTICO	MG	TUMIRITINGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VGW-VTR	192.512	12,45	2.396.966,91	726.767.418,64	0,32981%
CALCÁRIO DOLOMÍTICO	MG	TUMIRITINGA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	VST-VBC	192.512	6,71	1.291.755,52	726.767.418,64	0,17774%
CALCÁRIO DOLOMÍTICO	MG	VESPASIANO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	ENG-EVP	512.147	4,03	2.064.976,70	726.767.418,64	0,28413%
CALCÁRIO DOLOMÍTICO	MG	VESPASIANO	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EVV-ERE	512.147	3,51	1.797.635,97	726.767.418,64	0,24735%
CALCÁRIO DOLOMÍTICO	RJ	BARRA MANSA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EGR-EAB	927.874	5,04	4.678.340,71	726.767.418,64	0,64372%
CALCÁRIO DOLOMÍTICO	RJ	BARRA MANSA	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EAB-EBM	927.874	7,86	7.292.161,77	726.767.418,64	1,00337%
CALCÁRIO DOLOMÍTICO	RJ	BARRA MANSA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FPT-FEU	166.731	9,25	1.542.595,21	726.767.418,64	0,21225%
CALCÁRIO DOLOMÍTICO	RJ	BARRA MANSA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FEU-FSE	166.731	4,79	798.474,76	726.767.418,64	0,10987%
CALCÁRIO DOLOMÍTICO	RJ	BARRA MANSA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FBM-FBB	166.731	3,93	654.752,64	726.767.418,64	0,09009%
CALCÁRIO DOLOMÍTICO	RJ	BARRA MANSA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FSE-FBM	166.731	2,39	398.487,09	726.767.418,64	0,05483%
CALCÁRIO DOLOMÍTICO	RJ	BARRA MANSA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FBB-FIV	166.731	0,43	72.361,25	726.767.418,64	0,00996%
CALCÁRIO DOLOMÍTICO	RJ	QUATIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EFL-EQT	927.874	16,05	14.890.521,95	726.767.418,64	2,04887%
CALCÁRIO DOLOMÍTICO	RJ	QUATIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EQT-EGR	927.874	10,56	9.802.060,94	726.767.418,64	1,34872%
CALCÁRIO DOLOMÍTICO	RJ	QUATIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EPV-EFL	927.874	1,80	1.672.956,82	726.767.418,64	0,23019%
CALCÁRIO DOLOMÍTICO	RJ	QUATIS	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EGR-EAB	927.874	0,06	54.744,57	726.767.418,64	0,00753%
CALCÁRIO DOLOMÍTICO	RJ	QUATIS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FOA-FJQ	166.731	11,45	1.909.069,95	726.767.418,64	0,26268%
CALCÁRIO DOLOMÍTICO	RJ	QUATIS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FPT-FEU	166.731	7,75	1.292.665,44	726.767.418,64	0,17787%
CALCÁRIO DOLOMÍTICO	RJ	QUATIS	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FJQ-FPT	166.731	5,09	848.160,60	726.767.418,64	0,11670%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	RJ	RESENDE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EFL-EQT	927.874	1,06	978.907,07	726.767.418,64	0,13469%
CALCÁRIO DOLOMÍTICO	RJ	RESENDE	FCA	5	ES, MG, RJ	EFVM, FCA, MRS	EPV-EFL	927.874	0,62	572.498,26	726.767.418,64	0,07877%
CALCÁRIO DOLOMÍTICO	RJ	RESENDE	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FFU-FOA	166.731	9,46	1.577.775,45	726.767.418,64	0,21709%
CALCÁRIO DOLOMÍTICO	RJ	RESENDE	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FRP-FFU	166.731	3,64	606.567,38	726.767.418,64	0,08346%
CALCÁRIO DOLOMÍTICO	RJ	RESENDE	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FOA-FJQ	166.731	2,64	440.169,84	726.767.418,64	0,06057%
CALCÁRIO DOLOMÍTICO	RJ	VOLTA REDONDA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FIV-FVR	166.731	3,19	531.371,70	726.767.418,64	0,07311%
CALCÁRIO DOLOMÍTICO	RJ	VOLTA REDONDA	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FBB-FIV	166.731	1,40	232.756,48	726.767.418,64	0,03203%
CALCÁRIO DOLOMÍTICO	PR	ALMIRANTE TAMANDARE	RMS	6	PR	RMS	LTR-LTD	53.693	11,31	607.428,91	31.404.874,62	1,93419%
CALCÁRIO DOLOMÍTICO	PR	ALMIRANTE TAMANDARE	RMS	6	PR	RMS	LTD-LCH	53.693	3,11	166.985,23	31.404.874,62	0,53172%
CALCÁRIO DOLOMÍTICO	PR	ALMIRANTE TAMANDARE	RMS	6	PR	RMS	LCH-LCO	53.693	0,81	43.330,25	31.404.874,62	0,13797%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	6	PR	RMS	LCF-LJM	53.693	13,61	730.869,12	31.404.874,62	2,32725%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	6	PR	RMS	LAP-LPR	53.693	10,27	551.266,03	31.404.874,62	1,75353%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	6	PR	RMS	LPR-LAI	53.693	3,82	205.214,65	31.404.874,62	0,65345%
CALCÁRIO DOLOMÍTICO	PR	APUCARANA	RMS	6	PR	RMS	LJM-LAP	53.693	2,08	111.896,21	31.404.874,62	0,35630%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	6	PR	RMS	LAB-LGI	53.693	9,78	525.117,54	31.404.874,62	1,67209%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	6	PR	RMS	LAR-LAB	53.693	7,58	407.207,71	31.404.874,62	1,29664%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	6	PR	RMS	LAW-LAR	53.693	5,45	292.787,93	31.404.874,62	0,93230%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	6	PR	RMS	LGI-LBN	53.693	1,67	89.613,62	31.404.874,62	0,28535%
CALCÁRIO DOLOMÍTICO	PR	ARAUCARIA	RMS	6	PR	RMS	LAA-LAW	53.693	1,30	69.639,82	31.404.874,62	0,22175%
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	6	PR	RMS	LGI-LBN	53.693	5,71	306.425,95	31.404.874,62	0,97573%
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	6	PR	RMS	LEB-LOZ	53.693	9,79	525.386,01	31.404.874,62	1,67294%
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	6	PR	RMS	LBN-LEB	53.693	9,82	527.480,03	31.404.874,62	1,67961%
CALCÁRIO DOLOMÍTICO	PR	BALSA NOVA	RMS	6	PR	RMS	LOZ-LWV	53.693	0,82	44.028,26	31.404.874,62	0,14020%
CALCÁRIO DOLOMÍTICO	PR	CALIFORNIA	RMS	6	PR	RMS	LCF-LJM	53.693	5,07	272.116,12	31.404.874,62	0,86648%
CALCÁRIO DOLOMÍTICO	PR	CALIFORNIA	RMS	6	PR	RMS	LUV-LCF	53.693	7,15	383.851,26	31.404.874,62	1,22227%
CALCÁRIO DOLOMÍTICO	PR	CAMBIRA	RMS	6	PR	RMS	LPR-LAI	53.693	1,92	103.197,95	31.404.874,62	0,32860%
CALCÁRIO DOLOMÍTICO	PR	CAMBIRA	RMS	6	PR	RMS	LAI-LJD	53.693	3,52	188.838,28	31.404.874,62	0,60130%
CALCÁRIO DOLOMÍTICO	PR	CONTENDA	RMS	6	PR	RMS	LAB-LGI	53.693	0,91	48.753,24	31.404.874,62	0,15524%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	6	PR	RMS	LCH-LCO	53.693	12,17	653.229,04	31.404.874,62	2,08002%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	6	PR	RMS	LAA-LAW	53.693	2,62	140.836,74	31.404.874,62	0,44846%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	6	PR	RMS	LCO-LTE	53.693	4,03	216.382,79	31.404.874,62	0,68901%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	6	PR	RMS	LTE-LNH	53.693	2,14	115.010,41	31.404.874,62	0,36622%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	6	PR	RMS	LNH-LKP	53.693	1,61	86.499,42	31.404.874,62	0,27543%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	6	PR	RMS	LKP-LKM	53.693	2,72	146.152,35	31.404.874,62	0,46538%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	6	PR	RMS	LKM-LIC	53.693	6,70	359.582,02	31.404.874,62	1,14499%
CALCÁRIO DOLOMÍTICO	PR	CURITIBA	RMS	6	PR	RMS	LIC-LAA	53.693	9,82	526.996,80	31.404.874,62	1,67807%
CALCÁRIO DOLOMÍTICO	PR	FAXINAL	RMS	6	PR	RMS	LOD-LMF	53.693	16,62	892.216,58	31.404.874,62	2,84101%
CALCÁRIO DOLOMÍTICO	PR	FAXINAL	RMS	6	PR	RMS	LBJ-LOD	53.693	6,60	354.320,11	31.404.874,62	1,12823%
CALCÁRIO DOLOMÍTICO	PR	IMBAU	RMS	6	PR	RMS	LLH-LMJ	53.693	2,57	137.937,32	31.404.874,62	0,43922%
CALCÁRIO DOLOMÍTICO	PR	IMBAU	RMS	6	PR	RMS	LFI-LLH	53.693	0,49	26.470,65	31.404.874,62	0,08429%
CALCÁRIO DOLOMÍTICO	PR	IPIRANGA	RMS	6	PR	RMS	LIH-LLU	53.693	25,12	1.348.607,08	31.404.874,62	4,29426%
CALCÁRIO DOLOMÍTICO	PR	IPIRANGA	RMS	6	PR	RMS	LLU-LBX	53.693	14,27	766.199,11	31.404.874,62	2,43975%
CALCÁRIO DOLOMÍTICO	PR	IPIRANGA	RMS	6	PR	RMS	LLT-LIH	53.693	12,61	676.800,27	31.404.874,62	2,15508%
CALCÁRIO DOLOMÍTICO	PR	IVAI	RMS	6	PR	RMS	LLU-LBX	53.693	1,90	101.963,01	31.404.874,62	0,32467%
CALCÁRIO DOLOMÍTICO	PR	JANDAIA DO SUL	RMS	6	PR	RMS	LJD-LMI	53.693	4,40	236.302,89	31.404.874,62	0,75244%
CALCÁRIO DOLOMÍTICO	PR	JANDAIA DO SUL	RMS	6	PR	RMS	LAI-LJD	53.693	1,96	105.345,67	31.404.874,62	0,33544%
CALCÁRIO DOLOMÍTICO	PR	LAPA	RMS	6	PR	RMS	LBN-LEB	53.693	1,64	88.110,21	31.404.874,62	0,28056%
CALCÁRIO DOLOMÍTICO	PR	LAPA	RMS	6	PR	RMS	LEB-LOZ	53.693	0,51	27.598,20	31.404.874,62	0,08788%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
CALCÁRIO DOLOMÍTICO	PR	MANDAGUARI	RMS	6	PR	RMS	LJD-LMI	53.693	7,07	379.341,05	31.404.874,62	1,20790%
CALCÁRIO DOLOMÍTICO	PR	MANDAGUARI	RMS	6	PR	RMS	LMI-LMA	53.693	4,99	267.874,38	31.404.874,62	0,85297%
CALCÁRIO DOLOMÍTICO	PR	MARIALVA	RMS	6	PR	RMS	LMI-LMA	53.693	10,03	538.433,40	31.404.874,62	1,71449%
CALCÁRIO DOLOMÍTICO	PR	MARIALVA	RMS	6	PR	RMS	LMA-LSD	53.693	7,05	378.535,65	31.404.874,62	1,20534%
CALCÁRIO DOLOMÍTICO	PR	MARILANDIA DO SUL	RMS	6	PR	RMS	LGE-LUV	53.693	15,20	816.294,68	31.404.874,62	2,59926%
CALCÁRIO DOLOMÍTICO	PR	MARILANDIA DO SUL	RMS	6	PR	RMS	LUV-LCF	53.693	7,56	405.704,31	31.404.874,62	1,29185%
CALCÁRIO DOLOMÍTICO	PR	MARILANDIA DO SUL	RMS	6	PR	RMS	LMF-LGE	53.693	4,75	255.256,52	31.404.874,62	0,81279%
CALCÁRIO DOLOMÍTICO	PR	MARINGA	RMS	6	PR	RMS	LMN-LRX	53.693	10,10	542.030,84	31.404.874,62	1,72594%
CALCÁRIO DOLOMÍTICO	PR	MARINGA	RMS	6	PR	RMS	LSD-LMN	53.693	1,09	58.740,14	31.404.874,62	0,18704%
CALCÁRIO DOLOMÍTICO	PR	MARINGA	RMS	6	PR	RMS	LRX-LMG	53.693	1,06	57.075,66	31.404.874,62	0,18174%
CALCÁRIO DOLOMÍTICO	PR	MAUA DA SERRA	RMS	6	PR	RMS	LMF-LGE	53.693	5,61	301.164,04	31.404.874,62	0,95897%
CALCÁRIO DOLOMÍTICO	PR	MAUA DA SERRA	RMS	6	PR	RMS	LOD-LMF	53.693	2,29	123.064,36	31.404.874,62	0,39186%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	6	PR	RMS	LOR-LBJ	53.693	18,09	971.037,91	31.404.874,62	3,09200%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	6	PR	RMS	LMJ-LOR	53.693	17,59	944.352,48	31.404.874,62	3,00703%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	6	PR	RMS	LBJ-LOD	53.693	14,17	760.561,35	31.404.874,62	2,42179%
CALCÁRIO DOLOMÍTICO	PR	ORTIGUEIRA	RMS	6	PR	RMS	LLH-LMJ	53.693	7,10	381.166,61	31.404.874,62	1,21372%
CALCÁRIO DOLOMÍTICO	PR	PALMEIRA	RMS	6	PR	RMS	LMO-LLP	53.693	11,25	603.938,86	31.404.874,62	1,92307%
CALCÁRIO DOLOMÍTICO	PR	PALMEIRA	RMS	6	PR	RMS	LLP-LLY	53.693	7,24	388.522,55	31.404.874,62	1,23714%
CALCÁRIO DOLOMÍTICO	PR	PALMEIRA	RMS	6	PR	RMS	LWV-LMO	53.693	1,85	99.493,13	31.404.874,62	0,31681%
CALCÁRIO DOLOMÍTICO	PR	PINHAIS	RMS	6	PR	RMS	LNH-LKP	53.693	0,49	26.202,18	31.404.874,62	0,08343%
CALCÁRIO DOLOMÍTICO	PR	PINHAIS	RMS	6	PR	RMS	LTE-LNH	53.693	0,52	28.135,13	31.404.874,62	0,08959%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	6	PR	RMS	LPJ-LLT	53.693	32,04	1.720.108,95	31.404.874,62	5,47720%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	6	PR	RMS	LUS-LPJ	53.693	21,73	1.166.587,81	31.404.874,62	3,71467%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	6	PR	RMS	LLY-LDV	53.693	10,17	546.004,12	31.404.874,62	1,73860%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	6	PR	RMS	LVV-LUS	53.693	9,97	535.050,75	31.404.874,62	1,70372%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	6	PR	RMS	LLP-LLY	53.693	6,20	333.057,68	31.404.874,62	1,06053%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	6	PR	RMS	LDV-LVV	53.693	5,02	269.646,25	31.404.874,62	0,85861%
CALCÁRIO DOLOMÍTICO	PR	PONTA GROSSA	RMS	6	PR	RMS	LLT-LIH	53.693	0,26	14.013,87	31.404.874,62	0,04462%
CALCÁRIO DOLOMÍTICO	PR	PORTO AMAZONAS	RMS	6	PR	RMS	LWV-LMO	53.693	8,55	459.289,92	31.404.874,62	1,46248%
CALCÁRIO DOLOMÍTICO	PR	PORTO AMAZONAS	RMS	6	PR	RMS	LOZ-LWV	53.693	4,54	243.766,22	31.404.874,62	0,77621%
CALCÁRIO DOLOMÍTICO	PR	PORTO AMAZONAS	RMS	6	PR	RMS	LMO-LLP	53.693	1,87	100.137,45	31.404.874,62	0,31886%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	6	PR	RMS	LFI-LLH	53.693	18,83	1.011.146,58	31.404.874,62	3,21971%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	6	PR	RMS	LBO-LRF	53.693	17,30	929.103,67	31.404.874,62	2,95847%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	6	PR	RMS	LRF-LFI	53.693	10,90	585.146,31	31.404.874,62	1,86323%
CALCÁRIO DOLOMÍTICO	PR	RESERVA	RMS	6	PR	RMS	LBX-LBO	53.693	6,18	331.554,28	31.404.874,62	1,05574%
CALCÁRIO DOLOMÍTICO	PR	SARANDI	RMS	6	PR	RMS	LMA-LSD	53.693	3,26	174.931,79	31.404.874,62	0,55702%
CALCÁRIO DOLOMÍTICO	PR	SARANDI	RMS	6	PR	RMS	LSD-LMN	53.693	1,65	88.539,76	31.404.874,62	0,28193%
CALCÁRIO DOLOMÍTICO	PR	TIBAGI	RMS	6	PR	RMS	LLT-LIH	53.693	17,70	950.312,41	31.404.874,62	3,02600%
CALCÁRIO DOLOMÍTICO	PR	TIBAGI	RMS	6	PR	RMS	LBX-LBO	53.693	5,05	270.881,19	31.404.874,62	0,86255%
CALCÁRIO DOLOMÍTICO	PR	TIBAGI	RMS	6	PR	RMS	LLU-LBX	53.693	2,62	140.675,66	31.404.874,62	0,44794%
DOLOMITO	MG	ANDRELANDIA	FCA	7	MG, RJ	EFVM, FCA	ELN-EAT	497.664	22,18	11.036.694,53	233.051.663,69	4,73573%
DOLOMITO	MG	ANDRELANDIA	FCA	7	MG, RJ	EFVM, FCA	ESV-ELN	497.664	15,53	7.730.712,58	233.051.663,69	3,31717%
DOLOMITO	MG	ANTONIO DIAS	EFVM	7	MG, RJ	EFVM, FCA	DDC-VAD	2.299	14,83	34.084,97	233.051.663,69	0,01463%
DOLOMITO	MG	ANTONIO DIAS	EFVM	7	MG, RJ	EFVM, FCA	VAD-VAC	2.299	29,77	68.436,63	233.051.663,69	0,02937%
DOLOMITO	MG	ARANTINA	FCA	7	MG, RJ	EFVM, FCA	ELN-EAT	497.664	3,07	1.525.837,82	233.051.663,69	0,65472%
DOLOMITO	MG	ARANTINA	FCA	7	MG, RJ	EFVM, FCA	EAT-EKW	497.664	10,50	5.223.481,34	233.051.663,69	2,24134%
DOLOMITO	MG	ARCOS	FCA	7	MG, RJ	EFVM, FCA	EAO-E13	497.664	11,48	5.714.675,71	233.051.663,69	2,45211%
DOLOMITO	MG	BELA VISTA DE MINAS	EFVM	7	MG, RJ	EFVM, FCA	VBV-VDD	2.299	5,13	11.786,97	233.051.663,69	0,00506%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
DOLOMITO	MG	BOM JARDIM DE MINAS	FCA	7	MG, RJ	EFVM, FCA	EAT-EKW	497.664	4,21	2.093.174,78	233.051.663,69	0,89816%
DOLOMITO	MG	CAMPO BELO	FCA	7	MG, RJ	EFVM, FCA	ECX-ECB	497.664	7,83	3.897.704,45	233.051.663,69	1,67246%
DOLOMITO	MG	CAMPO BELO	FCA	7	MG, RJ	EFVM, FCA	ECB-ESM	497.664	3,10	1.542.260,74	233.051.663,69	0,66177%
DOLOMITO	MG	CAMPO BELO	FCA	7	MG, RJ	EFVM, FCA	ESM-EKV	497.664	13,79	6.861.293,57	233.051.663,69	2,94411%
DOLOMITO	MG	CANA VERDE	FCA	7	MG, RJ	EFVM, FCA	ESM-EKV	497.664	5,03	2.501.756,93	233.051.663,69	1,07348%
DOLOMITO	MG	CANA VERDE	FCA	7	MG, RJ	EFVM, FCA	EKV-EPE	497.664	6,42	3.195.998,21	233.051.663,69	1,37137%
DOLOMITO	MG	CANDEIAS	FCA	7	MG, RJ	EFVM, FCA	E69-EBG	497.664	5,45	2.714.259,46	233.051.663,69	1,16466%
DOLOMITO	MG	CANDEIAS	FCA	7	MG, RJ	EFVM, FCA	EBG-ECX	497.664	17,48	8.698.171,39	233.051.663,69	3,73229%
DOLOMITO	MG	CANDEIAS	FCA	7	MG, RJ	EFVM, FCA	ECX-ECB	497.664	18,43	9.170.952,19	233.051.663,69	3,93516%
DOLOMITO	MG	CARRANCAS	FCA	7	MG, RJ	EFVM, FCA	EPF-EKA	497.664	0,15	76.142,59	233.051.663,69	0,03267%
DOLOMITO	MG	CARRANCAS	FCA	7	MG, RJ	EFVM, FCA	EKA-ETU	497.664	13,68	6.807.545,86	233.051.663,69	2,92105%
DOLOMITO	MG	CARRANCAS	FCA	7	MG, RJ	EFVM, FCA	ETU-EAN	497.664	0,48	236.390,40	233.051.663,69	0,10143%
DOLOMITO	MG	CATAS ALTAS	EFVM	7	MG, RJ	EFVM, FCA	VFZ-VBT	2.299	11,89	27.323,62	233.051.663,69	0,01172%
DOLOMITO	MG	CATAS ALTAS	EFVM	7	MG, RJ	EFVM, FCA	VBT-VAG	2.299	10,03	23.063,57	233.051.663,69	0,00990%
DOLOMITO	MG	CATAS ALTAS	EFVM	7	MG, RJ	EFVM, FCA	VAG-VCS	2.299	4,01	9.207,50	233.051.663,69	0,00395%
DOLOMITO	MG	CORONEL FABRICIANO	EFVM	7	MG, RJ	EFVM, FCA	VAD-VAC	2.299	0,69	1.574,82	233.051.663,69	0,00068%
DOLOMITO	MG	CORONEL FABRICIANO	EFVM	7	MG, RJ	EFVM, FCA	VAC-VMR	2.299	1,32	3.030,08	233.051.663,69	0,00130%
DOLOMITO	MG	CRUZILIA	FCA	7	MG, RJ	EFVM, FCA	ETU-EAN	497.664	5,48	2.726.701,06	233.051.663,69	1,17000%
DOLOMITO	MG	FORMIGA	FCA	7	MG, RJ	EFVM, FCA	E13-EFG	497.664	18,13	9.024.638,98	233.051.663,69	3,87238%
DOLOMITO	MG	FORMIGA	FCA	7	MG, RJ	EFVM, FCA	E68-ETI	497.664	17,74	8.828.559,36	233.051.663,69	3,78824%
DOLOMITO	MG	FORMIGA	FCA	7	MG, RJ	EFVM, FCA	ETI-E69	497.664	7,35	3.655.342,08	233.051.663,69	1,56847%
DOLOMITO	MG	FORMIGA	FCA	7	MG, RJ	EFVM, FCA	E69-EBG	497.664	7,06	3.511.019,52	233.051.663,69	1,50654%
DOLOMITO	MG	FORMIGA	FCA	7	MG, RJ	EFVM, FCA	EFG-E68	497.664	2,41	1.196.881,92	233.051.663,69	0,51357%
DOLOMITO	MG	FORMIGA	FCA	7	MG, RJ	EFVM, FCA	EA0-E13	497.664	1,89	942.077,95	233.051.663,69	0,40424%
DOLOMITO	MG	INGAI	FCA	7	MG, RJ	EFVM, FCA	EII-EPF	497.664	14,03	6.983.718,91	233.051.663,69	2,99664%
DOLOMITO	MG	INGAI	FCA	7	MG, RJ	EFVM, FCA	EPF-EKA	497.664	6,84	3.406.012,42	233.051.663,69	1,46148%
DOLOMITO	MG	ITUMIRIM	FCA	7	MG, RJ	EFVM, FCA	EII-EPF	497.664	7,70	3.830.519,81	233.051.663,69	1,64364%
DOLOMITO	MG	ITUMIRIM	FCA	7	MG, RJ	EFVM, FCA	EIR-EII	497.664	2,31	1.149.603,84	233.051.663,69	0,49328%
DOLOMITO	MG	JOAO MONLEVADE	EFVM	7	MG, RJ	EFVM, FCA	VRP-VJM	2.299	8,06	18.539,14	233.051.663,69	0,00795%
DOLOMITO	MG	JOAO MONLEVADE	EFVM	7	MG, RJ	EFVM, FCA	VJM-VBV	2.299	2,61	6.009,59	233.051.663,69	0,00258%
DOLOMITO	MG	JOAO MONLEVADE	EFVM	7	MG, RJ	EFVM, FCA	VBV-VDD	2.299	2,37	5.439,43	233.051.663,69	0,00233%
DOLOMITO	MG	LAVRAS	FCA	7	MG, RJ	EFVM, FCA	EEB-EIR	497.664	14,58	7.257.931,78	233.051.663,69	3,11430%
DOLOMITO	MG	LAVRAS	FCA	7	MG, RJ	EFVM, FCA	ERV-ELS	497.664	8,91	4.432.693,25	233.051.663,69	1,90202%
DOLOMITO	MG	LAVRAS	FCA	7	MG, RJ	EFVM, FCA	EIR-EII	497.664	8,33	4.143.550,46	233.051.663,69	1,77795%
DOLOMITO	MG	LAVRAS	FCA	7	MG, RJ	EFVM, FCA	ELS-EEB	497.664	5,68	2.825.736,19	233.051.663,69	1,21249%
DOLOMITO	MG	LIBERDADE	FCA	7	MG, RJ	EFVM, FCA	EKW-EEP	497.664	20,16	10.034.399,23	233.051.663,69	4,30565%
DOLOMITO	MG	LIBERDADE	FCA	7	MG, RJ	EFVM, FCA	EAT-EKW	497.664	1,45	719.124,48	233.051.663,69	0,30857%
DOLOMITO	MG	LIBERDADE	FCA	7	MG, RJ	EFVM, FCA	EEL-EEU	497.664	0,23	112.969,73	233.051.663,69	0,04847%
DOLOMITO	MG	LUMINARIAS	FCA	7	MG, RJ	EFVM, FCA	EPF-EKA	497.664	10,96	5.451.909,12	233.051.663,69	2,33936%
DOLOMITO	MG	MARIANA	EFVM	7	MG, RJ	EFVM, FCA	VAL-VFZ	2.299	8,18	18.798,92	233.051.663,69	0,00807%
DOLOMITO	MG	MARIANA	EFVM	7	MG, RJ	EFVM, FCA	VTO-VAL	2.299	5,89	13.534,21	233.051.663,69	0,00581%
DOLOMITO	MG	MARIANA	EFVM	7	MG, RJ	EFVM, FCA	VFZ-VBT	2.299	1,24	2.853,06	233.051.663,69	0,00122%
DOLOMITO	MG	MINDURI	FCA	7	MG, RJ	EFVM, FCA	ETU-EAN	497.664	13,23	6.581.606,40	233.051.663,69	2,82410%
DOLOMITO	MG	MINDURI	FCA	7	MG, RJ	EFVM, FCA	EAN-ESV	497.664	4,36	2.167.326,72	233.051.663,69	0,92998%
DOLOMITO	MG	NOVA ERA	EFVM	7	MG, RJ	EFVM, FCA	VBV-VDD	2.299	11,44	26.300,56	233.051.663,69	0,01129%
DOLOMITO	MG	NOVA ERA	EFVM	7	MG, RJ	EFVM, FCA	DDC-VAD	2.299	7,17	16.479,23	233.051.663,69	0,00707%
DOLOMITO	MG	NOVA ERA	EFVM	7	MG, RJ	EFVM, FCA	VDD-DDC	2.299	3,28	7.545,32	233.051.663,69	0,00324%
DOLOMITO	MG	OURO PRETO	EFVM	7	MG, RJ	EFVM, FCA	VFU-VRV	2.299	17,21	39.568,09	233.051.663,69	0,01698%

Substância	UF	Município	Ferrovias	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
DOLOMITO	MG	OURO PRETO	EFVM	7	MG, RJ	EFVM, FCA	VRV-VTO	2.299	10,72	24.638,38	233.051.663,69	0,01057%
DOLOMITO	MG	OURO PRETO	EFVM	7	MG, RJ	EFVM, FCA	VTO-VAL	2.299	2,39	5.499,21	233.051.663,69	0,00236%
DOLOMITO	MG	PASSA-VINTE	FCA	7	MG, RJ	EFVM, FCA	EEP-EEU	497.664	11,34	5.644.007,42	233.051.663,69	2,42178%
DOLOMITO	MG	PASSA-VINTE	FCA	7	MG, RJ	EFVM, FCA	EEU-EPV	497.664	10,17	5.060.247,55	233.051.663,69	2,17130%
DOLOMITO	MG	PASSA-VINTE	FCA	7	MG, RJ	EFVM, FCA	EPV-EFL	497.664	8,39	4.175.400,96	233.051.663,69	1,79162%
DOLOMITO	MG	PERDOES	FCA	7	MG, RJ	EFVM, FCA	EKV-EPE	497.664	9,49	4.723.826,69	233.051.663,69	2,02694%
DOLOMITO	MG	PERDOES	FCA	7	MG, RJ	EFVM, FCA	EPE-ERV	497.664	8,32	4.142.555,14	233.051.663,69	1,77753%
DOLOMITO	MG	RIBEIRAO VERMELHO	FCA	7	MG, RJ	EFVM, FCA	EPE-ERV	497.664	11,50	5.723.633,66	233.051.663,69	2,45595%
DOLOMITO	MG	RIBEIRAO VERMELHO	FCA	7	MG, RJ	EFVM, FCA	ERV-ELS	497.664	0,32	157.261,82	233.051.663,69	0,00748%
DOLOMITO	MG	RIO PIRACICABA	EFVM	7	MG, RJ	EFVM, FCA	VRP-VJM	2.299	5,60	12.874,40	233.051.663,69	0,00552%
DOLOMITO	MG	RIO PIRACICABA	EFVM	7	MG, RJ	EFVM, FCA	OPT-VBS	2.299	4,76	10.940,94	233.051.663,69	0,00469%
DOLOMITO	MG	RIO PIRACICABA	EFVM	7	MG, RJ	EFVM, FCA	VBS-VRP	2.299	3,35	7.690,16	233.051.663,69	0,00330%
DOLOMITO	MG	SANTA BARBARA	EFVM	7	MG, RJ	EFVM, FCA	OFI-OPT	2.299	8,82	20.265,69	233.051.663,69	0,00870%
DOLOMITO	MG	SANTA BARBARA	EFVM	7	MG, RJ	EFVM, FCA	VCS-OFI	2.299	7,59	17.444,81	233.051.663,69	0,00749%
DOLOMITO	MG	SANTA BARBARA	EFVM	7	MG, RJ	EFVM, FCA	OPT-VBS	2.299	2,01	4.630,19	233.051.663,69	0,00199%
DOLOMITO	MG	SANTA BARBARA	EFVM	7	MG, RJ	EFVM, FCA	VAG-VCS	2.299	0,45	1.025,35	233.051.663,69	0,00044%
DOLOMITO	MG	SAO VICENTE DE MINAS	FCA	7	MG, RJ	EFVM, FCA	EAN-ESV	497.664	21,81	10.856.042,50	233.051.663,69	4,65821%
DOLOMITO	MG	SAO VICENTE DE MINAS	FCA	7	MG, RJ	EFVM, FCA	ESV-ELN	497.664	5,42	2.695.348,22	233.051.663,69	1,15655%
DOLOMITO	MG	TIMOTEO	EFVM	7	MG, RJ	EFVM, FCA	VAC-VMR	2.299	1,06	2.436,94	233.051.663,69	0,00105%
DOLOMITO	RJ	BARRA MANSA	FCA	7	MG, RJ	EFVM, FCA	EGR-EAB	497.664	5,04	2.509.221,89	233.051.663,69	1,07668%
DOLOMITO	RJ	BARRA MANSA	FCA	7	MG, RJ	EFVM, FCA	EAB-EBM	497.664	7,86	3.911.141,38	233.051.663,69	1,67823%
DOLOMITO	RJ	QUATIS	FCA	7	MG, RJ	EFVM, FCA	EFL-EQT	497.664	16,05	7.986.511,87	233.051.663,69	3,42693%
DOLOMITO	RJ	QUATIS	FCA	7	MG, RJ	EFVM, FCA	EQT-EGR	497.664	10,56	5.257.322,50	233.051.663,69	2,25586%
DOLOMITO	RJ	QUATIS	FCA	7	MG, RJ	EFVM, FCA	EPV-EFL	497.664	1,80	897.288,19	233.051.663,69	0,38502%
DOLOMITO	RJ	QUATIS	FCA	7	MG, RJ	EFVM, FCA	EGR-EAB	497.664	0,06	29.362,18	233.051.663,69	0,01260%
DOLOMITO	RJ	RESENDE	FCA	7	MG, RJ	EFVM, FCA	EFL-EQT	497.664	1,06	525.035,52	233.051.663,69	0,22529%
DOLOMITO	RJ	RESENDE	FCA	7	MG, RJ	EFVM, FCA	EPV-EFL	497.664	0,62	307.058,69	233.051.663,69	0,13176%
FOSFATO	GO	CATALAO	FCA	8	GO, MG	FCA	ELC-EGN	656.845	11,46	7.528.100,55	197.700.820,75	3,80782%
FOSFATO	GO	CUMARI	FCA	8	GO, MG	FCA	EYG-EYH	656.845	14,67	9.632.631,93	197.700.820,75	4,87233%
FOSFATO	GO	CUMARI	FCA	8	GO, MG	FCA	EGN-EYG	656.845	10,23	6.720.838,04	197.700.820,75	3,39950%
FOSFATO	GO	GOIANDIRA	FCA	8	GO, MG	FCA	EGN-EYG	656.845	12,06	7.922.207,55	197.700.820,75	4,00717%
FOSFATO	GO	GOIANDIRA	FCA	8	GO, MG	FCA	ELC-EGN	656.845	12,76	8.382.655,89	197.700.820,75	4,24007%
FOSFATO	MG	ARAGUARI	FCA	8	GO, MG	FCA	EAU-ZHF	656.845	22,06	14.488.687,01	197.700.820,75	7,32859%
FOSFATO	MG	ARAGUARI	FCA	8	GO, MG	FCA	EYH-EAU	656.845	20,20	13.268.925,85	197.700.820,75	6,71162%
FOSFATO	MG	ARAGUARI	FCA	8	GO, MG	FCA	EYG-EYH	656.845	13,26	8.707.794,17	197.700.820,75	4,40453%
FOSFATO	MG	ARAGUARI	FCA	8	GO, MG	FCA	ZHF-ZUL	656.845	2,73	1.791.216,32	197.700.820,75	0,90602%
FOSFATO	MG	UBERABA	FCA	8	GO, MG	FCA	ZZB-ZXJ	656.845	34,97	22.971.840,19	197.700.820,75	11,61950%
FOSFATO	MG	UBERABA	FCA	8	GO, MG	FCA	ZXJ-ZMN	656.845	19,27	12.656.089,46	197.700.820,75	6,40164%
FOSFATO	MG	UBERABA	FCA	8	GO, MG	FCA	ZUB-ZQQ	656.845	16,46	10.812.982,39	197.700.820,75	5,46937%
FOSFATO	MG	UBERABA	FCA	8	GO, MG	FCA	ZQQ-ZVF	656.845	14,87	9.766.628,31	197.700.820,75	4,94011%
FOSFATO	MG	UBERABA	FCA	8	GO, MG	FCA	ZYE-ZZB	656.845	10,79	7.084.073,33	197.700.820,75	3,58323%
FOSFATO	MG	UBERABA	FCA	8	GO, MG	FCA	ZHU-ZYE	656.845	1,58	1.035.844,57	197.700.820,75	0,52395%
FOSFATO	MG	UBERABA	FCA	8	GO, MG	FCA	ZMN-ZXX	656.845	20,01	13.144.453,72	197.700.820,75	6,64866%
FOSFATO	MG	UBERLANDIA	FCA	8	GO, MG	FCA	ZUL-ZHU	656.845	21,35	14.020.356,53	197.700.820,75	7,09170%
FOSFATO	MG	UBERLANDIA	FCA	8	GO, MG	FCA	ZHF-ZUL	656.845	21,92	14.395.415,02	197.700.820,75	7,28141%
FOSFATO	MG	UBERLANDIA	FCA	8	GO, MG	FCA	ZHU-ZYE	656.845	20,36	13.370.079,98	197.700.820,75	6,76278%
MAGNESITA	BA	ARACATU	FCA	9	BA, MG	FCA	DUV-DOV	93.613	12,23	1.144.793,38	178.803.601,63	0,64025%
MAGNESITA	BA	BARRA DA ESTIVA	FCA	9	BA, MG	FCA	DWN-DZU	93.613	14,97	1.400.918,55	178.803.601,63	0,78350%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MAGNESITA	BA	BARRA DA ESTIVA	FCA	9	BA, MG	FCA	DKY-DWN	93.613	0,40	37.257,97	178.803.601,63	0,02084%
MAGNESITA	BA	BRUMADO	FCA	9	BA, MG	FCA	DUV-DOV	93.613	5,37	502.608,20	178.803.601,63	0,28110%
MAGNESITA	BA	BRUMADO	FCA	9	BA, MG	FCA	DKZ-DMD	121.254	5,01	607.967,56	178.803.601,63	0,34002%
MAGNESITA	BA	BRUMADO	FCA	9	BA, MG	FCA	DKZ-DRU	93.613	8,49	794.399,92	178.803.601,63	0,44429%
MAGNESITA	BA	BRUMADO	FCA	9	BA, MG	FCA	DRU-DCB	93.613	9,54	893.255,25	178.803.601,63	0,49957%
MAGNESITA	BA	BRUMADO	FCA	9	BA, MG	FCA	DCB-DUV	93.613	16,91	1.583.089,44	178.803.601,63	0,88538%
MAGNESITA	BA	CABACEIRAS DO PARAGUACU	FCA	9	BA, MG	FCA	DVE-DEM	93.613	4,56	426.968,89	178.803.601,63	0,23879%
MAGNESITA	BA	CACHOEIRA	FCA	9	BA, MG	FCA	DSX-D23	93.613	0,82	76.949,89	178.803.601,63	0,04304%
MAGNESITA	BA	CACHOEIRA	FCA	9	BA, MG	FCA	D23-DQF	93.613	8,59	804.229,28	178.803.601,63	0,44978%
MAGNESITA	BA	CACULE	FCA	9	BA, MG	FCA	DDH-DKC	121.254	9,63	1.167.433,51	178.803.601,63	0,65291%
MAGNESITA	BA	CACULE	FCA	9	BA, MG	FCA	DKC-DPL	121.254	28,22	3.422.030,39	178.803.601,63	1,91385%
MAGNESITA	BA	CANDEIAS	FCA	9	BA, MG	FCA	DBH-DTC	93.613	4,77	446.721,24	178.803.601,63	0,24984%
MAGNESITA	BA	CANDEIAS	FCA	9	BA, MG	FCA	DTC-DCS	93.613	2,48	232.066,63	178.803.601,63	0,12979%
MAGNESITA	BA	CANDEIAS	FCA	9	BA, MG	FCA	DCS-DDM	93.613	4,88	456.925,05	178.803.601,63	0,25555%
MAGNESITA	BA	CANDEIAS	FCA	9	BA, MG	FCA	DDM-DPA	93.613	6,47	605.582,50	178.803.601,63	0,33869%
MAGNESITA	BA	CASTRO ALVES	FCA	9	BA, MG	FCA	DTT-DVS	93.613	10,77	1.007.743,95	178.803.601,63	0,56360%
MAGNESITA	BA	CASTRO ALVES	FCA	9	BA, MG	FCA	DVS-DVE	93.613	25,94	2.428.227,61	178.803.601,63	1,35804%
MAGNESITA	BA	CASTRO ALVES	FCA	9	BA, MG	FCA	DVE-DEM	93.613	2,58	241.802,38	178.803.601,63	0,13523%
MAGNESITA	BA	CONCEICAO DA FEIRA	FCA	9	BA, MG	FCA	D23-DQF	93.613	6,98	653.793,19	178.803.601,63	0,36565%
MAGNESITA	BA	CONCEICAO DA FEIRA	FCA	9	BA, MG	FCA	DQF-DDT	93.613	11,50	1.076.455,89	178.803.601,63	0,60203%
MAGNESITA	BA	CONTENDAS DO SINCORA	FCA	9	BA, MG	FCA	DKY-DWN	93.613	24,40	2.283.876,36	178.803.601,63	1,27731%
MAGNESITA	BA	CONTENDAS DO SINCORA	FCA	9	BA, MG	FCA	DHX-DFC	93.613	18,33	1.715.832,68	178.803.601,63	0,95962%
MAGNESITA	BA	CONTENDAS DO SINCORA	FCA	9	BA, MG	FCA	DFC-DKY	93.613	14,03	1.313.671,23	178.803.601,63	0,73470%
MAGNESITA	BA	CRUZ DAS ALMAS	FCA	9	BA, MG	FCA	DVE-DEM	93.613	7,05	659.971,65	178.803.601,63	0,36910%
MAGNESITA	BA	CRUZ DAS ALMAS	FCA	9	BA, MG	FCA	DEM-DZD	93.613	5,22	489.034,31	178.803.601,63	0,27350%
MAGNESITA	BA	IACU	FCA	9	BA, MG	FCA	DIL-DLG	93.613	39,28	3.676.650,58	178.803.601,63	2,05625%
MAGNESITA	BA	IACU	FCA	9	BA, MG	FCA	DTM-DPW	93.613	21,60	2.021.947,19	178.803.601,63	1,13082%
MAGNESITA	BA	IACU	FCA	9	BA, MG	FCA	DZA-DIL	93.613	18,10	1.694.582,53	178.803.601,63	0,94773%
MAGNESITA	BA	IACU	FCA	9	BA, MG	FCA	DLG-DTT	93.613	8,13	761.167,30	178.803.601,63	0,42570%
MAGNESITA	BA	IACU	FCA	9	BA, MG	FCA	DPW-DZA	93.613	5,63	527.134,80	178.803.601,63	0,29481%
MAGNESITA	BA	IRAMAIA	FCA	9	BA, MG	FCA	DZU-DIY	93.613	39,50	3.697.713,50	178.803.601,63	2,06803%
MAGNESITA	BA	IRAMAIA	FCA	9	BA, MG	FCA	DWN-DZU	93.613	10,67	998.476,26	178.803.601,63	0,55842%
MAGNESITA	BA	IRAMAIA	FCA	9	BA, MG	FCA	DIY-DQI	93.613	9,44	884.081,17	178.803.601,63	0,49444%
MAGNESITA	BA	ITATIM	FCA	9	BA, MG	FCA	DLG-DTT	93.613	11,22	1.050.244,25	178.803.601,63	0,58737%
MAGNESITA	BA	ITATIM	FCA	9	BA, MG	FCA	DTT-DVS	93.613	5,28	494.651,09	178.803.601,63	0,27664%
MAGNESITA	BA	ITUACU	FCA	9	BA, MG	FCA	DUV-DOV	93.613	1,42	132.836,85	178.803.601,63	0,07429%
MAGNESITA	BA	JACARACI	FCA	9	BA, MG	FCA	DKC-DPL	121.254	0,85	102.702,14	178.803.601,63	0,05744%
MAGNESITA	BA	LICINIO DE ALMEIDA	FCA	9	BA, MG	FCA	DPL-DLL	121.254	18,18	2.204.518,97	178.803.601,63	1,23293%
MAGNESITA	BA	LICINIO DE ALMEIDA	FCA	9	BA, MG	FCA	DLL-DEO	121.254	15,85	1.922.239,66	178.803.601,63	1,07506%
MAGNESITA	BA	LICINIO DE ALMEIDA	FCA	9	BA, MG	FCA	DKC-DPL	121.254	1,46	177.394,60	178.803.601,63	0,09921%
MAGNESITA	BA	LICINIO DE ALMEIDA	FCA	9	BA, MG	FCA	DEO-DUN	121.254	0,66	79.421,37	178.803.601,63	0,04442%
MAGNESITA	BA	MALHADA DE PEDRAS	FCA	9	BA, MG	FCA	DKZ-DMD	121.254	21,46	2.601.868,33	178.803.601,63	1,45515%
MAGNESITA	BA	MALHADA DE PEDRAS	FCA	9	BA, MG	FCA	DMD-DDH	121.254	3,29	399.168,17	178.803.601,63	0,22324%
MAGNESITA	BA	MARCIONILIO SOUZA	FCA	9	BA, MG	FCA	DIY-DQI	93.613	35,19	3.293.773,41	178.803.601,63	1,84212%
MAGNESITA	BA	MARCIONILIO SOUZA	FCA	9	BA, MG	FCA	DQI-DTM	93.613	28,89	2.704.105,12	178.803.601,63	1,51233%
MAGNESITA	BA	MARCIONILIO SOUZA	FCA	9	BA, MG	FCA	DTM-DPW	93.613	5,96	557.652,64	178.803.601,63	0,31188%
MAGNESITA	BA	MURITIBA	FCA	9	BA, MG	FCA	DEM-DZD	93.613	8,22	769.405,25	178.803.601,63	0,43031%
MAGNESITA	BA	MURITIBA	FCA	9	BA, MG	FCA	DVE-DEM	93.613	5,29	495.493,61	178.803.601,63	0,27712%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MAGNESITA	BA	MURITIBA	FCA	9	BA, MG	FCA	DZD-DSX	93.613	1,87	174.775,47	178.803.601,63	0,09775%
MAGNESITA	BA	RIO DO ANTONIO	FCA	9	BA, MG	FCA	DMD-DDH	121.254	24,09	2.921.372,62	178.803.601,63	1,63384%
MAGNESITA	BA	RIO DO ANTONIO	FCA	9	BA, MG	FCA	DDH-DKC	121.254	12,09	1.465.839,61	178.803.601,63	0,81980%
MAGNESITA	BA	SANTA TERESINHA	FCA	9	BA, MG	FCA	DTT-DVS	93.613	19,84	1.857.281,92	178.803.601,63	1,03873%
MAGNESITA	BA	SANTO AMARO	FCA	9	BA, MG	FCA	DGX-DWR	93.613	18,09	1.693.552,78	178.803.601,63	0,94716%
MAGNESITA	BA	SANTO AMARO	FCA	9	BA, MG	FCA	DTE-DBH	93.613	6,18	578.902,79	178.803.601,63	0,32376%
MAGNESITA	BA	SANTO AMARO	FCA	9	BA, MG	FCA	DWR-DTE	93.613	4,21	394.017,12	178.803.601,63	0,22036%
MAGNESITA	BA	SANTO AMARO	FCA	9	BA, MG	FCA	DDT-DGX	93.613	0,18	16.569,50	178.803.601,63	0,00927%
MAGNESITA	BA	SAO FELIX	FCA	9	BA, MG	FCA	DZD-DSX	93.613	3,34	312.948,26	178.803.601,63	0,17502%
MAGNESITA	BA	SAO FELIX	FCA	9	BA, MG	FCA	DEM-DZD	93.613	1,30	121.228,84	178.803.601,63	0,06780%
MAGNESITA	BA	SAO FELIX	FCA	9	BA, MG	FCA	DSX-D23	93.613	0,19	17.786,47	178.803.601,63	0,00995%
MAGNESITA	BA	SAO GONCALO DOS CAMPOS	FCA	9	BA, MG	FCA	DDT-DGX	93.613	9,41	881.272,78	178.803.601,63	0,49287%
MAGNESITA	BA	SAO GONCALO DOS CAMPOS	FCA	9	BA, MG	FCA	DQF-DDT	93.613	2,82	263.895,05	178.803.601,63	0,14759%
MAGNESITA	BA	SAO GONCALO DOS CAMPOS	FCA	9	BA, MG	FCA	DGX-DWR	93.613	1,75	163.916,36	178.803.601,63	0,09167%
MAGNESITA	BA	SAO SEBASTIAO DO PASSE	FCA	9	BA, MG	FCA	DBH-DTC	93.613	16,55	1.549.295,15	178.803.601,63	0,86648%
MAGNESITA	BA	SAO SEBASTIAO DO PASSE	FCA	9	BA, MG	FCA	DTE-DBH	93.613	0,21	19.845,96	178.803.601,63	0,01110%
MAGNESITA	BA	SAPEACU	FCA	9	BA, MG	FCA	DVE-DEM	93.613	1,45	136.113,30	178.803.601,63	0,07612%
MAGNESITA	BA	TANHACU	FCA	9	BA, MG	FCA	DHX-DFC	93.613	16,45	1.540.308,30	178.803.601,63	0,86145%
MAGNESITA	BA	TANHACU	FCA	9	BA, MG	FCA	DOV-DHX	93.613	11,53	1.079.264,28	178.803.601,63	0,60360%
MAGNESITA	BA	TANHACU	FCA	9	BA, MG	FCA	DUV-DOV	93.613	5,56	520.488,28	178.803.601,63	0,29109%
MAGNESITA	BA	URANDI	FCA	9	BA, MG	FCA	DEO-DUN	121.254	29,71	3.601.971,32	178.803.601,63	2,01448%
MAGNESITA	BA	URANDI	FCA	9	BA, MG	FCA	DUN-DEN	121.254	18,36	2.225.738,42	178.803.601,63	1,24480%
MAGNESITA	MG	ARACAI	FCA	9	BA, MG	FCA	EAI-ESX	121.254	17,61	2.134.919,18	178.803.601,63	1,19400%
MAGNESITA	MG	ARACAI	FCA	9	BA, MG	FCA	EOR-EAI	121.254	5,02	608.452,57	178.803.601,63	0,34029%
MAGNESITA	MG	AUGUSTO DE LIMA	FCA	9	BA, MG	FCA	EAL-EAA	121.254	19,61	2.377.305,92	178.803.601,63	1,32956%
MAGNESITA	MG	AUGUSTO DE LIMA	FCA	9	BA, MG	FCA	EBL-EAL	121.254	18,48	2.240.410,16	178.803.601,63	1,25300%
MAGNESITA	MG	BELO HORIZONTE	FCA	9	BA, MG	FCA	ECE-VWI	121.254	7,04	853.264,40	178.803.601,63	0,47721%
MAGNESITA	MG	BELO HORIZONTE	FCA	9	BA, MG	FCA	OCR-EHF	121.254	4,12	499.808,99	178.803.601,63	0,27953%
MAGNESITA	MG	BELO HORIZONTE	FCA	9	BA, MG	FCA	EHF-EBH	121.254	2,86	347.028,95	178.803.601,63	0,19408%
MAGNESITA	MG	BELO HORIZONTE	FCA	9	BA, MG	FCA	EBH-ECL	121.254	6,47	784.755,89	178.803.601,63	0,43889%
MAGNESITA	MG	BELO HORIZONTE	FCA	9	BA, MG	FCA	ECL-EEL	121.254	6,84	828.892,34	178.803.601,63	0,46358%
MAGNESITA	MG	BOCAIUVA	FCA	9	BA, MG	FCA	EGL-EEA	121.254	14,82	1.797.105,53	178.803.601,63	1,00507%
MAGNESITA	MG	BOCAIUVA	FCA	9	BA, MG	FCA	EEA-EBV	121.254	25,16	3.050.871,89	178.803.601,63	1,70627%
MAGNESITA	MG	BOCAIUVA	FCA	9	BA, MG	FCA	EBV-EEN	121.254	18,85	2.286.001,66	178.803.601,63	1,27850%
MAGNESITA	MG	BOCAIUVA	FCA	9	BA, MG	FCA	EEN-EEO	121.254	12,39	1.502.822,08	178.803.601,63	0,84049%
MAGNESITA	MG	BOCAIUVA	FCA	9	BA, MG	FCA	EEO-EBP	121.254	3,18	385.830,23	178.803.601,63	0,21578%
MAGNESITA	MG	BUENOPOLIS	FCA	9	BA, MG	FCA	EBL-EAL	121.254	13,26	1.608.070,55	178.803.601,63	0,89935%
MAGNESITA	MG	BUENOPOLIS	FCA	9	BA, MG	FCA	EJF-EBL	121.254	7,64	926.501,81	178.803.601,63	0,51817%
MAGNESITA	MG	CAPITAO ENEAS	FCA	9	BA, MG	FCA	EJN-EEM	121.254	2,88	348.969,01	178.803.601,63	0,19517%
MAGNESITA	MG	CAPITAO ENEAS	FCA	9	BA, MG	FCA	EEM-EON	121.254	20,73	2.513.959,18	178.803.601,63	1,40599%
MAGNESITA	MG	CAPITAO ENEAS	FCA	9	BA, MG	FCA	EON-EEZ	121.254	20,48	2.483.160,67	178.803.601,63	1,38876%
MAGNESITA	MG	CAPITAO ENEAS	FCA	9	BA, MG	FCA	EEZ-ENA	121.254	11,71	1.420.369,36	178.803.601,63	0,79437%
MAGNESITA	MG	CATUTI	FCA	9	BA, MG	FCA	EMA-EEW	121.254	2,28	276.822,88	178.803.601,63	0,15482%
MAGNESITA	MG	CATUTI	FCA	9	BA, MG	FCA	EEW-EYP	121.254	2,03	246.388,13	178.803.601,63	0,13780%
MAGNESITA	MG	CONTAGEM	FCA	9	BA, MG	FCA	ECL-EEL	121.254	0,70	84.392,78	178.803.601,63	0,04720%
MAGNESITA	MG	CONTAGEM	FCA	9	BA, MG	FCA	EEL-EPI	121.254	1,26	152.295,02	178.803.601,63	0,08517%
MAGNESITA	MG	CORDISBURGO	FCA	9	BA, MG	FCA	EOR-EAI	121.254	10,09	1.223.695,37	178.803.601,63	0,68438%
MAGNESITA	MG	CORDISBURGO	FCA	9	BA, MG	FCA	EMX-EOR	121.254	9,62	1.166.827,24	178.803.601,63	0,65257%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MAGNESITA	MG	CORINTO	FCA	9	BA, MG	FCA	EAL-EAA	121.254	8,19	992.706,50	178.803.601,63	0,55519%
MAGNESITA	MG	CORINTO	FCA	9	BA, MG	FCA	EAA-ECO	121.254	13,49	1.635.473,95	178.803.601,63	0,91468%
MAGNESITA	MG	CORINTO	FCA	9	BA, MG	FCA	ECO-EOA	121.254	23,53	2.853.106,62	178.803.601,63	1,59567%
MAGNESITA	MG	CORINTO	FCA	9	BA, MG	FCA	EOA-ECV	121.254	1,92	233.292,70	178.803.601,63	0,13047%
MAGNESITA	MG	CURVELO	FCA	9	BA, MG	FCA	ECO-EOA	121.254	2,95	357.820,55	178.803.601,63	0,20012%
MAGNESITA	MG	CURVELO	FCA	9	BA, MG	FCA	EOA-ECV	121.254	31,36	3.802.404,19	178.803.601,63	2,12658%
MAGNESITA	MG	CURVELO	FCA	9	BA, MG	FCA	ECV-EMX	121.254	7,02	851.081,83	178.803.601,63	0,47599%
MAGNESITA	MG	CURVELO	FCA	9	BA, MG	FCA	EMX-EOR	121.254	34,07	4.131.002,53	178.803.601,63	2,31036%
MAGNESITA	MG	ENGENHEIRO NAVARRO	FCA	9	BA, MG	FCA	EBV-EEN	121.254	11,39	1.380.476,79	178.803.601,63	0,77206%
MAGNESITA	MG	ENGENHEIRO NAVARRO	FCA	9	BA, MG	FCA	EEN-EEO	121.254	13,55	1.642.627,94	178.803.601,63	0,91868%
MAGNESITA	MG	ESPINOSA	FCA	9	BA, MG	FCA	DUN-DEN	121.254	8,93	1.082.676,97	178.803.601,63	0,60551%
MAGNESITA	MG	ESPINOSA	FCA	9	BA, MG	FCA	DEN-DMN	121.254	16,97	2.058.165,40	178.803.601,63	1,15108%
MAGNESITA	MG	ESPINOSA	FCA	9	BA, MG	FCA	DMN-EMA	121.254	0,62	75.541,24	178.803.601,63	0,04225%
MAGNESITA	MG	FRANCISCO SA	FCA	9	BA, MG	FCA	EEZ-ENA	121.254	24,83	3.010.251,80	178.803.601,63	1,68355%
MAGNESITA	MG	FRANCISCO SA	FCA	9	BA, MG	FCA	ENA-EMC	121.254	0,54	65.598,41	178.803.601,63	0,03669%
MAGNESITA	MG	GLAUCILANDIA	FCA	9	BA, MG	FCA	EMC-EGL	121.254	0,24	29.464,72	178.803.601,63	0,01648%
MAGNESITA	MG	GLAUCILANDIA	FCA	9	BA, MG	FCA	EGL-EEA	121.254	0,04	5.335,18	178.803.601,63	0,00298%
MAGNESITA	MG	JANAUBA	FCA	9	BA, MG	FCA	EJN-EEM	121.254	39,41	4.779.105,16	178.803.601,63	2,67282%
MAGNESITA	MG	JANAUBA	FCA	9	BA, MG	FCA	ETO-EJN	121.254	2,08	252.208,32	178.803.601,63	0,14105%
MAGNESITA	MG	JOAQUIM FELICIO	FCA	9	BA, MG	FCA	EBP-EKT	121.254	16,70	2.025.063,05	178.803.601,63	1,13256%
MAGNESITA	MG	JOAQUIM FELICIO	FCA	9	BA, MG	FCA	EKT-EJF	121.254	16,29	1.975.348,91	178.803.601,63	1,10476%
MAGNESITA	MG	JOAQUIM FELICIO	FCA	9	BA, MG	FCA	EJF-EBL	121.254	8,72	1.056.971,12	178.803.601,63	0,59114%
MAGNESITA	MG	JOAQUIM FELICIO	FCA	9	BA, MG	FCA	EEO-EBP	121.254	7,96	964.818,08	178.803.601,63	0,53960%
MAGNESITA	MG	MATO VERDE	FCA	9	BA, MG	FCA	EEW-EYP	121.254	4,60	557.768,40	178.803.601,63	0,31194%
MAGNESITA	MG	MATO VERDE	FCA	9	BA, MG	FCA	EMA-EEW	121.254	2,05	248.691,95	178.803.601,63	0,13909%
MAGNESITA	MG	MATOZINHOS	FCA	9	BA, MG	FCA	EMS-EWL	121.254	4,42	535.578,92	178.803.601,63	0,29953%
MAGNESITA	MG	MATOZINHOS	FCA	9	BA, MG	FCA	EPM-EMS	121.254	5,04	611.241,41	178.803.601,63	0,34185%
MAGNESITA	MG	MATOZINHOS	FCA	9	BA, MG	FCA	EWL-EPL	121.254	0,23	27.282,15	178.803.601,63	0,01526%
MAGNESITA	MG	MONTE AZUL	FCA	9	BA, MG	FCA	DMN-EMA	121.254	23,58	2.859.533,08	178.803.601,63	1,59926%
MAGNESITA	MG	MONTE AZUL	FCA	9	BA, MG	FCA	EMA-EEW	121.254	20,66	2.504.501,37	178.803.601,63	1,40070%
MAGNESITA	MG	MONTES CLAROS	FCA	9	BA, MG	FCA	EMC-EGL	121.254	28,73	3.483.142,40	178.803.601,63	1,94803%
MAGNESITA	MG	MONTES CLAROS	FCA	9	BA, MG	FCA	ENA-EMC	121.254	23,29	2.824.126,91	178.803.601,63	1,57946%
MAGNESITA	MG	MONTES CLAROS	FCA	9	BA, MG	FCA	EGL-EEA	121.254	1,89	229.412,57	178.803.601,63	0,12830%
MAGNESITA	MG	NOVA PORTEIRINHA	FCA	9	BA, MG	FCA	ETO-EJN	121.254	13,16	1.596.187,66	178.803.601,63	0,89270%
MAGNESITA	MG	PAI PEDRO	FCA	9	BA, MG	FCA	EEW-EYP	121.254	15,72	1.906.476,64	178.803.601,63	1,06624%
MAGNESITA	MG	PAI PEDRO	FCA	9	BA, MG	FCA	EYP-ETO	121.254	10,56	1.279.957,22	178.803.601,63	0,71585%
MAGNESITA	MG	PEDRO LEOPOLDO	FCA	9	BA, MG	FCA	EWL-EPL	121.254	5,39	653.316,55	178.803.601,63	0,36538%
MAGNESITA	MG	PEDRO LEOPOLDO	FCA	9	BA, MG	FCA	EPL-ELD	121.254	5,04	610.756,40	178.803.601,63	0,34158%
MAGNESITA	MG	PEDRO LEOPOLDO	FCA	9	BA, MG	FCA	ELD-ENG	121.254	1,00	120.768,98	178.803.601,63	0,06754%
MAGNESITA	MG	PORTEIRINHA	FCA	9	BA, MG	FCA	ETO-EJN	121.254	10,57	1.281.897,29	178.803.601,63	0,71693%
MAGNESITA	MG	PORTEIRINHA	FCA	9	BA, MG	FCA	EYP-ETO	121.254	8,58	1.040.238,07	178.803.601,63	0,58178%
MAGNESITA	MG	PRUDENTE DE MORAIS	FCA	9	BA, MG	FCA	EPM-EMS	121.254	6,64	804.884,05	178.803.601,63	0,45015%
MAGNESITA	MG	PRUDENTE DE MORAIS	FCA	9	BA, MG	FCA	ESL-EPM	121.254	0,99	120.162,71	178.803.601,63	0,06720%
MAGNESITA	MG	SABARA	FCA	9	BA, MG	FCA	ECE-VWI	121.254	1,92	232.686,43	178.803.601,63	0,13014%
MAGNESITA	MG	SABARA	FCA	9	BA, MG	FCA	OCR-EHF	121.254	4,13	501.021,53	178.803.601,63	0,28021%
MAGNESITA	MG	SABARA	FCA	9	BA, MG	FCA	VWI-EGC	121.254	1,27	153.507,56	178.803.601,63	0,08585%
MAGNESITA	MG	SABARA	FCA	9	BA, MG	FCA	EGC-OCR	121.254	1,08	130.590,56	178.803.601,63	0,07304%
MAGNESITA	MG	SANTA LUZIA	FCA	9	BA, MG	FCA	ECE-VWI	121.254	1,04	125.982,91	178.803.601,63	0,07046%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MAGNESITA	MG	SANTA LUZIA	FCA	9	BA, MG	FCA	ECA-ECE	121.254	8,80	1.067.277,71	178.803.601,63	0,59690%
MAGNESITA	MG	SANTA LUZIA	FCA	9	BA, MG	FCA	ERE-ECA	121.254	6,40	776.268,11	178.803.601,63	0,43415%
MAGNESITA	MG	SANTA LUZIA	FCA	9	BA, MG	FCA	EVP-ERE	121.254	1,60	193.521,38	178.803.601,63	0,10823%
MAGNESITA	MG	SAO JOSE DA LAPA	FCA	9	BA, MG	FCA	ELD-ENG	121.254	7,95	963.848,05	178.803.601,63	0,53905%
MAGNESITA	MG	SAO JOSE DA LAPA	FCA	9	BA, MG	FCA	ENG-EVP	121.254	0,87	105.248,47	178.803.601,63	0,05886%
MAGNESITA	MG	SETE LAGOAS	FCA	9	BA, MG	FCA	ESX-ESL	121.254	17,19	2.084.841,28	178.803.601,63	1,16600%
MAGNESITA	MG	SETE LAGOAS	FCA	9	BA, MG	FCA	ESL-EPM	121.254	7,45	903.706,06	178.803.601,63	0,50542%
MAGNESITA	MG	SETE LAGOAS	FCA	9	BA, MG	FCA	EAI-ESX	121.254	5,67	687.995,20	178.803.601,63	0,38478%
MAGNESITA	MG	VESPASIANO	FCA	9	BA, MG	FCA	ENG-EVP	121.254	4,03	488.896,13	178.803.601,63	0,27343%
MAGNESITA	MG	VESPASIANO	FCA	9	BA, MG	FCA	EVP-ERE	121.254	3,51	425.601,54	178.803.601,63	0,23803%
MINÉRIO DE ALUMÍNIO	DF	BRASILIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EBZ-EJK	949.189	13,44	12.752.354,22	1.607.373.265,22	0,79337%
MINÉRIO DE ALUMÍNIO	DF	BRASILIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EJK-EJI	949.189	29,69	28.184.268,98	1.607.373.265,22	1,75344%
MINÉRIO DE ALUMÍNIO	GO	CATALAO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EVV-EGN	949.189	3,42	3.242.429,62	1.607.373.265,22	0,20172%
MINÉRIO DE ALUMÍNIO	GO	CUMARI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EYG-EYH	949.189	14,67	13.919.856,69	1.607.373.265,22	0,86600%
MINÉRIO DE ALUMÍNIO	GO	CUMARI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EGN-EYG	949.189	10,23	9.712.101,85	1.607.373.265,22	0,60422%
MINÉRIO DE ALUMÍNIO	GO	GOIANDIRA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EBW-EYG	949.189	12,06	11.448.168,53	1.607.373.265,22	0,71223%
MINÉRIO DE ALUMÍNIO	GO	GOIANDIRA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EVV-EGN	949.189	19,12	18.152.290,44	1.607.373.265,22	1,12931%
MINÉRIO DE ALUMÍNIO	GO	IPAMERI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EPO-EVV	949.189	19,77	18.769.263,29	1.607.373.265,22	1,16770%
MINÉRIO DE ALUMÍNIO	GO	IPAMERI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ENJ-EPO	949.189	12,39	11.756.654,95	1.607.373.265,22	0,73142%
MINÉRIO DE ALUMÍNIO	GO	IPAMERI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EPZ-ENJ	949.189	7,26	6.888.264,57	1.607.373.265,22	0,42854%
MINÉRIO DE ALUMÍNIO	GO	IPAMERI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EVV-EGN	949.189	5,87	5.573.637,81	1.607.373.265,22	0,34675%
MINÉRIO DE ALUMÍNIO	GO	LUZIANIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EJI-EBW	949.189	60,97	57.868.256,57	1.607.373.265,22	3,60018%
MINÉRIO DE ALUMÍNIO	GO	LUZIANIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EBW-EYZ	949.189	38,19	36.245.731,15	1.607.373.265,22	2,25497%
MINÉRIO DE ALUMÍNIO	GO	LUZIANIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EYZ-EBU	949.189	26,43	25.082.319,33	1.607.373.265,22	1,56045%
MINÉRIO DE ALUMÍNIO	GO	LUZIANIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EJK-EJI	949.189	3,11	2.954.825,36	1.607.373.265,22	0,18383%
MINÉRIO DE ALUMÍNIO	GO	ORIZONA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EBU-EPZ	949.189	46,64	44.271.124,15	1.607.373.265,22	2,75425%
MINÉRIO DE ALUMÍNIO	GO	ORIZONA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EYZ-EBU	949.189	5,35	5.080.059,53	1.607.373.265,22	0,31605%
MINÉRIO DE ALUMÍNIO	GO	PIRES DO RIO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EBU-EPZ	949.189	8,84	8.389.881,57	1.607.373.265,22	0,52196%
MINÉRIO DE ALUMÍNIO	GO	PIRES DO RIO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EPZ-ENJ	949.189	1,27	1.209.266,79	1.607.373.265,22	0,07523%
MINÉRIO DE ALUMÍNIO	GO	URUTAI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EPZ-ENJ	949.189	26,71	25.348.092,25	1.607.373.265,22	1,57699%
MINÉRIO DE ALUMÍNIO	GO	VALPARAISO DE GOIAS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EJK-EJI	949.189	12,75	12.104.058,13	1.607.373.265,22	0,75303%
MINÉRIO DE ALUMÍNIO	MG	ARAGUARI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EAU-ZHF	949.189	22,06	20.937.210,96	1.607.373.265,22	1,30257%
MINÉRIO DE ALUMÍNIO	MG	ARAGUARI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EYH-EAU	949.189	20,20	19.174.566,99	1.607.373.265,22	1,19291%
MINÉRIO DE ALUMÍNIO	MG	ARAGUARI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	EYG-EYH	949.189	13,26	12.583.398,57	1.607.373.265,22	0,78285%
MINÉRIO DE ALUMÍNIO	MG	ARAGUARI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHF-ZUL	949.189	2,73	2.588.438,40	1.607.373.265,22	0,16104%
MINÉRIO DE ALUMÍNIO	MG	POCOS DE CALDAS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZBA-ZAQ	319.668	5,71	1.825.943,62	1.607.373.265,22	0,11360%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZZB-ZXJ	949.189	34,97	33.195.986,90	1.607.373.265,22	2,06523%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZXJ-ZMN	949.189	19,27	18.288.973,65	1.607.373.265,22	1,13782%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZUB-ZQQ	949.189	16,46	15.625.549,32	1.607.373.265,22	0,97212%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZQQ-ZVF	949.189	14,87	14.113.491,24	1.607.373.265,22	0,87805%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZYE-ZZB	949.189	10,79	10.237.003,37	1.607.373.265,22	0,63688%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVF-ZWA	949.189	8,26	7.839.351,95	1.607.373.265,22	0,48771%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHU-ZYE	949.189	1,58	1.496.871,05	1.607.373.265,22	0,09313%
MINÉRIO DE ALUMÍNIO	MG	UBERABA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZMN-ZXX	949.189	20,01	18.994.695,67	1.607.373.265,22	1,18172%
MINÉRIO DE ALUMÍNIO	MG	UBERLANDIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZUL-ZHU	949.189	21,35	20.260.439,21	1.607.373.265,22	1,26047%
MINÉRIO DE ALUMÍNIO	MG	UBERLANDIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHF-ZUL	949.189	21,92	20.802.426,12	1.607.373.265,22	1,29419%
MINÉRIO DE ALUMÍNIO	MG	UBERLANDIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHU-ZYE	949.189	20,36	19.320.742,10	1.607.373.265,22	1,20201%
MINÉRIO DE ALUMÍNIO	RJ	BARRA DO PIRAI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FWB-FVA	645.834	5,58	3.605.691,22	1.607.373.265,22	0,22432%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	RJ	BARRA DO PIRAI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPU-FWB	645.834	5,52	3.566.295,35	1.607.373.265,22	0,22187%
MINÉRIO DE ALUMÍNIO	RJ	BARRA DO PIRAI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FBP-FPU	645.834	2,52	1.625.564,18	1.607.373.265,22	0,10113%
MINÉRIO DE ALUMÍNIO	RJ	BARRA DO PIRAI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FVA-FPL	645.834	1,53	990.063,52	1.607.373.265,22	0,06160%
MINÉRIO DE ALUMÍNIO	RJ	BARRA DO PIRAI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAT-FDQ	645.834	3,24	2.092.502,16	1.607.373.265,22	0,13018%
MINÉRIO DE ALUMÍNIO	RJ	BARRA DO PIRAI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FDQ-FBP	645.834	2,77	1.787.022,68	1.607.373.265,22	0,11118%
MINÉRIO DE ALUMÍNIO	RJ	BARRA MANSA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FBB-FBM	645.834	3,93	2.536.190,12	1.607.373.265,22	0,15778%
MINÉRIO DE ALUMÍNIO	RJ	BARRA MANSA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FBM-FSE	645.834	2,39	1.543.543,26	1.607.373.265,22	0,09603%
MINÉRIO DE ALUMÍNIO	RJ	BARRA MANSA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FIV-FBB	645.834	0,43	280.291,96	1.607.373.265,22	0,01744%
MINÉRIO DE ALUMÍNIO	RJ	BARRA MANSA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPB-FFL	645.834	7,91	5.109.192,77	1.607.373.265,22	0,31786%
MINÉRIO DE ALUMÍNIO	RJ	BARRA MANSA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FSE-FPB	645.834	7,02	4.531.171,34	1.607.373.265,22	0,28190%
MINÉRIO DE ALUMÍNIO	RJ	BARRA MANSA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FFL-FAN	645.834	0,51	328.083,67	1.607.373.265,22	0,02041%
MINÉRIO DE ALUMÍNIO	RJ	ITATIAIA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FIA-FEP	645.834	5,95	3.844.003,97	1.607.373.265,22	0,23915%
MINÉRIO DE ALUMÍNIO	RJ	ITATIAIA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	645.834	4,67	3.015.980,20	1.607.373.265,22	0,18763%
MINÉRIO DE ALUMÍNIO	RJ	ITATIAIA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	645.834	4,67	3.015.980,20	1.607.373.265,22	0,18763%
MINÉRIO DE ALUMÍNIO	RJ	ITATIAIA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FMU-FIA	645.834	3,51	2.266.115,26	1.607.373.265,22	0,14098%
MINÉRIO DE ALUMÍNIO	RJ	ITATIAIA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	645.834	4,67	3.015.980,20	1.607.373.265,22	0,18763%
MINÉRIO DE ALUMÍNIO	RJ	PARAIBA DO SUL	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPS-FVC	645.834	8,11	5.237.067,91	1.607.373.265,22	0,32582%
MINÉRIO DE ALUMÍNIO	RJ	PARAIBA DO SUL	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FVC-FAP	645.834	5,37	3.468.128,58	1.607.373.265,22	0,21576%
MINÉRIO DE ALUMÍNIO	RJ	PARAIBA DO SUL	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FBN-FPS	645.834	5,31	3.426.149,37	1.607.373.265,22	0,21315%
MINÉRIO DE ALUMÍNIO	RJ	PINHEIRAL	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FVA-FPL	645.834	6,58	4.246.358,55	1.607.373.265,22	0,26418%
MINÉRIO DE ALUMÍNIO	RJ	PINHEIRAL	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPL-FRK	645.834	5,29	3.416.461,86	1.607.373.265,22	0,21255%
MINÉRIO DE ALUMÍNIO	RJ	PORTO REAL	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FFL-FAN	645.834	7,32	4.728.150,71	1.607.373.265,22	0,29415%
MINÉRIO DE ALUMÍNIO	RJ	RESENDE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FFL-FAN	645.834	8,08	5.220.922,06	1.607.373.265,22	0,32481%
MINÉRIO DE ALUMÍNIO	RJ	RESENDE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FIA-FEP	645.834	6,41	4.136.566,77	1.607.373.265,22	0,25735%
MINÉRIO DE ALUMÍNIO	RJ	RESENDE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FEP-FQU	645.834	2,58	1.664.960,05	1.607.373.265,22	0,10358%
MINÉRIO DE ALUMÍNIO	RJ	RESENDE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	645.834	3,99	2.574.404,12	1.607.373.265,22	0,16016%
MINÉRIO DE ALUMÍNIO	RJ	RESENDE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	645.834	3,99	2.574.404,12	1.607.373.265,22	0,16016%
MINÉRIO DE ALUMÍNIO	RJ	RESENDE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAN-FMU	645.834	3,99	2.574.404,12	1.607.373.265,22	0,16016%
MINÉRIO DE ALUMÍNIO	RJ	RIO DAS FLORES	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAI-FBL	645.834	0,57	364.896,21	1.607.373.265,22	0,02270%
MINÉRIO DE ALUMÍNIO	RJ	VALENCA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FBJ-FVS	645.834	2,74	1.767.647,66	1.607.373.265,22	0,10997%
MINÉRIO DE ALUMÍNIO	RJ	VALENCA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FBL-FBJ	645.834	2,58	1.666.251,72	1.607.373.265,22	0,10366%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FBL-FBJ	645.834	11,89	7.676.382,92	1.607.373.265,22	0,47757%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAI-FBL	645.834	7,80	5.034.276,03	1.607.373.265,22	0,31320%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FDR-FAT	645.834	7,34	4.741.067,39	1.607.373.265,22	0,29496%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FVS-FDR	645.834	7,10	4.585.421,40	1.607.373.265,22	0,28527%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FSL-FAI	645.834	4,75	3.066.419,83	1.607.373.265,22	0,19077%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAP-FNY	645.834	4,25	2.746.086,17	1.607.373.265,22	0,17084%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FVC-FAP	645.834	3,28	2.116.398,02	1.607.373.265,22	0,13167%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FNY-FNC	645.834	2,76	1.781.210,17	1.607.373.265,22	0,11081%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FNC-FSL	645.834	2,73	1.763.772,65	1.607.373.265,22	0,10973%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FBJ-FVS	645.834	1,36	875.750,90	1.607.373.265,22	0,05448%
MINÉRIO DE ALUMÍNIO	RJ	VASSOURAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAT-FDQ	645.834	0,10	62.645,90	1.607.373.265,22	0,00390%
MINÉRIO DE ALUMÍNIO	RJ	VOLTA REDONDA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FRK-FVR	645.834	6,76	4.363.900,34	1.607.373.265,22	0,27149%
MINÉRIO DE ALUMÍNIO	RJ	VOLTA REDONDA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FVR-FIV	645.834	3,19	2.058.272,96	1.607.373.265,22	0,12805%
MINÉRIO DE ALUMÍNIO	RJ	VOLTA REDONDA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPL-FRK	645.834	2,79	1.803.168,53	1.607.373.265,22	0,11218%
MINÉRIO DE ALUMÍNIO	RJ	VOLTA REDONDA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FIV-FBB	645.834	1,40	901.584,26	1.607.373.265,22	0,05609%
MINÉRIO DE ALUMÍNIO	SP	AGUAI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZAI-ZMQ	1.268.857	10,86	13.779.787,02	1.607.373.265,22	0,85729%
MINÉRIO DE ALUMÍNIO	SP	AGUAI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZON-ZAI	949.189	10,87	10.321.481,19	1.607.373.265,22	0,64213%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	SP	AGUAI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHV-ZAI	319.668	10,44	3.337.973,26	1.607.373.265,22	0,20767%
MINÉRIO DE ALUMÍNIO	SP	AGUAS DA PRATA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZBA-ZAQ	319.668	17,17	5.487.740,56	1.607.373.265,22	0,34141%
MINÉRIO DE ALUMÍNIO	SP	AGUAS DA PRATA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZAQ-ZHV	319.668	2,01	642.532,68	1.607.373.265,22	0,03997%
MINÉRIO DE ALUMÍNIO	SP	ALUMINIO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	1.268.857	3,68	4.674.469,19	1.607.373.265,22	0,29081%
MINÉRIO DE ALUMÍNIO	SP	ALUMINIO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	1.268.857	0,47	597.631,65	1.607.373.265,22	0,03718%
MINÉRIO DE ALUMÍNIO	SP	ALUMINIO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	645.834	3,68	2.379.252,46	1.607.373.265,22	0,14802%
MINÉRIO DE ALUMÍNIO	SP	ALUMINIO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	645.834	0,47	304.187,81	1.607.373.265,22	0,01892%
MINÉRIO DE ALUMÍNIO	SP	APARECIDA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	645.834	5,88	3.794.274,75	1.607.373.265,22	0,23605%
MINÉRIO DE ALUMÍNIO	SP	APARECIDA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	645.834	1,88	1.212.876,25	1.607.373.265,22	0,07546%
MINÉRIO DE ALUMÍNIO	SP	ARAMINA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZWA-ZYW	949.189	13,82	13.115.893,60	1.607.373.265,22	0,81598%
MINÉRIO DE ALUMÍNIO	SP	ARAMINA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVF-ZWA	949.189	0,09	85.427,01	1.607.373.265,22	0,00531%
MINÉRIO DE ALUMÍNIO	SP	CACAPAVA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	645.834	7,86	5.076.901,07	1.607.373.265,22	0,31585%
MINÉRIO DE ALUMÍNIO	SP	CACAPAVA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	645.834	6,84	4.420.087,90	1.607.373.265,22	0,27499%
MINÉRIO DE ALUMÍNIO	SP	CACHOEIRA PAULISTA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	645.834	3,27	2.112.523,01	1.607.373.265,22	0,13143%
MINÉRIO DE ALUMÍNIO	SP	CACHOEIRA PAULISTA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	645.834	4,36	2.818.419,58	1.607.373.265,22	0,17534%
MINÉRIO DE ALUMÍNIO	SP	CAIEIRAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	IPE-OCI	645.834	2,31	1.493.168,21	1.607.373.265,22	0,09289%
MINÉRIO DE ALUMÍNIO	SP	CAIEIRAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OCI-OFR	645.834	1,71	1.103.084,47	1.607.373.265,22	0,06863%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZOP-ZBL	1.268.857	7,83	9.940.225,74	1.607.373.265,22	0,61841%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZBL-ZQB	1.268.857	3,63	4.604.682,05	1.607.373.265,22	0,28647%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZQB-ZDS	1.268.857	8,36	10.606.375,66	1.607.373.265,22	0,65986%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZDS-ZVK	1.268.857	4,88	6.194.559,87	1.607.373.265,22	0,38538%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	1.268.857	2,29	2.900.607,10	1.607.373.265,22	0,18046%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZBL-ZQB	645.834	3,63	2.343.731,59	1.607.373.265,22	0,14581%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZQB-ZDS	645.834	8,36	5.398.526,41	1.607.373.265,22	0,33586%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZDS-ZVK	645.834	4,88	3.152.961,59	1.607.373.265,22	0,19616%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	645.834	2,29	1.476.376,52	1.607.373.265,22	0,09185%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVH-ZSX	645.834	4,91	3.172.336,61	1.607.373.265,22	0,19736%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZSX-ZCP	645.834	3,70	2.388.939,97	1.607.373.265,22	0,14862%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZCP-Z51	645.834	7,57	4.891.546,72	1.607.373.265,22	0,30432%
MINÉRIO DE ALUMÍNIO	SP	CAMPINAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	Z51-ZBL	645.834	1,54	997.167,70	1.607.373.265,22	0,06204%
MINÉRIO DE ALUMÍNIO	SP	CAMPO LIMPO PAULISTA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OFM-OCL	645.834	6,64	4.285.754,42	1.607.373.265,22	0,26663%
MINÉRIO DE ALUMÍNIO	SP	CAMPO LIMPO PAULISTA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OCL-OVP	645.834	2,59	1.669.480,89	1.607.373.265,22	0,10386%
MINÉRIO DE ALUMÍNIO	SP	CANAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	645.834	5,89	3.802.670,59	1.607.373.265,22	0,23658%
MINÉRIO DE ALUMÍNIO	SP	CASA BRANCA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZON-ZAI	949.189	4,95	4.697.536,36	1.607.373.265,22	0,29225%
MINÉRIO DE ALUMÍNIO	SP	CASA BRANCA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZTD-ZKB	949.189	8,06	7.645.717,40	1.607.373.265,22	0,47567%
MINÉRIO DE ALUMÍNIO	SP	CASA BRANCA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZKB-ZCB	949.189	12,59	11.951.238,70	1.607.373.265,22	0,74353%
MINÉRIO DE ALUMÍNIO	SP	CASA BRANCA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZCB-ZLB	949.189	18,15	17.223.034,41	1.607.373.265,22	1,07150%
MINÉRIO DE ALUMÍNIO	SP	CASA BRANCA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZLB-ZON	949.189	9,51	9.024.889,01	1.607.373.265,22	0,56147%
MINÉRIO DE ALUMÍNIO	SP	CRAVINHOS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZEG-ZEK	949.189	5,67	5.380.952,44	1.607.373.265,22	0,33477%
MINÉRIO DE ALUMÍNIO	SP	CRAVINHOS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZEK-ZCE	949.189	7,95	7.549.849,31	1.607.373.265,22	0,46970%
MINÉRIO DE ALUMÍNIO	SP	CRUZEIRO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FCZ-FCP	645.834	7,83	5.058.171,89	1.607.373.265,22	0,31469%
MINÉRIO DE ALUMÍNIO	SP	CRUZEIRO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FVQ-FCZ	645.834	4,55	2.936.607,20	1.607.373.265,22	0,18270%
MINÉRIO DE ALUMÍNIO	SP	ESTIVA GERBI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZMQ-ZEA	1.268.857	9,78	12.413.228,03	1.607.373.265,22	0,77227%
MINÉRIO DE ALUMÍNIO	SP	ESTIVA GERBI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZEA-ZMG	1.268.857	2,67	3.386.579,33	1.607.373.265,22	0,21069%
MINÉRIO DE ALUMÍNIO	SP	FRANCISCO MORATO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OFM-OCL	645.834	3,82	2.469.023,38	1.607.373.265,22	0,15361%
MINÉRIO DE ALUMÍNIO	SP	FRANCISCO MORATO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OBA-OFM	645.834	2,00	1.292.959,67	1.607.373.265,22	0,08044%
MINÉRIO DE ALUMÍNIO	SP	FRANCISCO MORATO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OFR-OBA	645.834	0,82	527.646,38	1.607.373.265,22	0,03283%
MINÉRIO DE ALUMÍNIO	SP	FRANCO DA ROCHA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OCI-OFR	645.834	3,68	2.376.669,12	1.607.373.265,22	0,14786%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	SP	FRANCO DA ROCHA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OFR-OBA	645.834	3,25	2.101.543,84	1.607.373.265,22	0,13074%
MINÉRIO DE ALUMÍNIO	SP	GUARA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZGU-ZHB	949.189	8,02	7.608.699,02	1.607.373.265,22	0,47336%
MINÉRIO DE ALUMÍNIO	SP	GUARACAI	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZYW-ZGU	949.189	6,96	6.603.507,87	1.607.373.265,22	0,41083%
MINÉRIO DE ALUMÍNIO	SP	GUARAREMA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	645.834	9,78	6.316.256,52	1.607.373.265,22	0,39296%
MINÉRIO DE ALUMÍNIO	SP	GUARATINGUETA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FEN-FGU	645.834	5,06	3.267.274,21	1.607.373.265,22	0,20327%
MINÉRIO DE ALUMÍNIO	SP	GUARATINGUETA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FGU-FAD	645.834	2,93	1.891.647,79	1.607.373.265,22	0,11769%
MINÉRIO DE ALUMÍNIO	SP	GUARATINGUETA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	645.834	2,26	1.461.522,34	1.607.373.265,22	0,09093%
MINÉRIO DE ALUMÍNIO	SP	IGARAPAVA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVF-ZWA	949.189	1,44	1.362.086,22	1.607.373.265,22	0,08474%
MINÉRIO DE ALUMÍNIO	SP	INDAIATUBA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	1.268.857	9,63	12.221.630,62	1.607.373.265,22	0,76035%
MINÉRIO DE ALUMÍNIO	SP	INDAIATUBA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	1.268.857	5,63	7.147.471,48	1.607.373.265,22	0,44467%
MINÉRIO DE ALUMÍNIO	SP	INDAIATUBA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZIC-ZXI	1.268.857	4,14	5.251.799,12	1.607.373.265,22	0,32673%
MINÉRIO DE ALUMÍNIO	SP	INDAIATUBA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVK-ZIC	645.834	9,63	6.220.673,09	1.607.373.265,22	0,38701%
MINÉRIO DE ALUMÍNIO	SP	INDAIATUBA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	645.834	5,63	3.637.982,92	1.607.373.265,22	0,22633%
MINÉRIO DE ALUMÍNIO	SP	INDAIATUBA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZIC-ZXI	645.834	4,14	2.673.106,93	1.607.373.265,22	0,16630%
MINÉRIO DE ALUMÍNIO	SP	ITAQUAQUECETUBA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPI-IEF	645.834	6,88	4.441.400,42	1.607.373.265,22	0,27631%
MINÉRIO DE ALUMÍNIO	SP	ITAQUAQUECETUBA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	645.834	3,90	2.520.690,10	1.607.373.265,22	0,15682%
MINÉRIO DE ALUMÍNIO	SP	ITAQUAQUECETUBA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	645.834	1,32	855.084,22	1.607.373.265,22	0,05320%
MINÉRIO DE ALUMÍNIO	SP	ITU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZYU-ZFY	1.268.857	7,83	9.936.419,17	1.607.373.265,22	0,61818%
MINÉRIO DE ALUMÍNIO	SP	ITU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZFY-ZXP	1.268.857	7,73	9.805.726,90	1.607.373.265,22	0,61005%
MINÉRIO DE ALUMÍNIO	SP	ITU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZDY-ZDI	1.268.857	6,54	8.303.400,21	1.607.373.265,22	0,51658%
MINÉRIO DE ALUMÍNIO	SP	ITU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZXP-ZDY	1.268.857	4,22	5.352.038,83	1.607.373.265,22	0,33297%
MINÉRIO DE ALUMÍNIO	SP	ITU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZST-ZYU	1.268.857	2,21	2.809.249,40	1.607.373.265,22	0,17477%
MINÉRIO DE ALUMÍNIO	SP	ITU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	1.268.857	1,07	1.358.945,85	1.607.373.265,22	0,08454%
MINÉRIO DE ALUMÍNIO	SP	ITU	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZYU-ZFY	645.834	7,83	5.057.526,05	1.607.373.265,22	0,31465%
MINÉRIO DE ALUMÍNIO	SP	ITU	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZFY-ZXP	645.834	7,73	4.991.005,15	1.607.373.265,22	0,31051%
MINÉRIO DE ALUMÍNIO	SP	ITU	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZDY-ZDI	645.834	6,54	4.226.337,70	1.607.373.265,22	0,26293%
MINÉRIO DE ALUMÍNIO	SP	ITU	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZXP-ZDY	645.834	4,22	2.724.127,81	1.607.373.265,22	0,16948%
MINÉRIO DE ALUMÍNIO	SP	ITU	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZST-ZYU	645.834	2,21	1.429.876,48	1.607.373.265,22	0,08896%
MINÉRIO DE ALUMÍNIO	SP	ITU	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	645.834	1,07	691.688,21	1.607.373.265,22	0,04303%
MINÉRIO DE ALUMÍNIO	SP	ITUVERAVA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZWA-ZYW	949.189	20,90	19.840.897,67	1.607.373.265,22	1,23437%
MINÉRIO DE ALUMÍNIO	SP	ITUVERAVA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZYW-ZGU	949.189	4,71	4.472.578,57	1.607.373.265,22	0,27825%
MINÉRIO DE ALUMÍNIO	SP	JACAREI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPA-FRE	645.834	15,86	10.241.635,57	1.607.373.265,22	0,63717%
MINÉRIO DE ALUMÍNIO	SP	JACAREI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	645.834	2,59	1.674.001,73	1.607.373.265,22	0,10415%
MINÉRIO DE ALUMÍNIO	SP	JACAREI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	645.834	0,54	345.521,19	1.607.373.265,22	0,02150%
MINÉRIO DE ALUMÍNIO	SP	JAGUARIUNA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZJJ-ZOP	1.268.857	11,57	14.680.675,49	1.607.373.265,22	0,91333%
MINÉRIO DE ALUMÍNIO	SP	JAGUARIUNA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZGE-ZJJ	1.268.857	4,52	5.733.964,78	1.607.373.265,22	0,35673%
MINÉRIO DE ALUMÍNIO	SP	JAGUARIUNA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZXD-ZGE	1.268.857	3,18	4.033.696,40	1.607.373.265,22	0,25095%
MINÉRIO DE ALUMÍNIO	SP	JARDINOPOLIS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZKR-ZJN	949.189	13,30	12.626.112,08	1.607.373.265,22	0,78551%
MINÉRIO DE ALUMÍNIO	SP	JARDINOPOLIS	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZJN-ZRP	949.189	11,80	11.202.328,58	1.607.373.265,22	0,69693%
MINÉRIO DE ALUMÍNIO	SP	JUNDIAI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OVF-ZJY	645.834	2,77	1.786.376,84	1.607.373.265,22	0,11114%
MINÉRIO DE ALUMÍNIO	SP	JUNDIAI	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZJY-ZLV	645.834	13,83	8.932.530,05	1.607.373.265,22	0,55572%
MINÉRIO DE ALUMÍNIO	SP	LAVRINHAS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FVQ-FCZ	645.834	10,18	6.572.006,78	1.607.373.265,22	0,40887%
MINÉRIO DE ALUMÍNIO	SP	LORENA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FLR-FEN	645.834	5,10	3.294.399,23	1.607.373.265,22	0,20496%
MINÉRIO DE ALUMÍNIO	SP	LORENA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FCP-FLR	645.834	4,73	3.051.565,65	1.607.373.265,22	0,18985%
MINÉRIO DE ALUMÍNIO	SP	LOUVEIRA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZLV-ZVN	645.834	2,47	1.594.564,15	1.607.373.265,22	0,09920%
MINÉRIO DE ALUMÍNIO	SP	LOUVEIRA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZJY-ZLV	645.834	2,00	1.289.084,66	1.607.373.265,22	0,08020%
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	1.268.857	7,13	9.052.025,84	1.607.373.265,22	0,56316%
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZER-ZCX	1.268.857	6,21	7.884.677,40	1.607.373.265,22	0,49053%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	1.268.857	2,79	3.537.573,32	1.607.373.265,22	0,22008%
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	1.268.857	0,97	1.230.791,29	1.607.373.265,22	0,07657%
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZDI-ZER	645.834	7,13	4.607.379,76	1.607.373.265,22	0,28664%
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZER-ZCX	645.834	6,21	4.013.212,48	1.607.373.265,22	0,24968%
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZCX-ZPS	645.834	2,79	1.800.585,19	1.607.373.265,22	0,11202%
MINÉRIO DE ALUMÍNIO	SP	MAIRINQUE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZPS-ZAL	645.834	0,97	626.458,98	1.607.373.265,22	0,03897%
MINÉRIO DE ALUMÍNIO	SP	MOGI DAS CRUZES	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FIP-FST	645.834	10,24	6.612.048,49	1.607.373.265,22	0,41136%
MINÉRIO DE ALUMÍNIO	SP	MOGI DAS CRUZES	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FST-FPI	645.834	8,78	5.671.714,19	1.607.373.265,22	0,35286%
MINÉRIO DE ALUMÍNIO	SP	MOGI DAS CRUZES	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FRE-FIP	645.834	3,46	2.232.002,30	1.607.373.265,22	0,13886%
MINÉRIO DE ALUMÍNIO	SP	MOGI GUACU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZEA-ZMG	1.268.857	7,62	9.662.346,06	1.607.373.265,22	0,60113%
MINÉRIO DE ALUMÍNIO	SP	MOGI GUACU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZMQ-ZEA	1.268.857	4,96	6.289.724,15	1.607.373.265,22	0,39130%
MINÉRIO DE ALUMÍNIO	SP	MOGI GUACU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZMG-ZMM	1.268.857	4,15	5.259.412,27	1.607.373.265,22	0,32721%
MINÉRIO DE ALUMÍNIO	SP	MOGI GUACU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZAI-ZMQ	1.268.857	0,54	687.720,49	1.607.373.265,22	0,04279%
MINÉRIO DE ALUMÍNIO	SP	MOJI MIRIM	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZMM-ZKF	1.268.857	10,59	13.442.271,06	1.607.373.265,22	0,83629%
MINÉRIO DE ALUMÍNIO	SP	MOJI MIRIM	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZKF-ZXD	1.268.857	5,15	6.534.613,55	1.607.373.265,22	0,40654%
MINÉRIO DE ALUMÍNIO	SP	MOJI MIRIM	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZMG-ZMM	1.268.857	4,51	5.722.545,07	1.607.373.265,22	0,35602%
MINÉRIO DE ALUMÍNIO	SP	ORLANDIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZOL-ZKR	949.189	10,62	10.081.336,37	1.607.373.265,22	0,62719%
MINÉRIO DE ALUMÍNIO	SP	ORLANDIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHB-ZOL	949.189	10,01	9.498.534,32	1.607.373.265,22	0,59094%
MINÉRIO DE ALUMÍNIO	SP	PAULINIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZJI-ZOP	1.268.857	7,78	9.875.514,03	1.607.373.265,22	0,61439%
MINÉRIO DE ALUMÍNIO	SP	PAULINIA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZOP-ZBL	1.268.857	1,94	2.465.389,15	1.607.373.265,22	0,15338%
MINÉRIO DE ALUMÍNIO	SP	PINDAMONHANGABA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	645.834	6,41	4.137.212,60	1.607.373.265,22	0,25739%
MINÉRIO DE ALUMÍNIO	SP	PINDAMONHANGABA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FCT-FPG	645.834	6,28	4.053.900,02	1.607.373.265,22	0,25221%
MINÉRIO DE ALUMÍNIO	SP	PINDAMONHANGABA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	645.834	5,97	3.852.399,81	1.607.373.265,22	0,23967%
MINÉRIO DE ALUMÍNIO	SP	PINDAMONHANGABA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPR-FCT	645.834	0,79	507.625,52	1.607.373.265,22	0,03158%
MINÉRIO DE ALUMÍNIO	SP	QUELUZ	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FQU-FVQ	645.834	8,89	5.738.880,92	1.607.373.265,22	0,35703%
MINÉRIO DE ALUMÍNIO	SP	QUELUZ	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FEP-FQU	645.834	8,07	5.214.463,72	1.607.373.265,22	0,32441%
MINÉRIO DE ALUMÍNIO	SP	QUELUZ	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FVQ-FCZ	645.834	0,54	347.458,69	1.607.373.265,22	0,02162%
MINÉRIO DE ALUMÍNIO	SP	RIBEIRAO PRETO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZEG-ZEK	949.189	9,35	8.878.713,91	1.607.373.265,22	0,55237%
MINÉRIO DE ALUMÍNIO	SP	RIBEIRAO PRETO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZRP-ZEG	949.189	8,72	8.277.877,27	1.607.373.265,22	0,51499%
MINÉRIO DE ALUMÍNIO	SP	RIBEIRAO PRETO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZJN-ZRP	949.189	8,14	7.725.449,27	1.607.373.265,22	0,48063%
MINÉRIO DE ALUMÍNIO	SP	ROSEIRA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FAD-FRA	645.834	4,61	2.976.648,91	1.607.373.265,22	0,18519%
MINÉRIO DE ALUMÍNIO	SP	ROSEIRA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FRA-FPR	645.834	3,30	2.128.023,03	1.607.373.265,22	0,13239%
MINÉRIO DE ALUMÍNIO	SP	SALES OLIVEIRA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZOL-ZKR	949.189	11,26	10.685.020,57	1.607.373.265,22	0,66475%
MINÉRIO DE ALUMÍNIO	SP	SALES OLIVEIRA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZKR-ZJN	949.189	1,69	1.607.926,17	1.607.373.265,22	0,10003%
MINÉRIO DE ALUMÍNIO	SP	SALTO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZST-ZYU	1.268.857	6,82	8.654.873,60	1.607.373.265,22	0,53845%
MINÉRIO DE ALUMÍNIO	SP	SALTO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	1.268.857	1,32	1.677.428,95	1.607.373.265,22	0,10436%
MINÉRIO DE ALUMÍNIO	SP	SALTO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZST-ZYU	645.834	6,82	4.405.233,71	1.607.373.265,22	0,27406%
MINÉRIO DE ALUMÍNIO	SP	SALTO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZXI-ZST	645.834	1,32	853.792,55	1.607.373.265,22	0,05312%
MINÉRIO DE ALUMÍNIO	SP	SANTA RITA DO PASSA QUATRO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHM-ZTD	949.189	4,08	3.869.843,55	1.607.373.265,22	0,24076%
MINÉRIO DE ALUMÍNIO	SP	SANTA ROSA DE VITERBO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHM-ZTD	949.189	5,78	5.481.566,48	1.607.373.265,22	0,34103%
MINÉRIO DE ALUMÍNIO	SP	SANTA ROSA DE VITERBO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHI-ZHM	949.189	1,68	1.592.739,14	1.607.373.265,22	0,09909%
MINÉRIO DE ALUMÍNIO	SP	SANTO ANTONIO DE POSSE	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZXD-ZGE	1.268.857	5,79	7.347.950,89	1.607.373.265,22	0,45714%
MINÉRIO DE ALUMÍNIO	SP	SANTO ANTONIO DE POSSE	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZKF-ZXD	1.268.857	4,48	5.689.554,79	1.607.373.265,22	0,35397%
MINÉRIO DE ALUMÍNIO	SP	SAO JOAO DA BOA VISTA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHV-ZAI	319.668	19,45	6.218.181,94	1.607.373.265,22	0,38685%
MINÉRIO DE ALUMÍNIO	SP	SAO JOAO DA BOA VISTA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZAQ-ZHV	319.668	10,95	3.500.684,27	1.607.373.265,22	0,21779%
MINÉRIO DE ALUMÍNIO	SP	SAO JOAQUIM DA BARRA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHB-ZOL	949.189	11,25	10.673.630,31	1.607.373.265,22	0,66404%
MINÉRIO DE ALUMÍNIO	SP	SAO JOAQUIM DA BARRA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZGU-ZHB	949.189	5,67	5.385.698,39	1.607.373.265,22	0,33506%
MINÉRIO DE ALUMÍNIO	SP	SAO JOSE DOS CAMPOS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FSJ-FPA	645.834	11,30	7.295.986,70	1.607.373.265,22	0,45391%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE ALUMÍNIO	SP	SAO JOSE DOS CAMPOS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FEM-FSJ	645.834	6,17	3.986.087,45	1.607.373.265,22	0,24799%
MINÉRIO DE ALUMÍNIO	SP	SAO JOSE DOS CAMPOS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FEG-FEM	645.834	5,01	3.233.690,84	1.607.373.265,22	0,20118%
MINÉRIO DE ALUMÍNIO	SP	SAO JOSE DOS CAMPOS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FEA-FEG	645.834	1,76	1.138.605,34	1.607.373.265,22	0,07084%
MINÉRIO DE ALUMÍNIO	SP	SAO JOSE DOS CAMPOS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FCA-FEA	645.834	1,20	776.938,30	1.607.373.265,22	0,04834%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	IEF-OCE	645.834	11,72	7.570.466,15	1.607.373.265,22	0,47098%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OCE-OSG	645.834	11,42	7.378.007,62	1.607.373.265,22	0,45901%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OSG-IES	645.834	4,45	2.872.023,80	1.607.373.265,22	0,17868%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OJA-IPE	645.834	6,58	4.247.004,38	1.607.373.265,22	0,26422%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OLU-OBF	645.834	3,71	2.396.689,97	1.607.373.265,22	0,14911%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OBF-IAB	645.834	3,65	2.359.231,60	1.607.373.265,22	0,14678%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	IES-OBR	645.834	1,85	1.196.084,57	1.607.373.265,22	0,07441%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	IPB-OVC	645.834	3,09	1.993.689,56	1.607.373.265,22	0,12403%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	IPE-OCI	645.834	2,18	1.407.272,29	1.607.373.265,22	0,08755%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OPQ-IPB	645.834	2,03	1.312.980,52	1.607.373.265,22	0,08168%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OVC-OJA	645.834	1,77	1.144.417,85	1.607.373.265,22	0,07120%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	IAB-ILA	645.834	1,34	862.834,22	1.607.373.265,22	0,05368%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	IPR-OLU	645.834	1,18	762.729,95	1.607.373.265,22	0,04745%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ILA-OPQ	645.834	0,99	636.146,49	1.607.373.265,22	0,03958%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ORO-IPR	645.834	0,84	541.208,89	1.607.373.265,22	0,03367%
MINÉRIO DE ALUMÍNIO	SP	SAO PAULO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OBR-ORO	645.834	0,30	195.041,87	1.607.373.265,22	0,01213%
MINÉRIO DE ALUMÍNIO	SP	SAO SIMAO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHI-ZHM	949.189	15,73	14.928.844,59	1.607.373.265,22	0,92877%
MINÉRIO DE ALUMÍNIO	SP	SAO SIMAO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZCE-ZHI	949.189	11,72	11.125.444,27	1.607.373.265,22	0,69215%
MINÉRIO DE ALUMÍNIO	SP	SAO SIMAO	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZEK-ZCE	949.189	5,77	5.474.922,15	1.607.373.265,22	0,34061%
MINÉRIO DE ALUMÍNIO	SP	SERRANA	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZEG-ZEK	949.189	5,45	5.174.029,24	1.607.373.265,22	0,32189%
MINÉRIO DE ALUMÍNIO	SP	TAMBAU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZHM-ZTD	949.189	12,86	12.206.570,54	1.607.373.265,22	0,75941%
MINÉRIO DE ALUMÍNIO	SP	TAMBAU	FCA	10	DF, GO, MG, RJ, SP	FCA, MRS	ZTD-ZKB	949.189	8,59	8.154.482,70	1.607.373.265,22	0,50732%
MINÉRIO DE ALUMÍNIO	SP	TAUBATE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FTA-FUI	645.834	5,90	3.810.420,60	1.607.373.265,22	0,23706%
MINÉRIO DE ALUMÍNIO	SP	TAUBATE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FUI-FCA	645.834	4,01	2.589.148,51	1.607.373.265,22	0,16108%
MINÉRIO DE ALUMÍNIO	SP	TAUBATE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FPG-FTA	645.834	3,72	2.401.210,81	1.607.373.265,22	0,14939%
MINÉRIO DE ALUMÍNIO	SP	TREMEMBE	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	FTG-FTA	645.834	4,21	2.720.898,64	1.607.373.265,22	0,16928%
MINÉRIO DE ALUMÍNIO	SP	VALINHOS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVH-ZSX	645.834	4,88	3.153.607,42	1.607.373.265,22	0,19620%
MINÉRIO DE ALUMÍNIO	SP	VALINHOS	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVN-ZVH	645.834	4,33	2.797.107,05	1.607.373.265,22	0,17402%
MINÉRIO DE ALUMÍNIO	SP	VARZEA PAULISTA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OCL-OVP	645.834	3,30	2.131.252,20	1.607.373.265,22	0,13259%
MINÉRIO DE ALUMÍNIO	SP	VARZEA PAULISTA	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	OVP-ZJY	645.834	2,14	1.382.730,59	1.607.373.265,22	0,08602%
MINÉRIO DE ALUMÍNIO	SP	VINHEDO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZLV-ZVN	645.834	5,28	3.411.295,19	1.607.373.265,22	0,21223%
MINÉRIO DE ALUMÍNIO	SP	VINHEDO	MRS	10	DF, GO, MG, RJ, SP	FCA, MRS	ZVN-ZVH	645.834	3,31	2.140.293,88	1.607.373.265,22	0,13315%
MINÉRIO DE COBRE	MA	ACAILANDIA	EFC	11	MA, PA	EFC	QMA-QAL	426.760	21,09	8.999.941,64	371.091.718,56	2,42526%
MINÉRIO DE COBRE	MA	ACAILANDIA	EFC	11	MA, PA	EFC	QAL-QNV	426.760	93,02	39.698.922,24	371.091.718,56	10,69787%
MINÉRIO DE COBRE	MA	ALTO ALEGRE DO PINDARE	EFC	11	MA, PA	EFC	QNV-QSI	426.760	85,71	36.577.172,84	371.091.718,56	9,85664%
MINÉRIO DE COBRE	MA	ANAJATUBA	EFC	11	MA, PA	EFC	QSI-QRO	426.760	20,55	8.771.198,28	371.091.718,56	2,36362%
MINÉRIO DE COBRE	MA	ARARI	EFC	11	MA, PA	EFC	QSI-QRO	426.760	26,68	11.384.676,52	371.091.718,56	3,06789%
MINÉRIO DE COBRE	MA	BACABEIRA	EFC	11	MA, PA	EFC	QSI-QRO	426.760	19,72	8.416.560,72	371.091.718,56	2,26805%
MINÉRIO DE COBRE	MA	BACABEIRA	EFC	11	MA, PA	EFC	QRO-QPM	426.760	20,41	8.708.037,80	371.091.718,56	2,34660%
MINÉRIO DE COBRE	MA	BOM JARDIM	EFC	11	MA, PA	EFC	QNV-QSI	426.760	5,86	2.500.813,60	371.091.718,56	0,67391%
MINÉRIO DE COBRE	MA	BOM JESUS DAS SELVAS	EFC	11	MA, PA	EFC	QAL-QNV	426.760	28,94	12.350.434,40	371.091.718,56	3,32814%
MINÉRIO DE COBRE	MA	BOM JESUS DAS SELVAS	EFC	11	MA, PA	EFC	QNV-QSI	426.760	20,24	8.638.049,16	371.091.718,56	2,32774%
MINÉRIO DE COBRE	MA	BURITICUPU	EFC	11	MA, PA	EFC	QNV-QSI	426.760	28,36	12.102.913,60	371.091.718,56	3,26143%
MINÉRIO DE COBRE	MA	CIDELANDIA	EFC	11	MA, PA	EFC	QMA-QAL	426.760	46,88	20.006.082,04	371.091.718,56	5,39114%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE COBRE	MA	IGARAPE DO MEIO	EFC	11	MA, PA	EFC	QSI-QRO	426.760	26,17	11.166.175,40	371.091.718,56	3,00901%
MINÉRIO DE COBRE	MA	ITAPECURU MIRIM	EFC	11	MA, PA	EFC	QSI-QRO	426.760	13,16	5.614.454,56	371.091.718,56	1,51296%
MINÉRIO DE COBRE	MA	ITINGA DO MARANHAO	EFC	11	MA, PA	EFC	QAL-QNV	426.760	7,58	3.234.840,80	371.091.718,56	0,87171%
MINÉRIO DE COBRE	MA	MIRANDA DO NORTE	EFC	11	MA, PA	EFC	QSI-QRO	426.760	8,32	3.551.496,72	371.091.718,56	0,95704%
MINÉRIO DE COBRE	MA	MONCAO	EFC	11	MA, PA	EFC	QSI-QRO	426.760	12,92	5.511.605,40	371.091.718,56	1,48524%
MINÉRIO DE COBRE	MA	PINDARE-MIRIM	EFC	11	MA, PA	EFC	QNV-QSI	426.760	12,71	5.423.266,08	371.091.718,56	1,46144%
MINÉRIO DE COBRE	MA	SANTA INES	EFC	11	MA, PA	EFC	QSI-QRO	426.760	9,59	4.092.628,40	371.091.718,56	1,10286%
MINÉRIO DE COBRE	MA	SANTA INES	EFC	11	MA, PA	EFC	QNV-QSI	426.760	1,61	688.790,64	371.091.718,56	0,18561%
MINÉRIO DE COBRE	MA	SANTA LUZIA	EFC	11	MA, PA	EFC	QNV-QSI	426.760	4,29	1.830.800,40	371.091.718,56	0,49336%
MINÉRIO DE COBRE	MA	SANTA RITA	EFC	11	MA, PA	EFC	QSI-QRO	426.760	14,86	6.339.519,80	371.091.718,56	1,70834%
MINÉRIO DE COBRE	MA	SAO FRANCISCO DO BREJAO	EFC	11	MA, PA	EFC	QMA-QAL	426.760	5,04	2.151.723,92	371.091.718,56	0,57984%
MINÉRIO DE COBRE	MA	SAO LUIS	EFC	11	MA, PA	EFC	QPM-APB	426.760	7,10	3.029.996,00	371.091.718,56	0,81651%
MINÉRIO DE COBRE	MA	SAO LUIS	EFC	11	MA, PA	EFC	A99-QCO	426.760	1,02	434.014,92	371.091.718,56	0,11696%
MINÉRIO DE COBRE	MA	SAO LUIS	EFC	11	MA, PA	EFC	A03-A99	426.760	1,47	625.630,16	371.091.718,56	0,16859%
MINÉRIO DE COBRE	MA	SAO LUIS	EFC	11	MA, PA	EFC	APB-ABL	426.760	0,70	298.732,00	371.091.718,56	0,08050%
MINÉRIO DE COBRE	MA	SAO LUIS	EFC	11	MA, PA	EFC	ABL-A03	426.760	0,30	128.028,00	371.091.718,56	0,03450%
MINÉRIO DE COBRE	MA	SAO LUIS	EFC	11	MA, PA	EFC	QRO-QPM	426.760	18,64	7.954.379,64	371.091.718,56	2,14351%
MINÉRIO DE COBRE	MA	SAO PEDRO DA AGUA BRANCA	EFC	11	MA, PA	EFC	QMA-QAL	426.760	48,42	20.664.572,72	371.091.718,56	5,56859%
MINÉRIO DE COBRE	MA	TUFILANDIA	EFC	11	MA, PA	EFC	QNV-QSI	426.760	14,42	6.152.172,16	371.091.718,56	1,65786%
MINÉRIO DE COBRE	MA	VILA NOVA DOS MARTIROS	EFC	11	MA, PA	EFC	QMA-QAL	426.760	34,96	14.918.249,32	371.091.718,56	4,02010%
MINÉRIO DE COBRE	MA	VITORIA DO MEARIM	EFC	11	MA, PA	EFC	QSI-QRO	426.760	21,48	9.166.378,04	371.091.718,56	2,47011%
MINÉRIO DE COBRE	PA	BOM JESUS DO TO	EFC	11	MA, PA	EFC	QMA-QAL	426.760	42,94	18.324.647,64	371.091.718,56	4,93804%
MINÉRIO DE COBRE	PA	CURIONOPOLIS	EFC	11	MA, PA	EFC	QRS-QSL	426.760	5,35	2.281.458,96	371.091.718,56	0,61480%
MINÉRIO DE COBRE	PA	MARABA	EFC	11	MA, PA	EFC	QSL-QMA	426.760	99,20	42.335.445,52	371.091.718,56	11,40835%
MINÉRIO DE COBRE	PA	MARABA	EFC	11	MA, PA	EFC	QMA-QAL	426.760	22,13	9.443.345,28	371.091.718,56	2,54475%
MINÉRIO DE COBRE	PA	MARABA	EFC	11	MA, PA	EFC	QRS-QSL	426.760	1,40	595.330,20	371.091.718,56	0,16043%
MINÉRIO DE COBRE	PA	PARAUPEBAS	EFC	11	MA, PA	EFC	QRS-QSL	426.760	15,93	6.799.140,32	371.091.718,56	1,83220%
MINÉRIO DE COBRE	PA	PARAUPEBAS	EFC	11	MA, PA	EFC	QPA-QRS	426.760	0,42	180.092,72	371.091.718,56	0,04853%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	12	BA	FCA	DAF-DIA	283.933	22,85	6.486.733,32	89.603.258,97	7,23939%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	12	BA	FCA	DLM-DAF	283.933	15,42	4.378.246,86	89.603.258,97	4,88626%
MINÉRIO DE CROMO	BA	AGUA FRIA	FCA	12	BA	FCA	DIA-D10	283.933	4,53	1.285.648,62	89.603.258,97	1,43482%
MINÉRIO DE CROMO	BA	ALAGOINHAS	FCA	12	BA	FCA	DSF-DNV	283.933	12,88	3.655.921,31	89.603.258,97	4,08012%
MINÉRIO DE CROMO	BA	ALAGOINHAS	FCA	12	BA	FCA	DAM-DSF	283.933	10,48	2.974.482,11	89.603.258,97	3,31961%
MINÉRIO DE CROMO	BA	ANTONIO GONCALVES	FCA	12	BA	FCA	DGS-DBO	53.559	9,80	524.717,52	89.603.258,97	0,58560%
MINÉRIO DE CROMO	BA	ANTONIO GONCALVES	FCA	12	BA	FCA	DCF-DGS	53.559	8,52	456.322,68	89.603.258,97	0,50927%
MINÉRIO DE CROMO	BA	ARACI	FCA	12	BA	FCA	DWL-DFT	283.933	0,07	18.739,58	89.603.258,97	0,02091%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	12	BA	FCA	DIA-D10	283.933	6,67	1.893.833,11	89.603.258,97	2,11358%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	12	BA	FCA	DAM-DSF	283.933	3,15	893.821,08	89.603.258,97	0,99753%
MINÉRIO DE CROMO	BA	ARAMARI	FCA	12	BA	FCA	D10-DAM	283.933	16,92	4.804.146,36	89.603.258,97	5,36158%
MINÉRIO DE CROMO	BA	BARROCAS	FCA	12	BA	FCA	DWL-DFT	283.933	9,25	2.627.232,05	89.603.258,97	2,93207%
MINÉRIO DE CROMO	BA	BARROCAS	FCA	12	BA	FCA	DFT-DSH	283.933	5,70	1.617.282,37	89.603.258,97	1,80494%
MINÉRIO DE CROMO	BA	CAMPO FORMOSO	FCA	12	BA	FCA	DCF-DGS	53.559	1,41	75.303,95	89.603.258,97	0,08404%
MINÉRIO DE CROMO	BA	CATU	FCA	12	BA	FCA	DSF-DNV	283.933	2,06	583.482,32	89.603.258,97	0,65118%
MINÉRIO DE CROMO	BA	CATU	FCA	12	BA	FCA	DNV-DUL	283.933	7,36	2.090.882,61	89.603.258,97	2,33349%
MINÉRIO DE CROMO	BA	CATU	FCA	12	BA	FCA	DUL-DKT	283.933	7,35	2.085.487,89	89.603.258,97	2,32747%
MINÉRIO DE CROMO	BA	CATU	FCA	12	BA	FCA	DKT-DWG	283.933	4,14	1.175.198,69	89.603.258,97	1,31156%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	12	BA	FCA	DWL-DFT	283.933	7,91	2.247.045,76	89.603.258,97	2,50777%
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	12	BA	FCA	DSI-D26	283.933	0,31	88.303,16	89.603.258,97	0,09855%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE CROMO	BA	CONCEICAO DO COITE	FCA	12	BA	FCA	D26-DWL	283.933	15,74	4.469.105,42	89.603.258,97	4,98766%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	12	BA	FCA	DHT-D12	283.933	23,60	6.700.818,80	89.603.258,97	7,47832%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	12	BA	FCA	D12-DQM	283.933	14,05	3.990.110,45	89.603.258,97	4,45309%
MINÉRIO DE CROMO	BA	ITIUBA	FCA	12	BA	FCA	DQE-DHT	53.559	21,11	1.130.791,17	89.603.258,97	1,26200%
MINÉRIO DE CROMO	BA	LAMARAO	FCA	12	BA	FCA	DSH-DLM	283.933	7,69	2.183.444,77	89.603.258,97	2,43679%
MINÉRIO DE CROMO	BA	LAMARAO	FCA	12	BA	FCA	DLM-DAF	283.933	2,24	636.577,79	89.603.258,97	0,71044%
MINÉRIO DE CROMO	BA	OURICANGAS	FCA	12	BA	FCA	DIA-D10	283.933	0,40	113.857,13	89.603.258,97	0,12707%
MINÉRIO DE CROMO	BA	OURICANGAS	FCA	12	BA	FCA	DAF-DIA	283.933	0,16	44.577,48	89.603.258,97	0,04975%
MINÉRIO DE CROMO	BA	POJUCA	FCA	12	BA	FCA	DKT-DWG	283.933	2,43	690.525,06	89.603.258,97	0,77065%
MINÉRIO DE CROMO	BA	POJUCA	FCA	12	BA	FCA	DWG-DIX	283.933	1,88	533.226,17	89.603.258,97	0,59510%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	12	BA	FCA	DQM-D11	283.933	19,82	5.627.268,13	89.603.258,97	6,28020%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	12	BA	FCA	D12-DQM	283.933	4,31	1.222.331,57	89.603.258,97	1,36416%
MINÉRIO DE CROMO	BA	QUEIMADAS	FCA	12	BA	FCA	D11-DSI	283.933	1,52	430.726,36	89.603.258,97	0,48070%
MINÉRIO DE CROMO	BA	SANTALUZ	FCA	12	BA	FCA	D11-DSI	283.933	24,93	7.079.585,42	89.603.258,97	7,90104%
MINÉRIO DE CROMO	BA	SANTALUZ	FCA	12	BA	FCA	DSI-D26	283.933	17,38	4.935.039,47	89.603.258,97	5,50766%
MINÉRIO DE CROMO	BA	SENHOR DO BONFIM	FCA	12	BA	FCA	DBO-DQE	53.559	25,07	1.342.831,25	89.603.258,97	1,49864%
MINÉRIO DE CROMO	BA	SENHOR DO BONFIM	FCA	12	BA	FCA	DGS-DBO	53.559	11,22	600.878,42	89.603.258,97	0,67060%
MINÉRIO DE CROMO	BA	SENHOR DO BONFIM	FCA	12	BA	FCA	DQE-DHT	53.559	6,16	329.709,20	89.603.258,97	0,36797%
MINÉRIO DE CROMO	BA	SERRINHA	FCA	12	BA	FCA	DSH-DLM	283.933	14,24	4.044.341,65	89.603.258,97	4,51361%
MINÉRIO DE CROMO	BA	SERRINHA	FCA	12	BA	FCA	DFT-DSH	283.933	12,45	3.534.681,92	89.603.258,97	3,94481%
MINÉRIO DE FERRO	MA	ACAILANDIA	EFC	13	MA, PA	EFC	QMA-QAL	171.300.074	21,09	3.612.547.260,59	157.024.018.732,55	2,30063%
MINÉRIO DE FERRO	MA	ACAILANDIA	EFC	13	MA, PA	EFC	QAL-QNV	170.001.165	93,02	15.814.188.372,96	157.024.018.732,55	10,07119%
MINÉRIO DE FERRO	MA	ALTO ALEGRE DO PINDARE	EFC	13	MA, PA	EFC	QNV-QSI	170.001.165	85,71	14.570.629.850,99	157.024.018.732,55	9,27924%
MINÉRIO DE FERRO	MA	ANAJATUBA	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	20,55	3.494.033.944,25	157.024.018.732,55	2,22516%
MINÉRIO DE FERRO	MA	ARARI	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	26,68	4.535.121.078,71	157.024.018.732,55	2,88817%
MINÉRIO DE FERRO	MA	BACABEIRA	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	19,72	3.352.762.976,13	157.024.018.732,55	2,13519%
MINÉRIO DE FERRO	MA	BACABEIRA	EFC	13	MA, PA	EFC	QRO-QPM	170.001.165	20,41	3.468.873.771,83	157.024.018.732,55	2,20914%
MINÉRIO DE FERRO	MA	BOM JARDIM	EFC	13	MA, PA	EFC	QNV-QSI	170.001.165	5,86	996.206.826,90	157.024.018.732,55	0,63443%
MINÉRIO DE FERRO	MA	BOM JESUS DAS SELVAS	EFC	13	MA, PA	EFC	QAL-QNV	170.001.165	28,94	4.919.833.715,10	157.024.018.732,55	3,13317%
MINÉRIO DE FERRO	MA	BOM JESUS DAS SELVAS	EFC	13	MA, PA	EFC	QNV-QSI	170.001.165	20,24	3.440.993.580,77	157.024.018.732,55	2,19138%
MINÉRIO DE FERRO	MA	BURITICUPU	EFC	13	MA, PA	EFC	QNV-QSI	170.001.165	28,36	4.821.233.039,40	157.024.018.732,55	3,07038%
MINÉRIO DE FERRO	MA	CIDELANDIA	EFC	13	MA, PA	EFC	QMA-QAL	171.300.074	46,88	8.030.376.169,05	157.024.018.732,55	5,11411%
MINÉRIO DE FERRO	MA	IGARAPE DO MEIO	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	26,17	4.448.080.482,23	157.024.018.732,55	2,83274%
MINÉRIO DE FERRO	MA	ITAPECURU MIRIM	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	13,16	2.236.535.326,74	157.024.018.732,55	1,42433%
MINÉRIO DE FERRO	MA	ITINGA DO MARANHAO	EFC	13	MA, PA	EFC	QAL-QNV	170.001.165	7,58	1.288.608.830,70	157.024.018.732,55	0,82064%
MINÉRIO DE FERRO	MA	MIRANDA DO NORTE	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	8,32	1.414.749.695,13	157.024.018.732,55	0,90998%
MINÉRIO DE FERRO	MA	MONCAO	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	12,92	2.195.565.045,98	157.024.018.732,55	1,39824%
MINÉRIO DE FERRO	MA	PINDARE-MIRIM	EFC	13	MA, PA	EFC	QNV-QSI	170.001.165	12,71	2.160.374.804,82	157.024.018.732,55	1,37582%
MINÉRIO DE FERRO	MA	SANTA INES	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	9,59	1.630.311.172,35	157.024.018.732,55	1,03826%
MINÉRIO DE FERRO	MA	SANTA INES	EFC	13	MA, PA	EFC	QNV-QSI	170.001.165	1,61	274.381.880,31	157.024.018.732,55	0,17474%
MINÉRIO DE FERRO	MA	SANTA LUZIA	EFC	13	MA, PA	EFC	QNV-QSI	170.001.165	4,29	729.304.997,85	157.024.018.732,55	0,46445%
MINÉRIO DE FERRO	MA	SANTA RITA	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	14,86	2.525.367.306,08	157.024.018.732,55	1,60827%
MINÉRIO DE FERRO	MA	SAO FRANCISCO DO BREJAO	EFC	13	MA, PA	EFC	QMA-QAL	171.300.074	5,04	863.694.973,11	157.024.018.732,55	0,55004%
MINÉRIO DE FERRO	MA	SAO LUIS	EFC	13	MA, PA	EFC	QRO-QPM	170.001.165	18,64	3.168.651.714,44	157.024.018.732,55	2,01794%
MINÉRIO DE FERRO	MA	SAO PEDRO DA AGUA BRANCA	EFC	13	MA, PA	EFC	QMA-QAL	171.300.074	48,42	8.294.692.183,23	157.024.018.732,55	5,28244%
MINÉRIO DE FERRO	MA	TUFILANDIA	EFC	13	MA, PA	EFC	QNV-QSI	170.001.165	14,42	2.450.736.794,64	157.024.018.732,55	1,56074%
MINÉRIO DE FERRO	MA	VILA NOVA DOS MARTIRIOS	EFC	13	MA, PA	EFC	QMA-QAL	171.300.074	34,96	5.988.136.686,82	157.024.018.732,55	3,81352%
MINÉRIO DE FERRO	MA	VITORIA DO MEARIM	EFC	13	MA, PA	EFC	QSI-QRO	170.001.165	21,48	3.651.455.023,04	157.024.018.732,55	2,32541%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	PA	BOM JESUS DO TO	EFC	13	MA, PA	EFC	QMA-QAL	171.300.074	42,94	7.355.453.877,49	157.024.018.732,55	4,68429%
MINÉRIO DE FERRO	PA	CANAL DOS CARAJAS	EFC	13	MA, PA	EFC	QSS-QRS	70.163.578	56,65	3.974.626.366,54	157.024.018.732,55	2,53122%
MINÉRIO DE FERRO	PA	CURIONOPOLIS	EFC	13	MA, PA	EFC	QRS-QSL	167.140.100	5,35	893.530.974,60	157.024.018.732,55	0,56904%
MINÉRIO DE FERRO	PA	MARABA	EFC	13	MA, PA	EFC	QSL-QMA	171.521.730	99,20	17.015.298.659,46	157.024.018.732,55	10,83611%
MINÉRIO DE FERRO	PA	MARABA	EFC	13	MA, PA	EFC	QMA-QAL	171.300.074	22,13	3.790.528.037,47	157.024.018.732,55	2,41398%
MINÉRIO DE FERRO	PA	MARABA	EFC	13	MA, PA	EFC	QRS-QSL	167.140.100	1,40	233.160.439,50	157.024.018.732,55	0,14849%
MINÉRIO DE FERRO	PA	PARAUPEBAS	EFC	13	MA, PA	EFC	QCA-QPA	96.976.522	37,39	3.625.952.157,58	157.024.018.732,55	2,30917%
MINÉRIO DE FERRO	PA	PARAUPEBAS	EFC	13	MA, PA	EFC	QRS-QSL	167.140.100	15,93	2.662.876.073,20	157.024.018.732,55	1,69584%
MINÉRIO DE FERRO	PA	PARAUPEBAS	EFC	13	MA, PA	EFC	QPA-QRS	96.976.522	0,42	40.924.092,28	157.024.018.732,55	0,02606%
MINÉRIO DE FERRO	PA	PARAUPEBAS	EFC	13	MA, PA	EFC	QSS-QRS	70.163.578	43,53	3.054.220.550,34	157.024.018.732,55	1,94507%
MINÉRIO DE FERRO	BA	ARACATU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUV-DOV	429.247	12,23	5.249.261,56	95.099.379.621,04	0,00552%
MINÉRIO DE FERRO	BA	BARRA DA ESTIVA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DWN-DZU	429.247	14,97	6.423.681,36	95.099.379.621,04	0,00675%
MINÉRIO DE FERRO	BA	BARRA DA ESTIVA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKY-DWN	429.247	0,40	170.840,31	95.099.379.621,04	0,00018%
MINÉRIO DE FERRO	BA	BRUMADO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUV-DOV	429.247	5,37	2.304.627,14	95.099.379.621,04	0,00242%
MINÉRIO DE FERRO	BA	BRUMADO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKZ-DRU	429.247	8,49	3.642.590,04	95.099.379.621,04	0,00383%
MINÉRIO DE FERRO	BA	BRUMADO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DRU-DCB	429.247	9,54	4.095.874,87	95.099.379.621,04	0,00431%
MINÉRIO DE FERRO	BA	BRUMADO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DCB-DUV	429.247	16,91	7.258.996,02	95.099.379.621,04	0,00763%
MINÉRIO DE FERRO	BA	BRUMADO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DMD-DKZ	429.247	5,01	2.152.244,46	95.099.379.621,04	0,00226%
MINÉRIO DE FERRO	BA	CACULE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DPL-DKC	429.247	28,22	12.114.208,83	95.099.379.621,04	0,01274%
MINÉRIO DE FERRO	BA	CACULE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKC-DDH	429.247	9,63	4.132.790,12	95.099.379.621,04	0,00435%
MINÉRIO DE FERRO	BA	CASTRO ALVES	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTT-DVS	429.247	10,77	4.620.843,96	95.099.379.621,04	0,00486%
MINÉRIO DE FERRO	BA	CASTRO ALVES	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DVS-DVE	429.247	25,94	11.134.237,93	95.099.379.621,04	0,01171%
MINÉRIO DE FERRO	BA	CONTENDAS DO SINCORA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKY-DWN	429.247	24,40	10.472.339,06	95.099.379.621,04	0,01101%
MINÉRIO DE FERRO	BA	CONTENDAS DO SINCORA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DHX-DFC	429.247	18,33	7.867.668,26	95.099.379.621,04	0,00827%
MINÉRIO DE FERRO	BA	CONTENDAS DO SINCORA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DFC-DKY	429.247	14,03	6.023.623,15	95.099.379.621,04	0,00633%
MINÉRIO DE FERRO	BA	IACU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DIL-DLG	429.247	39,28	16.858.675,93	95.099.379.621,04	0,01773%
MINÉRIO DE FERRO	BA	IACU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTM-DPW	429.247	21,60	9.271.305,95	95.099.379.621,04	0,00975%
MINÉRIO DE FERRO	BA	IACU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DZA-DIL	429.247	18,10	7.770.229,19	95.099.379.621,04	0,00817%
MINÉRIO DE FERRO	BA	IACU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DLG-DTT	429.247	8,13	3.490.207,36	95.099.379.621,04	0,00367%
MINÉRIO DE FERRO	BA	IACU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DPW-DZA	429.247	5,63	2.417.089,86	95.099.379.621,04	0,00254%
MINÉRIO DE FERRO	BA	IRAMAIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DZU-DIY	429.247	39,50	16.955.256,50	95.099.379.621,04	0,01783%
MINÉRIO DE FERRO	BA	IRAMAIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DWN-DZU	429.247	10,67	4.578.348,50	95.099.379.621,04	0,00481%
MINÉRIO DE FERRO	BA	IRAMAIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DIY-DQI	429.247	9,44	4.053.808,67	95.099.379.621,04	0,00426%
MINÉRIO DE FERRO	BA	ITATIM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DLG-DTT	429.247	11,22	4.815.722,09	95.099.379.621,04	0,00506%
MINÉRIO DE FERRO	BA	ITATIM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTT-DVS	429.247	5,28	2.268.141,15	95.099.379.621,04	0,00239%
MINÉRIO DE FERRO	BA	ITUACU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUV-DOV	429.247	1,42	609.101,49	95.099.379.621,04	0,00064%
MINÉRIO DE FERRO	BA	JACARACI	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DPL-DKC	429.247	0,85	363.572,21	95.099.379.621,04	0,00038%
MINÉRIO DE FERRO	BA	LICINIO DE ALMEIDA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DLL-DPL	429.247	18,18	7.804.139,71	95.099.379.621,04	0,00821%
MINÉRIO DE FERRO	BA	LICINIO DE ALMEIDA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DPL-DKC	429.247	1,46	627.988,36	95.099.379.621,04	0,00066%
MINÉRIO DE FERRO	BA	MALHADA DE PEDRAS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DMD-DKZ	429.247	21,46	9.210.782,13	95.099.379.621,04	0,00969%
MINÉRIO DE FERRO	BA	MALHADA DE PEDRAS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDH-DMD	429.247	3,29	1.413.081,12	95.099.379.621,04	0,00149%
MINÉRIO DE FERRO	BA	MARCIONILIO SOUZA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DIY-DQI	429.247	35,19	15.103.055,70	95.099.379.621,04	0,01588%
MINÉRIO DE FERRO	BA	MARCIONILIO SOUZA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DQI-DTM	429.247	28,89	12.399.228,84	95.099.379.621,04	0,01304%
MINÉRIO DE FERRO	BA	MARCIONILIO SOUZA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTM-DPW	429.247	5,96	2.557.024,38	95.099.379.621,04	0,00269%
MINÉRIO DE FERRO	BA	RIO DO ANTONIO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDH-DMD	429.247	24,09	10.341.847,97	95.099.379.621,04	0,01087%
MINÉRIO DE FERRO	BA	RIO DO ANTONIO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DKC-DDH	429.247	12,09	5.189.166,98	95.099.379.621,04	0,00546%
MINÉRIO DE FERRO	BA	SANTA TERESINHA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DTT-DVS	429.247	19,84	8.516.260,48	95.099.379.621,04	0,00896%
MINÉRIO DE FERRO	BA	TANHACU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DHX-DFC	429.247	16,45	7.062.830,14	95.099.379.621,04	0,00743%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	BA	TANHACU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DOV-DHX	429.247	11,53	4.948.788,66	95.099.379.621,04	0,00520%
MINÉRIO DE FERRO	BA	TANHACU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DUV-DOV	429.247	5,56	2.386.613,32	95.099.379.621,04	0,00251%
MINÉRIO DE FERRO	ES	BAIXO GUANDU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VMC	366.416	10,72	3.929.445,18	95.099.379.621,04	0,00413%
MINÉRIO DE FERRO	ES	BAIXO GUANDU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VBG	366.416	10,94	4.007.491,79	95.099.379.621,04	0,00421%
MINÉRIO DE FERRO	ES	BAIXO GUANDU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VAY	366.416	4,09	1.497.542,19	95.099.379.621,04	0,00157%
MINÉRIO DE FERRO	ES	BAIXO GUANDU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	71.246.317	4,09	291.183.697,58	95.099.379.621,04	0,30619%
MINÉRIO DE FERRO	ES	BAIXO GUANDU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VMC	71.246.317	10,94	779.220.969,03	95.099.379.621,04	0,81938%
MINÉRIO DE FERRO	ES	BAIXO GUANDU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	71.246.317	10,72	764.045.503,51	95.099.379.621,04	0,80342%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	605.073	0,84	510.076,54	95.099.379.621,04	0,00054%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	481.793	1,42	683.182,47	95.099.379.621,04	0,00072%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPN-VFH	68.222	5,34	364.578,37	95.099.379.621,04	0,00038%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFH-VEA	68.222	6,37	434.301,25	95.099.379.621,04	0,00046%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VEA-V03	68.222	2,66	181.606,96	95.099.379.621,04	0,00019%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	71.064.425	1,42	100.769.354,65	95.099.379.621,04	0,10596%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	71.071.107	0,84	59.912.943,20	95.099.379.621,04	0,06300%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VEA	184.820	2,66	491.990,84	95.099.379.621,04	0,00052%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VEA-VFH	184.820	6,37	1.176.564,12	95.099.379.621,04	0,00124%
MINÉRIO DE FERRO	ES	CARIACICA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFH-VPN	184.820	5,34	987.678,08	95.099.379.621,04	0,00104%
MINÉRIO DE FERRO	ES	COLATINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VCL	366.416	37,34	13.681.240,61	95.099.379.621,04	0,01439%
MINÉRIO DE FERRO	ES	COLATINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VIA	366.416	20,94	7.673.483,87	95.099.379.621,04	0,00807%
MINÉRIO DE FERRO	ES	COLATINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VMC	366.416	0,83	304.125,28	95.099.379.621,04	0,00032%
MINÉRIO DE FERRO	ES	COLATINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMC-VIA	71.246.317	0,83	59.134.443,11	95.099.379.621,04	0,06218%
MINÉRIO DE FERRO	ES	COLATINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIA-VCL	71.246.317	20,94	1.492.040.370,61	95.099.379.621,04	1,56893%
MINÉRIO DE FERRO	ES	COLATINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	71.246.317	37,34	2.660.194.984,15	95.099.379.621,04	2,79728%
MINÉRIO DE FERRO	ES	FUNDAO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	481.793	9,63	4.638.703,00	95.099.379.621,04	0,00488%
MINÉRIO DE FERRO	ES	FUNDAO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAR	481.793	4,26	2.051.474,59	95.099.379.621,04	0,00216%
MINÉRIO DE FERRO	ES	FUNDAO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	71.064.425	9,63	684.208.283,90	95.099.379.621,04	0,71947%
MINÉRIO DE FERRO	ES	FUNDAO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	71.064.425	4,26	302.592.321,65	95.099.379.621,04	0,31819%
MINÉRIO DE FERRO	ES	IBIRACU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAR	481.793	9,95	4.791.431,39	95.099.379.621,04	0,00504%
MINÉRIO DE FERRO	ES	IBIRACU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VPA	481.793	7,94	3.823.509,25	95.099.379.621,04	0,00402%
MINÉRIO DE FERRO	ES	IBIRACU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VFN	71.064.425	9,95	706.735.706,63	95.099.379.621,04	0,74315%
MINÉRIO DE FERRO	ES	IBIRACU	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	71.064.425	7,94	563.967.276,80	95.099.379.621,04	0,59303%
MINÉRIO DE FERRO	ES	JOAO NEIVA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VCL	366.416	18,84	6.901.811,78	95.099.379.621,04	0,00726%
MINÉRIO DE FERRO	ES	JOAO NEIVA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAR-VPA	481.793	1,64	790.140,52	95.099.379.621,04	0,00083%
MINÉRIO DE FERRO	ES	JOAO NEIVA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCL-VPA	71.246.317	18,84	1.341.995.627,01	95.099.379.621,04	1,41115%
MINÉRIO DE FERRO	ES	JOAO NEIVA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPA-VAR	71.064.425	1,64	116.545.657,00	95.099.379.621,04	0,12255%
MINÉRIO DE FERRO	ES	SANTA LEOPOLDINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	481.793	5,26	2.535.676,56	95.099.379.621,04	0,00267%
MINÉRIO DE FERRO	ES	SANTA LEOPOLDINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	481.793	4,23	2.037.502,60	95.099.379.621,04	0,00214%
MINÉRIO DE FERRO	ES	SANTA LEOPOLDINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	71.064.425	5,26	374.012.068,78	95.099.379.621,04	0,39329%
MINÉRIO DE FERRO	ES	SANTA LEOPOLDINA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	71.064.425	4,23	300.531.453,33	95.099.379.621,04	0,31602%
MINÉRIO DE FERRO	ES	SERRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-VFN	481.793	12,57	6.054.692,63	95.099.379.621,04	0,00637%
MINÉRIO DE FERRO	ES	SERRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTU-V03	605.073	11,59	7.009.770,71	95.099.379.621,04	0,00737%
MINÉRIO DE FERRO	ES	SERRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VAB	481.793	2,60	1.251.216,42	95.099.379.621,04	0,00132%
MINÉRIO DE FERRO	ES	SERRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFN-VAB	71.064.425	12,57	893.066.628,98	95.099.379.621,04	0,93909%
MINÉRIO DE FERRO	ES	SERRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	V03-VTU	71.071.107	11,59	823.358.774,60	95.099.379.621,04	0,86579%
MINÉRIO DE FERRO	ES	SERRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAB-V03	71.064.425	2,60	184.554.311,73	95.099.379.621,04	0,19406%
MINÉRIO DE FERRO	MG	AIMORES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBG-VAY	366.416	1,61	588.830,51	95.099.379.621,04	0,00062%
MINÉRIO DE FERRO	MG	AIMORES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VIU	366.416	13,21	4.839.988,94	95.099.379.621,04	0,00509%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MG	AIMORES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	71.246.317	13,21	941.092.601,25	95.099.379.621,04	0,98959%
MINÉRIO DE FERRO	MG	AIMORES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VBG	71.246.317	1,61	114.492.831,42	95.099.379.621,04	0,12039%
MINÉRIO DE FERRO	MG	ALFREDO VASCONCELOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCH-FDB	206.531	7,98	1.648.117,38	95.099.379.621,04	0,00173%
MINÉRIO DE FERRO	MG	ALFREDO VASCONCELOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEV-FCH	206.531	6,37	1.315.602,47	95.099.379.621,04	0,00138%
MINÉRIO DE FERRO	MG	ALFREDO VASCONCELOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FEV	206.531	4,43	915.345,39	95.099.379.621,04	0,00096%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FAU	344.156	11,29	3.884.488,77	95.099.379.621,04	0,00408%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FGO	344.156	8,69	2.989.683,17	95.099.379.621,04	0,00314%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FIN	344.156	7,55	2.597.001,18	95.099.379.621,04	0,00273%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FFR	344.156	5,64	1.941.728,15	95.099.379.621,04	0,00204%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FIR	344.156	4,07	1.400.026,61	95.099.379.621,04	0,00147%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	101.639.262	11,29	1.147.202.350,19	95.099.379.621,04	1,20632%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	101.639.262	8,69	882.940.268,99	95.099.379.621,04	0,92844%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIN-FIR	101.639.262	7,55	766.969.871,05	95.099.379.621,04	0,80649%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FIN	101.639.262	5,64	573.448.716,20	95.099.379.621,04	0,60300%
MINÉRIO DE FERRO	MG	ANDRELANDIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FOJ	101.639.262	4,07	413.468.517,82	95.099.379.621,04	0,43478%
MINÉRIO DE FERRO	MG	ANTONIO CARLOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAS-FLJ	206.531	7,49	1.546.297,60	95.099.379.621,04	0,00163%
MINÉRIO DE FERRO	MG	ANTONIO CARLOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSF-FAS	206.531	4,73	977.098,16	95.099.379.621,04	0,00103%
MINÉRIO DE FERRO	MG	ANTONIO CARLOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLJ-FJA	206.531	3,87	798.242,32	95.099.379.621,04	0,00084%
MINÉRIO DE FERRO	MG	ANTONIO CARLOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJA-FQT	206.531	0,60	123.299,01	95.099.379.621,04	0,00013%
MINÉRIO DE FERRO	MG	ANTONIO CARLOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTT-FSF	206.531	0,18	37.175,58	95.099.379.621,04	0,00004%
MINÉRIO DE FERRO	MG	ANTONIO DIAS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	71.703.354	14,83	1.063.073.926,40	95.099.379.621,04	1,11786%
MINÉRIO DE FERRO	MG	ANTONIO DIAS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	71.703.354	29,77	2.134.465.441,87	95.099.379.621,04	2,24446%
MINÉRIO DE FERRO	MG	ANTONIO DIAS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	1.655.868	14,83	24.549.898,97	95.099.379.621,04	0,02581%
MINÉRIO DE FERRO	MG	ANTONIO DIAS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	1.655.868	29,77	49.291.878,62	95.099.379.621,04	0,05183%
MINÉRIO DE FERRO	MG	ARANTINA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FIR	344.156	3,46	1.190.435,60	95.099.379.621,04	0,00125%
MINÉRIO DE FERRO	MG	ARANTINA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	101.639.262	3,46	351.570.207,26	95.099.379.621,04	0,36969%
MINÉRIO DE FERRO	MG	ARAXA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAX-EYF	4.819.690	7,87	37.916.501,23	95.099.379.621,04	0,03987%
MINÉRIO DE FERRO	MG	ARAXA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EPK-ETM	4.819.690	16,16	77.886.190,40	95.099.379.621,04	0,08190%
MINÉRIO DE FERRO	MG	ARAXA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ETM-EAX	4.819.690	28,43	137.033.426,08	95.099.379.621,04	0,14409%
MINÉRIO DE FERRO	MG	ARAXA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYF-ETF	4.819.690	9,82	47.329.355,80	95.099.379.621,04	0,04977%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	1.058.288	3,67	3.879.683,81	95.099.379.621,04	0,00408%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGS-VME	1.058.288	9,81	10.377.572,13	95.099.379.621,04	0,01091%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VME-VDI	1.058.288	6,99	7.399.549,70	95.099.379.621,04	0,00778%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	1.058.288	5,50	5.823.758,86	95.099.379.621,04	0,00612%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	1.655.868	3,67	6.070.412,09	95.099.379.621,04	0,00638%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGS-VME	1.655.868	9,81	16.237.441,61	95.099.379.621,04	0,01707%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VME-VDI	1.655.868	6,99	11.577.829,06	95.099.379.621,04	0,01217%
MINÉRIO DE FERRO	MG	BARAO DE COCAIS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	1.655.868	5,50	9.112.241,60	95.099.379.621,04	0,00958%
MINÉRIO DE FERRO	MG	BARBACENA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCH-FDB	206.531	0,70	143.745,58	95.099.379.621,04	0,00015%
MINÉRIO DE FERRO	MG	BARBACENA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTT-FSF	206.531	4,18	862.679,99	95.099.379.621,04	0,00091%
MINÉRIO DE FERRO	MG	BARBACENA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDB-FBC	206.531	6,59	1.360.213,17	95.099.379.621,04	0,00143%
MINÉRIO DE FERRO	MG	BARBACENA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBC-FTT	206.531	5,65	1.167.519,74	95.099.379.621,04	0,00123%
MINÉRIO DE FERRO	MG	BELA VISTA DE MINAS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-VBV	40.376	5,13	207.007,75	95.099.379.621,04	0,00022%
MINÉRIO DE FERRO	MG	BELA VISTA DE MINAS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	46.223.094	5,13	236.985.802,94	95.099.379.621,04	0,24920%
MINÉRIO DE FERRO	MG	BELA VISTA DE MINAS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	1.655.868	5,13	8.489.635,24	95.099.379.621,04	0,00893%
MINÉRIO DE FERRO	MG	BELMIRO BRAGA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDD-FSI	59.146	8,09	478.254,56	95.099.379.621,04	0,00050%
MINÉRIO DE FERRO	MG	BELMIRO BRAGA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSI-FOT	59.146	0,65	38.385,75	95.099.379.621,04	0,00004%
MINÉRIO DE FERRO	MG	BELMIRO BRAGA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAA-FDD	59.146	0,45	26.852,28	95.099.379.621,04	0,00003%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MG	BELO HORIZONTE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWV	1.053.761	7,04	7.415.316,16	95.099.379.621,04	0,00780%
MINÉRIO DE FERRO	MG	BELO HORIZONTE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWV	2.100	7,04	14.777,70	95.099.379.621,04	0,00002%
MINÉRIO DE FERRO	MG	BELO HORIZONTE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEL-ECL	1.653.768	6,84	11.305.158,05	95.099.379.621,04	0,01189%
MINÉRIO DE FERRO	MG	BELO HORIZONTE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECL-EBH	1.653.768	6,47	10.703.186,50	95.099.379.621,04	0,01125%
MINÉRIO DE FERRO	MG	BELO HORIZONTE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBH-EHF	1.653.768	2,86	4.733.084,02	95.099.379.621,04	0,00498%
MINÉRIO DE FERRO	MG	BELO HORIZONTE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHF-OCR	1.653.768	4,12	6.816.831,70	95.099.379.621,04	0,00717%
MINÉRIO DE FERRO	MG	BELO HORIZONTE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLH-FIE	4.316.922	7,46	32.186.970,43	95.099.379.621,04	0,03385%
MINÉRIO DE FERRO	MG	BELO ORIENTE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	366.416	11,83	4.335.434,11	95.099.379.621,04	0,00456%
MINÉRIO DE FERRO	MG	BELO ORIENTE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VJC	366.416	6,78	2.485.766,14	95.099.379.621,04	0,00261%
MINÉRIO DE FERRO	MG	BELO ORIENTE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	71.246.317	6,78	483.335.014,53	95.099.379.621,04	0,50824%
MINÉRIO DE FERRO	MG	BELO ORIENTE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	71.246.317	11,83	842.986.422,74	95.099.379.621,04	0,88643%
MINÉRIO DE FERRO	MG	BELO VALE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOZ-FAL	30.137.104	6,95	209.332.324,38	95.099.379.621,04	0,22012%
MINÉRIO DE FERRO	MG	BELO VALE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTC-FBV	30.137.104	6,64	200.140.507,66	95.099.379.621,04	0,21045%
MINÉRIO DE FERRO	MG	BELO VALE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQV-FQZ	30.137.104	5,60	168.828.056,61	95.099.379.621,04	0,17753%
MINÉRIO DE FERRO	MG	BELO VALE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	30.137.104	5,20	156.833.489,22	95.099.379.621,04	0,16492%
MINÉRIO DE FERRO	MG	BELO VALE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	30.137.104	4,75	143.241.655,31	95.099.379.621,04	0,15062%
MINÉRIO DE FERRO	MG	BELO VALE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBV-FQV	30.137.104	2,63	79.109.898,00	95.099.379.621,04	0,08319%
MINÉRIO DE FERRO	MG	BETIM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	1.653.768	6,18	10.215.324,94	95.099.379.621,04	0,01074%
MINÉRIO DE FERRO	MG	BETIM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EVN-ECN	1.653.768	11,03	18.234.445,97	95.099.379.621,04	0,01917%
MINÉRIO DE FERRO	MG	BETIM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECN-EYB	1.653.768	8,38	13.851.960,77	95.099.379.621,04	0,01457%
MINÉRIO DE FERRO	MG	BETIM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYB-EYU	1.653.768	3,94	6.512.538,38	95.099.379.621,04	0,00685%
MINÉRIO DE FERRO	MG	BETIM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYU-EBO	1.653.768	4,79	7.913.279,88	95.099.379.621,04	0,00832%
MINÉRIO DE FERRO	MG	BOM JARDIM DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FIR	344.156	3,75	1.289.896,69	95.099.379.621,04	0,00136%
MINÉRIO DE FERRO	MG	BOM JARDIM DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIR-FOJ	101.639.262	3,75	380.943.953,98	95.099.379.621,04	0,40057%
MINÉRIO DE FERRO	MG	BOM JARDIM DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FOJ	344.156	8,40	2.890.222,09	95.099.379.621,04	0,00304%
MINÉRIO DE FERRO	MG	BOM JARDIM DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	101.639.262	8,40	853.566.522,28	95.099.379.621,04	0,89755%
MINÉRIO DE FERRO	MG	BRUMADINHO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	30.137.104	7,31	220.151.544,72	95.099.379.621,04	0,23150%
MINÉRIO DE FERRO	MG	BRUMADINHO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAF-FML	30.137.104	6,99	210.598.082,75	95.099.379.621,04	0,22145%
MINÉRIO DE FERRO	MG	BRUMADINHO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FML-FLC	30.137.104	6,48	195.137.748,40	95.099.379.621,04	0,20519%
MINÉRIO DE FERRO	MG	BRUMADINHO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLC-FMS	30.137.104	6,14	185.011.681,46	95.099.379.621,04	0,19455%
MINÉRIO DE FERRO	MG	BRUMADINHO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSN-FBR	30.137.104	5,54	166.959.556,16	95.099.379.621,04	0,17556%
MINÉRIO DE FERRO	MG	BRUMADINHO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBR-FCC	30.137.104	5,02	151.137.576,56	95.099.379.621,04	0,15893%
MINÉRIO DE FERRO	MG	BRUMADINHO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCC-FAF	30.137.104	1,20	36.013.839,28	95.099.379.621,04	0,03787%
MINÉRIO DE FERRO	MG	BRUMADINHO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	21.928.136	1,18	25.875.200,48	95.099.379.621,04	0,02721%
MINÉRIO DE FERRO	MG	BUGRE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VJC	366.416	1,00	366.416,00	95.099.379.621,04	0,00039%
MINÉRIO DE FERRO	MG	BUGRE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	71.246.317	1,00	71.246.317,00	95.099.379.621,04	0,07492%
MINÉRIO DE FERRO	MG	CAETE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	1.058.288	4,75	5.031.101,15	95.099.379.621,04	0,00529%
MINÉRIO DE FERRO	MG	CAETE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTE-VQT	1.058.288	9,56	10.113.000,13	95.099.379.621,04	0,01063%
MINÉRIO DE FERRO	MG	CAETE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	1.058.288	4,75	5.027.926,29	95.099.379.621,04	0,00529%
MINÉRIO DE FERRO	MG	CAETE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	1.655.868	4,75	7.871.996,47	95.099.379.621,04	0,00828%
MINÉRIO DE FERRO	MG	CAETE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTE-VQT	1.655.868	9,56	15.823.474,61	95.099.379.621,04	0,01664%
MINÉRIO DE FERRO	MG	CAETE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VQT-VGS	1.655.868	4,75	7.867.028,87	95.099.379.621,04	0,00827%
MINÉRIO DE FERRO	MG	CARANAIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	206.531	2,99	618.147,28	95.099.379.621,04	0,00065%
MINÉRIO DE FERRO	MG	CARANAIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FHP	206.531	0,12	25.609,84	95.099.379.621,04	0,00003%
MINÉRIO DE FERRO	MG	CARANDAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	206.531	2,07	426.486,52	95.099.379.621,04	0,00045%
MINÉRIO DE FERRO	MG	CARANDAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPE-FHP	206.531	4,75	980.196,13	95.099.379.621,04	0,00103%
MINÉRIO DE FERRO	MG	CARANDAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCY-FIL	206.531	7,49	1.547.123,72	95.099.379.621,04	0,00163%
MINÉRIO DE FERRO	MG	CARANDAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHP-FCY	206.531	4,34	895.724,95	95.099.379.621,04	0,00094%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MG	CARANDAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FCN	206.531	2,84	587.374,16	95.099.379.621,04	0,00062%
MINÉRIO DE FERRO	MG	CARANDAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIL-FPC	206.531	2,75	567.134,13	95.099.379.621,04	0,00060%
MINÉRIO DE FERRO	MG	CARANDAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPC-FCM	206.531	1,76	363.907,62	95.099.379.621,04	0,00038%
MINÉRIO DE FERRO	MG	CARMO DO CAJURU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHT-ECJ	50.761	2,67	135.633,39	95.099.379.621,04	0,00014%
MINÉRIO DE FERRO	MG	CARMO DO CAJURU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECJ-EYE	50.761	7,18	364.463,98	95.099.379.621,04	0,00038%
MINÉRIO DE FERRO	MG	CARMO DO CAJURU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYE-EAG	50.761	8,41	427.001,53	95.099.379.621,04	0,00045%
MINÉRIO DE FERRO	MG	CARMO DO CAJURU	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAG-EGD	50.761	0,50	25.431,26	95.099.379.621,04	0,00003%
MINÉRIO DE FERRO	MG	CATAS ALTAS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	21.096.826	0,13	2.742.587,38	95.099.379.621,04	0,00288%
MINÉRIO DE FERRO	MG	CATAS ALTAS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	25.028.553	11,89	297.464.352,41	95.099.379.621,04	0,31279%
MINÉRIO DE FERRO	MG	CATAS ALTAS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBT-VAG	25.028.553	10,03	251.086.443,70	95.099.379.621,04	0,26403%
MINÉRIO DE FERRO	MG	CATAS ALTAS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	25.028.553	4,01	100.239.354,77	95.099.379.621,04	0,10540%
MINÉRIO DE FERRO	MG	CATAS ALTAS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	1.655.868	0,13	215.262,84	95.099.379.621,04	0,00023%
MINÉRIO DE FERRO	MG	CONCEICAO DA BARRA DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FDE	344.156	2,50	859.357,53	95.099.379.621,04	0,00090%
MINÉRIO DE FERRO	MG	CONCEICAO DA BARRA DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	101.242.028	2,50	252.801.343,92	95.099.379.621,04	0,26583%
MINÉRIO DE FERRO	MG	CONGONHAS	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-ELF	4.099.555	0,95	3.890.477,70	95.099.379.621,04	0,00409%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FFV	465.497	3,52	1.639.480,43	95.099.379.621,04	0,00172%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	729.126	1,32	964.633,70	95.099.379.621,04	0,00101%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FQN	729.126	2,84	2.067.801,34	95.099.379.621,04	0,00217%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCO	729.126	3,52	2.562.877,89	95.099.379.621,04	0,00269%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQD	729.126	4,51	3.284.712,63	95.099.379.621,04	0,00345%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	729.126	3,77	2.748.075,89	95.099.379.621,04	0,00289%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-VOB	484.720	3,47	1.681.978,40	95.099.379.621,04	0,00177%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	5.461.161	3,77	20.583.115,81	95.099.379.621,04	0,02164%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FCO	5.461.161	4,51	24.602.530,31	95.099.379.621,04	0,02587%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCO-FQN	5.461.161	3,52	19.195.980,92	95.099.379.621,04	0,02019%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQN-FCR	5.461.161	2,84	15.487.852,60	95.099.379.621,04	0,01629%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	21.724.919	1,32	28.742.067,84	95.099.379.621,04	0,03022%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FLP	24.269.381	3,52	85.476.759,88	95.099.379.621,04	0,08988%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	44.857.297	1,10	49.298.169,40	95.099.379.621,04	0,05184%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FLM	44.857.297	13,00	583.144.861,00	95.099.379.621,04	0,61320%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	44.857.297	7,35	329.701.132,95	95.099.379.621,04	0,34669%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-FDM	12.533	3,47	43.489,51	95.099.379.621,04	0,00005%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FLM	343.880	7,35	2.527.518,00	95.099.379.621,04	0,00266%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FHC	343.880	13,00	4.470.440,00	95.099.379.621,04	0,00470%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-PPY	343.880	1,10	377.924,12	95.099.379.621,04	0,00040%
MINÉRIO DE FERRO	MG	CONGONHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FGE	206.531	0,51	105.537,34	95.099.379.621,04	0,00011%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQD-FDM	729.126	0,28	203.426,15	95.099.379.621,04	0,00021%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-VOB	484.720	2,45	1.188.048,72	95.099.379.621,04	0,00125%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FQD	5.461.161	0,28	1.523.663,92	95.099.379.621,04	0,00160%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	206.531	1,23	254.446,19	95.099.379.621,04	0,00027%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-FDM	12.533	2,45	30.718,38	95.099.379.621,04	0,00003%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-FGE	206.531	3,35	692.704,97	95.099.379.621,04	0,00073%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGE-FMO	206.531	5,29	1.092.135,93	95.099.379.621,04	0,00115%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMO-FCL	206.531	5,20	1.073.341,61	95.099.379.621,04	0,00113%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCL-FPK	206.531	3,73	770.360,63	95.099.379.621,04	0,00081%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPK-FBS	206.531	4,40	908.529,87	95.099.379.621,04	0,00096%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBS-FBQ	206.531	4,26	880.028,59	95.099.379.621,04	0,00093%
MINÉRIO DE FERRO	MG	CONSELHEIRO LAFAIETE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBQ-FQC	206.531	4,45	918.649,89	95.099.379.621,04	0,00097%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MG	CONSELHEIRO PENA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VCP	366.416	15,80	5.789.739,22	95.099.379.621,04	0,00609%
MINÉRIO DE FERRO	MG	CONSELHEIRO PENA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VBC	366.416	13,10	4.799.316,77	95.099.379.621,04	0,00505%
MINÉRIO DE FERRO	MG	CONSELHEIRO PENA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VST	366.416	0,71	261.254,61	95.099.379.621,04	0,00027%
MINÉRIO DE FERRO	MG	CONSELHEIRO PENA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	71.246.317	0,71	50.798.624,02	95.099.379.621,04	0,05342%
MINÉRIO DE FERRO	MG	CONSELHEIRO PENA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VCP	71.246.317	13,10	933.184.260,07	95.099.379.621,04	0,98127%
MINÉRIO DE FERRO	MG	CONSELHEIRO PENA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	71.246.317	15,80	1.125.763.054,92	95.099.379.621,04	1,18378%
MINÉRIO DE FERRO	MG	CONTAGEM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EYU-EBO	1.653.768	0,54	893.034,72	95.099.379.621,04	0,00094%
MINÉRIO DE FERRO	MG	CONTAGEM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EBO-EEL	1.653.768	6,60	10.908.253,73	95.099.379.621,04	0,01147%
MINÉRIO DE FERRO	MG	CONTAGEM	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEL-ECL	1.653.768	0,70	1.151.022,53	95.099.379.621,04	0,00121%
MINÉRIO DE FERRO	MG	CORONEL FABRICIANO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VMR	30.814	4,74	145.965,92	95.099.379.621,04	0,00015%
MINÉRIO DE FERRO	MG	CORONEL FABRICIANO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	71.703.354	0,69	49.116.797,49	95.099.379.621,04	0,05165%
MINÉRIO DE FERRO	MG	CORONEL FABRICIANO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	71.703.354	1,32	94.505.020,57	95.099.379.621,04	0,09938%
MINÉRIO DE FERRO	MG	CORONEL FABRICIANO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	72.439.773	4,74	343.147.204,70	95.099.379.621,04	0,36083%
MINÉRIO DE FERRO	MG	CORONEL FABRICIANO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAD-VAC	1.655.868	0,69	1.134.269,58	95.099.379.621,04	0,00119%
MINÉRIO DE FERRO	MG	CORONEL FABRICIANO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	1.655.868	1,32	2.182.434,02	95.099.379.621,04	0,00229%
MINÉRIO DE FERRO	MG	CORONEL FABRICIANO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	1.655.868	4,74	7.843.846,72	95.099.379.621,04	0,00825%
MINÉRIO DE FERRO	MG	CORONEL XAVIER CHAVES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FIC	344.156	3,97	1.365.955,16	95.099.379.621,04	0,00144%
MINÉRIO DE FERRO	MG	CORONEL XAVIER CHAVES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	101.242.028	3,97	401.829.609,13	95.099.379.621,04	0,42254%
MINÉRIO DE FERRO	MG	CORONEL XAVIER CHAVES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FVT	101.242.028	3,98	403.323.941,47	95.099.379.621,04	0,42411%
MINÉRIO DE FERRO	MG	CORONEL XAVIER CHAVES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVT-FXA	344.156	3,98	1.371.034,91	95.099.379.621,04	0,00144%
MINÉRIO DE FERRO	MG	CRISTIANO OTONI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQC-FPE	206.531	10,16	2.097.322,31	95.099.379.621,04	0,00221%
MINÉRIO DE FERRO	MG	DIVINOPOLIS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EDV-EHT	50.761	9,41	477.610,25	95.099.379.621,04	0,00050%
MINÉRIO DE FERRO	MG	DIVINOPOLIS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHT-EJC	50.761	6,30	319.997,34	95.099.379.621,04	0,00034%
MINÉRIO DE FERRO	MG	DIVINOPOLIS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EWD-EDV	50.761	10,60	538.218,88	95.099.379.621,04	0,00057%
MINÉRIO DE FERRO	MG	ENTRE RIOS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FRL	344.156	0,28	95.331,21	95.099.379.621,04	0,00010%
MINÉRIO DE FERRO	MG	ENTRE RIOS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FJO	344.156	9,06	3.116.676,74	95.099.379.621,04	0,00328%
MINÉRIO DE FERRO	MG	ENTRE RIOS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FJC	344.156	9,58	3.295.293,70	95.099.379.621,04	0,00347%
MINÉRIO DE FERRO	MG	ENTRE RIOS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	101.242.028	9,58	969.392.418,10	95.099.379.621,04	1,01935%
MINÉRIO DE FERRO	MG	ENTRE RIOS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FRL	101.242.028	9,06	916.847.805,57	95.099.379.621,04	0,96409%
MINÉRIO DE FERRO	MG	ENTRE RIOS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	101.242.028	0,28	28.044.041,76	95.099.379.621,04	0,02949%
MINÉRIO DE FERRO	MG	ESMERALDAS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	1.653.768	2,92	4.822.387,49	95.099.379.621,04	0,00507%
MINÉRIO DE FERRO	MG	EWBANK DA CAMARA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEB-FCD	206.531	5,17	1.066.939,15	95.099.379.621,04	0,00112%
MINÉRIO DE FERRO	MG	EWBANK DA CAMARA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSM-FEB	206.531	4,89	1.008.903,94	95.099.379.621,04	0,00106%
MINÉRIO DE FERRO	MG	GOVERNADOR VALADARES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VGV	366.416	30,77	11.276.085,98	95.099.379.621,04	0,01186%
MINÉRIO DE FERRO	MG	GOVERNADOR VALADARES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VPC	366.416	30,61	11.216.360,18	95.099.379.621,04	0,01179%
MINÉRIO DE FERRO	MG	GOVERNADOR VALADARES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	366.416	30,61	11.216.360,18	95.099.379.621,04	0,01179%
MINÉRIO DE FERRO	MG	GOVERNADOR VALADARES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VTR	71.246.317	30,77	2.192.534.159,36	95.099.379.621,04	2,30552%
MINÉRIO DE FERRO	MG	GOVERNADOR VALADARES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGV	71.246.317	30,61	2.180.921.009,69	95.099.379.621,04	2,29331%
MINÉRIO DE FERRO	MG	GOVERNADOR VALADARES	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	71.246.317	30,61	2.180.921.009,69	95.099.379.621,04	2,29331%
MINÉRIO DE FERRO	MG	IBIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EIA-EPK	4.819.690	34,04	164.067.067,29	95.099.379.621,04	0,17252%
MINÉRIO DE FERRO	MG	IBIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EPK-ETM	4.819.690	8,24	39.719.065,29	95.099.379.621,04	0,04177%
MINÉRIO DE FERRO	MG	IBIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGW-EOM	4.819.690	15,96	76.912.613,02	95.099.379.621,04	0,08088%
MINÉRIO DE FERRO	MG	IBIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EOM-EIA	4.819.690	13,80	66.502.082,62	95.099.379.621,04	0,06993%
MINÉRIO DE FERRO	MG	IBIRITE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLH-FIE	4.316.922	5,20	22.456.628,24	95.099.379.621,04	0,02361%
MINÉRIO DE FERRO	MG	IBIRITE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIE-FPO	4.316.922	4,75	20.509.696,42	95.099.379.621,04	0,02157%
MINÉRIO DE FERRO	MG	IPATINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VIC	366.416	6,57	2.405.521,04	95.099.379.621,04	0,00253%
MINÉRIO DE FERRO	MG	IPATINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VMR	30.814	4,12	126.922,87	95.099.379.621,04	0,00013%
MINÉRIO DE FERRO	MG	IPATINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	71.246.317	6,57	467.732.071,11	95.099.379.621,04	0,49184%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MG	IPATINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	72.439.773	4,12	298.379.424,99	95.099.379.621,04	0,31376%
MINÉRIO DE FERRO	MG	IPATINGA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	1.655.868	4,12	6.820.520,29	95.099.379.621,04	0,00717%
MINÉRIO DE FERRO	MG	ITABIRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VLB-VDD	25.520.636	11,86	302.674.742,96	95.099.379.621,04	0,31827%
MINÉRIO DE FERRO	MG	ITABIRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBF-VLB	25.520.636	6,86	174.995.001,05	95.099.379.621,04	0,18401%
MINÉRIO DE FERRO	MG	ITABIRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCE-VBF	15.851.128	7,95	126.048.169,86	95.099.379.621,04	0,13254%
MINÉRIO DE FERRO	MG	ITABIRA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJP-VBF	9.669.508	6,53	63.141.887,24	95.099.379.621,04	0,06640%
MINÉRIO DE FERRO	MG	ITABIRITO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIU-FBG	29.378.885	12,02	353.192.955,47	95.099.379.621,04	0,37139%
MINÉRIO DE FERRO	MG	ITABIRITO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBG-FLO	29.378.885	8,43	247.693.379,44	95.099.379.621,04	0,26046%
MINÉRIO DE FERRO	MG	ITABIRITO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	29.378.885	3,68	108.055.539,03	95.099.379.621,04	0,11362%
MINÉRIO DE FERRO	MG	ITABIRITO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	29.378.885	1,10	32.375.531,27	95.099.379.621,04	0,03404%
MINÉRIO DE FERRO	MG	ITAUNA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EEQ-ESQ	50.761	12,94	656.948,86	95.099.379.621,04	0,00069%
MINÉRIO DE FERRO	MG	ITAUNA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGD-ESS	50.761	11,60	588.675,32	95.099.379.621,04	0,00062%
MINÉRIO DE FERRO	MG	ITAUNA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESQ-EZU	1.653.768	1,33	2.201.165,21	95.099.379.621,04	0,00231%
MINÉRIO DE FERRO	MG	ITAUNA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESS-EEQ	50.761	7,58	384.565,34	95.099.379.621,04	0,00040%
MINÉRIO DE FERRO	MG	ITAUNA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EAG-EGD	50.761	5,43	275.429,19	95.099.379.621,04	0,00029%
MINÉRIO DE FERRO	MG	ITUETA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAY-VIU	366.416	7,20	2.637.095,95	95.099.379.621,04	0,00277%
MINÉRIO DE FERRO	MG	ITUETA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VRD	366.416	6,73	2.465.613,26	95.099.379.621,04	0,00259%
MINÉRIO DE FERRO	MG	ITUETA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VAY	71.246.317	7,20	512.759.743,45	95.099.379.621,04	0,53918%
MINÉRIO DE FERRO	MG	ITUETA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	71.246.317	6,73	479.416.467,09	95.099.379.621,04	0,50412%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FLA	206.807	5,54	1.146.331,20	95.099.379.621,04	0,00121%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FLF	343.880	4,65	1.597.322,60	95.099.379.621,04	0,00168%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FLP	465.497	2,96	1.377.871,12	95.099.379.621,04	0,00145%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FLM	343.880	1,40	482.463,64	95.099.379.621,04	0,00051%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCR-FFV	21.724.919	0,99	21.572.844,57	95.099.379.621,04	0,02268%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FLA	258.690	0,57	148.229,37	95.099.379.621,04	0,00016%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLA-FJC	54.406.485	5,54	301.575.146,36	95.099.379.621,04	0,31712%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	44.598.607	4,65	207.160.529,52	95.099.379.621,04	0,21784%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAL-FJR	30.137.104	5,48	165.181.467,02	95.099.379.621,04	0,17369%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLP-FLA	24.269.381	2,96	71.837.367,76	95.099.379.621,04	0,07554%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJR-FLA	30.137.104	2,89	87.216.778,98	95.099.379.621,04	0,09171%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLM-FLF	44.857.297	1,40	62.934.787,69	95.099.379.621,04	0,06618%
MINÉRIO DE FERRO	MG	JECEABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFV-FCR	729.126	0,99	724.022,12	95.099.379.621,04	0,00076%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VRP	40.376	8,06	325.592,06	95.099.379.621,04	0,00034%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VJM	40.376	2,61	105.542,86	95.099.379.621,04	0,00011%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-VBV	40.376	2,37	95.529,62	95.099.379.621,04	0,00010%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	46.223.094	8,06	372.743.030,02	95.099.379.621,04	0,39195%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	46.223.094	2,61	120.827.167,72	95.099.379.621,04	0,12705%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	46.223.094	2,37	109.363.840,40	95.099.379.621,04	0,11500%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	1.655.868	8,06	13.352.919,55	95.099.379.621,04	0,01404%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VBV	1.655.868	2,61	4.328.438,95	95.099.379.621,04	0,00455%
MINÉRIO DE FERRO	MG	JOAO MONLEVADE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	1.655.868	2,37	3.917.783,69	95.099.379.621,04	0,00412%
MINÉRIO DE FERRO	MG	JUATUBA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EML-EJU	1.653.768	5,63	9.302.445,00	95.099.379.621,04	0,00978%
MINÉRIO DE FERRO	MG	JUATUBA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJU-EVN	1.653.768	2,66	4.400.676,65	95.099.379.621,04	0,00463%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFB-FFV	59.146	7,23	427.566,43	95.099.379.621,04	0,00045%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMP-FFB	59.146	5,40	319.506,69	95.099.379.621,04	0,00034%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDU-FJF	59.146	4,83	285.438,60	95.099.379.621,04	0,00030%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCI-FDS	59.146	4,39	259.473,50	95.099.379.621,04	0,00027%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRT-FDU	59.146	3,55	210.086,59	95.099.379.621,04	0,00022%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDS-FRT	59.146	3,47	204.940,89	95.099.379.621,04	0,00022%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJF-FMP	59.146	2,49	147.273,54	95.099.379.621,04	0,00015%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBF-FDT	59.146	4,86	287.331,27	95.099.379.621,04	0,00030%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDN-FDT	206.531	4,55	938.889,93	95.099.379.621,04	0,00099%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCD-FDN	206.531	3,82	789.568,01	95.099.379.621,04	0,00083%
MINÉRIO DE FERRO	MG	JUIZ DE FORA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEB-FCD	206.531	1,46	302.154,85	95.099.379.621,04	0,00032%
MINÉRIO DE FERRO	MG	LAGOA DOURADA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FRL	344.156	16,55	5.696.470,11	95.099.379.621,04	0,00599%
MINÉRIO DE FERRO	MG	LAGOA DOURADA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FRC	344.156	3,09	1.062.753,73	95.099.379.621,04	0,00112%
MINÉRIO DE FERRO	MG	LAGOA DOURADA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRL-FRC	101.242.028	16,55	1.675.758.047,46	95.099.379.621,04	1,76211%
MINÉRIO DE FERRO	MG	LAGOA DOURADA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	101.242.028	3,09	312.635.382,46	95.099.379.621,04	0,32875%
MINÉRIO DE FERRO	MG	MADRE DE DEUS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FPZ	344.156	13,89	4.778.950,22	95.099.379.621,04	0,00503%
MINÉRIO DE FERRO	MG	MADRE DE DEUS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FRN	344.156	5,23	1.799.591,72	95.099.379.621,04	0,00189%
MINÉRIO DE FERRO	MG	MADRE DE DEUS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FGO	344.156	3,39	1.166.688,84	95.099.379.621,04	0,00123%
MINÉRIO DE FERRO	MG	MADRE DE DEUS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FGO	101.639.262	13,89	1.411.362.792,13	95.099.379.621,04	1,48409%
MINÉRIO DE FERRO	MG	MADRE DE DEUS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	101.639.262	5,23	531.471.701,00	95.099.379.621,04	0,55886%
MINÉRIO DE FERRO	MG	MADRE DE DEUS DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	101.639.262	3,39	344.557.098,18	95.099.379.621,04	0,36231%
MINÉRIO DE FERRO	MG	MARIANA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAL-VFZ	13.331.909	8,18	109.015.019,89	95.099.379.621,04	0,11463%
MINÉRIO DE FERRO	MG	MARIANA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	13.326.463	5,89	78.452.887,68	95.099.379.621,04	0,08250%
MINÉRIO DE FERRO	MG	MARIANA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFZ-VBT	25.028.553	1,24	31.060.434,27	95.099.379.621,04	0,03266%
MINÉRIO DE FERRO	MG	MARIO CAMPOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	21.928.136	5,10	111.789.637,33	95.099.379.621,04	0,11755%
MINÉRIO DE FERRO	MG	MARIO CAMPOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	21.928.136	2,41	52.846.807,76	95.099.379.621,04	0,05557%
MINÉRIO DE FERRO	MG	MATEUS LEME	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EML-EJU	1.653.768	5,89	9.737.385,98	95.099.379.621,04	0,01024%
MINÉRIO DE FERRO	MG	MATEUS LEME	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EZU-EML	1.653.768	5,76	9.524.049,91	95.099.379.621,04	0,01001%
MINÉRIO DE FERRO	MG	MATEUS LEME	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ESQ-EZU	1.653.768	5,04	8.328.375,65	95.099.379.621,04	0,00876%
MINÉRIO DE FERRO	MG	MATIAS BARBOSA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMT-FCI	59.146	4,48	264.855,79	95.099.379.621,04	0,00028%
MINÉRIO DE FERRO	MG	MATIAS BARBOSA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOT-FDC	59.146	3,99	235.696,81	95.099.379.621,04	0,00025%
MINÉRIO DE FERRO	MG	MATIAS BARBOSA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDC-FMT	59.146	2,75	162.533,21	95.099.379.621,04	0,00017%
MINÉRIO DE FERRO	MG	MATIAS BARBOSA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCI-FDS	59.146	1,77	104.865,86	95.099.379.621,04	0,00011%
MINÉRIO DE FERRO	MG	MATOZINHOS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EMS-EWL	2.100	4,42	9.275,70	95.099.379.621,04	0,00001%
MINÉRIO DE FERRO	MG	MATOZINHOS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EPM-EMS	2.100	5,04	10.586,10	95.099.379.621,04	0,00001%
MINÉRIO DE FERRO	MG	MATOZINHOS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EWL-EPL	2.100	0,23	472,50	95.099.379.621,04	0,00000%
MINÉRIO DE FERRO	MG	MOEDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMS-FMD	30.137.104	2,73	82.123.608,40	95.099.379.621,04	0,08636%
MINÉRIO DE FERRO	MG	MOEDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMD-FTC	30.137.104	1,95	58.707.078,59	95.099.379.621,04	0,06173%
MINÉRIO DE FERRO	MG	NAQUE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	366.416	11,33	4.150.027,62	95.099.379.621,04	0,00436%
MINÉRIO DE FERRO	MG	NAQUE	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	71.246.317	11,33	806.935.786,34	95.099.379.621,04	0,84852%
MINÉRIO DE FERRO	MG	NOVA ERA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-VBV	40.376	11,44	461.901,44	95.099.379.621,04	0,00049%
MINÉRIO DE FERRO	MG	NOVA ERA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	46.223.094	11,44	528.792.195,36	95.099.379.621,04	0,55604%
MINÉRIO DE FERRO	MG	NOVA ERA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	71.703.354	7,17	513.969.641,47	95.099.379.621,04	0,54046%
MINÉRIO DE FERRO	MG	NOVA ERA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VLB-VDD	25.520.636	14,05	358.590.456,44	95.099.379.621,04	0,37707%
MINÉRIO DE FERRO	MG	NOVA ERA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	71.703.354	3,28	235.330.407,83	95.099.379.621,04	0,24746%
MINÉRIO DE FERRO	MG	NOVA ERA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBV-VDD	1.655.868	11,44	18.943.129,92	95.099.379.621,04	0,01992%
MINÉRIO DE FERRO	MG	NOVA ERA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	DDC-VAD	1.655.868	7,17	11.869.261,82	95.099.379.621,04	0,01248%
MINÉRIO DE FERRO	MG	NOVA ERA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDD-DDC	1.655.868	3,28	5.434.558,78	95.099.379.621,04	0,00571%
MINÉRIO DE FERRO	MG	OURO BRANCO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDM-VOB	484.720	0,25	121.180,00	95.099.379.621,04	0,00013%
MINÉRIO DE FERRO	MG	OURO BRANCO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-FDM	12.533	0,25	3.133,25	95.099.379.621,04	0,00000%
MINÉRIO DE FERRO	MG	OURO PRETO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFU-VRV	4.132.272	17,21	71.120.533,39	95.099.379.621,04	0,07479%
MINÉRIO DE FERRO	MG	OURO PRETO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRV-VTO	4.132.272	10,72	44.285.559,02	95.099.379.621,04	0,04657%
MINÉRIO DE FERRO	MG	OURO PRETO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ELF-VCB	4.099.555	9,88	40.507.702,96	95.099.379.621,04	0,04260%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MG	OURO PRETO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCB-VFU	4.099.555	7,86	32.202.004,53	95.099.379.621,04	0,03386%
MINÉRIO DE FERRO	MG	OURO PRETO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTO-VAL	13.326.463	2,39	31.876.899,50	95.099.379.621,04	0,03352%
MINÉRIO DE FERRO	MG	OURO PRETO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VOB-ELF	4.099.555	11,72	48.050.884,16	95.099.379.621,04	0,05053%
MINÉRIO DE FERRO	MG	OURO PRETO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHC-FPY	343.880	5,34	1.836.319,20	95.099.379.621,04	0,00193%
MINÉRIO DE FERRO	MG	OURO PRETO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPY-FHC	44.857.297	5,34	239.537.965,98	95.099.379.621,04	0,25188%
MINÉRIO DE FERRO	MG	OURO PRETO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLO-FPY	29.378.885	2,69	79.058.579,54	95.099.379.621,04	0,08313%
MINÉRIO DE FERRO	MG	PASSA-VINTE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FSH	344.156	12,28	4.225.891,52	95.099.379.621,04	0,00444%
MINÉRIO DE FERRO	MG	PASSA-VINTE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FJT	344.156	6,39	2.197.436,06	95.099.379.621,04	0,00231%
MINÉRIO DE FERRO	MG	PASSA-VINTE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FRP	344.156	3,70	1.272.000,58	95.099.379.621,04	0,00134%
MINÉRIO DE FERRO	MG	PASSA-VINTE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FRP	101.639.262	12,28	1.248.028.498,10	95.099.379.621,04	1,31234%
MINÉRIO DE FERRO	MG	PASSA-VINTE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	101.639.262	6,39	648.966.687,87	95.099.379.621,04	0,68241%
MINÉRIO DE FERRO	MG	PASSA-VINTE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	101.639.262	3,70	375.658.712,35	95.099.379.621,04	0,39502%
MINÉRIO DE FERRO	MG	PATROCINIO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ELI-EDZ	4.819.690	6,63	31.969.003,77	95.099.379.621,04	0,03362%
MINÉRIO DE FERRO	MG	PATROCINIO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ETP-ELI	4.819.690	5,05	24.339.434,50	95.099.379.621,04	0,02559%
MINÉRIO DE FERRO	MG	PEDRO LEOPOLDO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EWL-EPL	2.100	5,39	11.314,80	95.099.379.621,04	0,00001%
MINÉRIO DE FERRO	MG	PEDRO LEOPOLDO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EPL-ELD	2.100	5,04	10.577,70	95.099.379.621,04	0,00001%
MINÉRIO DE FERRO	MG	PEDRO LEOPOLDO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ELD-ENG	2.100	1,00	2.091,60	95.099.379.621,04	0,00000%
MINÉRIO DE FERRO	MG	PERIQUITO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VFS	366.416	19,91	7.293.510,48	95.099.379.621,04	0,00767%
MINÉRIO DE FERRO	MG	PERIQUITO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGW-VPC	366.416	5,49	2.010.158,18	95.099.379.621,04	0,00211%
MINÉRIO DE FERRO	MG	PERIQUITO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VPC	71.246.317	19,91	1.418.157.939,89	95.099.379.621,04	1,49124%
MINÉRIO DE FERRO	MG	PERIQUITO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VPC-VGW	71.246.317	5,49	390.857.295,06	95.099.379.621,04	0,41100%
MINÉRIO DE FERRO	MG	PRUDENTE DE MORAIS	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EPM-EMS	2.100	6,64	13.939,80	95.099.379.621,04	0,00001%
MINÉRIO DE FERRO	MG	RESENDE COSTA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FRC	344.156	6,80	2.341.293,27	95.099.379.621,04	0,00246%
MINÉRIO DE FERRO	MG	RESENDE COSTA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FIC	344.156	1,47	505.909,32	95.099.379.621,04	0,00053%
MINÉRIO DE FERRO	MG	RESENDE COSTA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRC-FIC	101.242.028	6,80	688.749.516,48	95.099.379.621,04	0,72424%
MINÉRIO DE FERRO	MG	RESENDE COSTA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIC-FXA	101.242.028	1,47	148.825.781,16	95.099.379.621,04	0,15650%
MINÉRIO DE FERRO	MG	RESPLENDOR	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VCN	366.416	16,02	5.868.885,07	95.099.379.621,04	0,00617%
MINÉRIO DE FERRO	MG	RESPLENDOR	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIU-VRD	366.416	8,44	3.091.085,38	95.099.379.621,04	0,00325%
MINÉRIO DE FERRO	MG	RESPLENDOR	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VCP	366.416	1,24	452.890,18	95.099.379.621,04	0,00048%
MINÉRIO DE FERRO	MG	RESPLENDOR	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCN-VRD	71.246.317	16,02	1.141.152.259,39	95.099.379.621,04	1,19996%
MINÉRIO DE FERRO	MG	RESPLENDOR	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRD-VIU	71.246.317	8,44	601.033.930,21	95.099.379.621,04	0,63201%
MINÉRIO DE FERRO	MG	RESPLENDOR	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCP-VCN	71.246.317	1,24	88.060.447,81	95.099.379.621,04	0,09260%
MINÉRIO DE FERRO	MG	RESSAQUINHA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCN-FET	206.531	5,16	1.066.526,08	95.099.379.621,04	0,00112%
MINÉRIO DE FERRO	MG	RESSAQUINHA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FEV	206.531	1,14	234.412,69	95.099.379.621,04	0,00025%
MINÉRIO DE FERRO	MG	RESSAQUINHA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FCN	206.531	0,64	132.799,43	95.099.379.621,04	0,00014%
MINÉRIO DE FERRO	MG	RIO ACIMA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOO-FIU	29.378.885	0,33	9.783.168,71	95.099.379.621,04	0,01029%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJM-VRP	40.376	5,60	226.105,60	95.099.379.621,04	0,00024%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VBS	40.376	3,35	135.057,72	95.099.379.621,04	0,00014%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	46.223.094	5,60	258.849.326,40	95.099.379.621,04	0,27219%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	46.125.379	4,76	219.510.678,66	95.099.379.621,04	0,23082%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	46.223.094	3,35	154.616.249,43	95.099.379.621,04	0,16258%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VRP-VJM	1.655.868	5,60	9.272.860,80	95.099.379.621,04	0,00975%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	1.655.868	4,76	7.880.275,81	95.099.379.621,04	0,00829%
MINÉRIO DE FERRO	MG	RIO PIRACICABA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBS-VRP	1.655.868	3,35	5.538.878,46	95.099.379.621,04	0,00582%
MINÉRIO DE FERRO	MG	RITAPOLIS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FVT	101.242.028	2,63	266.342.465,16	95.099.379.621,04	0,28007%
MINÉRIO DE FERRO	MG	RITAPOLIS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVT-FXA	344.156	2,63	905.388,40	95.099.379.621,04	0,00095%
MINÉRIO DE FERRO	MG	SABARA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VWI-VDO	1.058.288	11,36	12.021.093,39	95.099.379.621,04	0,01264%
MINÉRIO DE FERRO	MG	SABARA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	1.058.288	3,49	3.688.133,68	95.099.379.621,04	0,00388%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MG	SABARA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	1.053.761	1,92	2.022.167,36	95.099.379.621,04	0,00213%
MINÉRIO DE FERRO	MG	SABARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EHF-OCR	1.653.768	4,13	6.833.369,38	95.099.379.621,04	0,00719%
MINÉRIO DE FERRO	MG	SABARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGC-VWI	1.653.768	1,27	2.093.670,29	95.099.379.621,04	0,00220%
MINÉRIO DE FERRO	MG	SABARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OCR-EGC	1.653.768	1,08	1.781.108,14	95.099.379.621,04	0,00187%
MINÉRIO DE FERRO	MG	SABARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VWI-VDO	1.655.868	11,36	18.809.004,61	95.099.379.621,04	0,01978%
MINÉRIO DE FERRO	MG	SABARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDO-VTE	1.655.868	3,49	5.770.699,98	95.099.379.621,04	0,00607%
MINÉRIO DE FERRO	MG	SABARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	2.100	1,92	4.029,90	95.099.379.621,04	0,00000%
MINÉRIO DE FERRO	MG	SANTA BARBARA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	46.125.379	8,82	406.595.215,89	95.099.379.621,04	0,42755%
MINÉRIO DE FERRO	MG	SANTA BARBARA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	46.125.379	7,59	349.999.375,85	95.099.379.621,04	0,36804%
MINÉRIO DE FERRO	MG	SANTA BARBARA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	21.096.826	12,57	265.229.296,47	95.099.379.621,04	0,27890%
MINÉRIO DE FERRO	MG	SANTA BARBARA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	46.125.379	2,01	92.896.513,31	95.099.379.621,04	0,09768%
MINÉRIO DE FERRO	MG	SANTA BARBARA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAG-VCS	25.028.553	0,45	11.162.734,64	95.099.379.621,04	0,01174%
MINÉRIO DE FERRO	MG	SANTA BARBARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OFI-OPT	1.655.868	8,82	14.596.476,42	95.099.379.621,04	0,01535%
MINÉRIO DE FERRO	MG	SANTA BARBARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VCS-OFI	1.655.868	7,59	12.564.726,38	95.099.379.621,04	0,01321%
MINÉRIO DE FERRO	MG	SANTA BARBARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	1.655.868	12,57	20.817.572,50	95.099.379.621,04	0,02189%
MINÉRIO DE FERRO	MG	SANTA BARBARA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	OPT-VBS	1.655.868	2,01	3.334.918,15	95.099.379.621,04	0,00351%
MINÉRIO DE FERRO	MG	SANTA LUZIA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	1.053.761	1,04	1.094.857,68	95.099.379.621,04	0,00115%
MINÉRIO DE FERRO	MG	SANTA LUZIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECE-VWI	2.100	1,04	2.181,90	95.099.379.621,04	0,00000%
MINÉRIO DE FERRO	MG	SANTA LUZIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECA-ECE	2.100	8,80	18.484,20	95.099.379.621,04	0,00002%
MINÉRIO DE FERRO	MG	SANTA LUZIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ERE-ECA	2.100	6,40	13.444,20	95.099.379.621,04	0,00001%
MINÉRIO DE FERRO	MG	SANTA LUZIA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EVP-ERE	2.100	1,60	3.351,60	95.099.379.621,04	0,00000%
MINÉRIO DE FERRO	MG	SANTA RITA DE JACUTINGA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSH-FJT	344.156	9,29	3.197.897,55	95.099.379.621,04	0,00336%
MINÉRIO DE FERRO	MG	SANTA RITA DE JACUTINGA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FOJ	344.156	5,74	1.975.455,44	95.099.379.621,04	0,00208%
MINÉRIO DE FERRO	MG	SANTA RITA DE JACUTINGA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJT-FSH	101.639.262	9,29	944.432.022,50	95.099.379.621,04	0,99310%
MINÉRIO DE FERRO	MG	SANTA RITA DE JACUTINGA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOJ-FJT	101.639.262	5,74	583.409.363,88	95.099.379.621,04	0,61347%
MINÉRIO DE FERRO	MG	SANTANA DO DESERTO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSR-FSA	59.146	3,23	190.805,00	95.099.379.621,04	0,00020%
MINÉRIO DE FERRO	MG	SANTANA DO DESERTO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFP-FSR	59.146	1,01	59.855,75	95.099.379.621,04	0,00006%
MINÉRIO DE FERRO	MG	SANTANA DO PARAISO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VFS-VJC	366.416	21,78	7.980.906,90	95.099.379.621,04	0,00839%
MINÉRIO DE FERRO	MG	SANTANA DO PARAISO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VIC	366.416	0,72	262.353,86	95.099.379.621,04	0,00028%
MINÉRIO DE FERRO	MG	SANTANA DO PARAISO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VJC-VFS	71.246.317	21,78	1.551.816.030,58	95.099.379.621,04	1,63178%
MINÉRIO DE FERRO	MG	SANTANA DO PARAISO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VJC	71.246.317	0,72	51.012.362,97	95.099.379.621,04	0,05364%
MINÉRIO DE FERRO	MG	SANTOS DUMONT	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRD-FMQ	206.531	9,28	1.916.194,62	95.099.379.621,04	0,00201%
MINÉRIO DE FERRO	MG	SANTOS DUMONT	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSD-FSM	206.531	7,45	1.537.829,83	95.099.379.621,04	0,00162%
MINÉRIO DE FERRO	MG	SANTOS DUMONT	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRV-FSD	206.531	6,84	1.412.672,04	95.099.379.621,04	0,00149%
MINÉRIO DE FERRO	MG	SANTOS DUMONT	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMQ-FRV	206.531	4,92	1.016.958,64	95.099.379.621,04	0,00107%
MINÉRIO DE FERRO	MG	SANTOS DUMONT	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQT-FRD	206.531	3,92	810.427,64	95.099.379.621,04	0,00085%
MINÉRIO DE FERRO	MG	SANTOS DUMONT	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJA-FQT	206.531	1,80	371.549,27	95.099.379.621,04	0,00039%
MINÉRIO DE FERRO	MG	SANTOS DUMONT	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSM-FEB	206.531	0,75	153.865,60	95.099.379.621,04	0,00016%
MINÉRIO DE FERRO	MG	SAO BRAS DO SUACUI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJO-FJC	344.156	8,28	2.849.267,52	95.099.379.621,04	0,00300%
MINÉRIO DE FERRO	MG	SAO BRAS DO SUACUI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FLF	343.880	0,54	186.726,84	95.099.379.621,04	0,00020%
MINÉRIO DE FERRO	MG	SAO BRAS DO SUACUI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJC-FJO	101.242.028	8,28	838.182.749,81	95.099.379.621,04	0,88138%
MINÉRIO DE FERRO	MG	SAO BRAS DO SUACUI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLF-FJC	44.598.607	0,54	24.217.043,60	95.099.379.621,04	0,02546%
MINÉRIO DE FERRO	MG	SAO GONCALO DO RIO ABAIXO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	21.096.826	4,43	93.501.132,83	95.099.379.621,04	0,09832%
MINÉRIO DE FERRO	MG	SAO GONCALO DO RIO ABAIXO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	1.058.288	0,56	594.757,86	95.099.379.621,04	0,00063%
MINÉRIO DE FERRO	MG	SAO GONCALO DO RIO ABAIXO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBR-VCS	1.655.868	4,43	7.338.806,98	95.099.379.621,04	0,00772%
MINÉRIO DE FERRO	MG	SAO GONCALO DO RIO ABAIXO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VDI-VBR	1.655.868	0,56	930.597,82	95.099.379.621,04	0,00098%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FGT	344.156	14,86	5.115.534,78	95.099.379.621,04	0,00538%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FDE	344.156	7,24	2.491.001,13	95.099.379.621,04	0,00262%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPZ-FRN	344.156	6,71	2.309.286,76	95.099.379.621,04	0,00243%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FRN	101.639.262	14,86	1.510.765.990,37	95.099.379.621,04	1,58862%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	101.242.028	7,24	732.789.798,66	95.099.379.621,04	0,77055%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRN-FPZ	101.639.262	6,71	681.999.448,02	95.099.379.621,04	0,71714%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBU-FEI	101.242.028	13,59	1.375.372.950,38	95.099.379.621,04	1,44625%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEI-FBU	344.156	13,59	4.675.359,26	95.099.379.621,04	0,00492%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXA-FVT	101.242.028	8,01	810.657.067,24	95.099.379.621,04	0,85243%
MINÉRIO DE FERRO	MG	SAO JOAO DEL REI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVT-FXA	344.156	8,01	2.755.698,39	95.099.379.621,04	0,00290%
MINÉRIO DE FERRO	MG	SAO JOAQUIM DE BICAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMC-FSN	21.928.136	2,12	46.443.792,05	95.099.379.621,04	0,04884%
MINÉRIO DE FERRO	MG	SAO JOSE DA LAPA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ELD-ENG	2.100	7,95	16.692,90	95.099.379.621,04	0,00002%
MINÉRIO DE FERRO	MG	SAO JOSE DA LAPA	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ENG-EVP	2.100	0,87	1.822,80	95.099.379.621,04	0,00000%
MINÉRIO DE FERRO	MG	SAO SEBASTIAO DO OESTE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EWV-EDV	50.761	1,48	75.329,32	95.099.379.621,04	0,00008%
MINÉRIO DE FERRO	MG	SAO VICENTE DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFR-FAU	344.156	2,83	973.617,32	95.099.379.621,04	0,00102%
MINÉRIO DE FERRO	MG	SAO VICENTE DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FGO	344.156	1,15	394.402,78	95.099.379.621,04	0,00041%
MINÉRIO DE FERRO	MG	SAO VICENTE DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAU-FFR	101.639.262	2,83	287.537.472,20	95.099.379.621,04	0,30235%
MINÉRIO DE FERRO	MG	SAO VICENTE DE MINAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGO-FAU	101.639.262	1,15	116.478.594,25	95.099.379.621,04	0,12248%
MINÉRIO DE FERRO	MG	SARZEDO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPO-FSO	4.316.922	5,60	24.183.397,04	95.099.379.621,04	0,02543%
MINÉRIO DE FERRO	MG	SARZEDO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSO-FZN	9.070.566	3,78	34.277.668,91	95.099.379.621,04	0,03604%
MINÉRIO DE FERRO	MG	SARZEDO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FZN-FMC	21.928.136	1,87	40.939.829,91	95.099.379.621,04	0,04305%
MINÉRIO DE FERRO	MG	SARZEDO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIE-FPO	4.316.922	1,01	4.351.457,38	95.099.379.621,04	0,00458%
MINÉRIO DE FERRO	MG	SENHORA DOS REMEDIOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FET-FEV	206.531	3,60	742.478,95	95.099.379.621,04	0,00078%
MINÉRIO DE FERRO	MG	SENHORA DOS REMEDIOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCM-FCN	206.531	1,51	311.861,81	95.099.379.621,04	0,00033%
MINÉRIO DE FERRO	MG	SENHORA DOS REMEDIOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCN-FET	206.531	1,03	212.313,87	95.099.379.621,04	0,00022%
MINÉRIO DE FERRO	MG	SERRA DO SALITRE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ECT-EJR	4.819.690	15,02	72.372.465,04	95.099.379.621,04	0,07610%
MINÉRIO DE FERRO	MG	SERRA DO SALITRE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EDZ-ECT	4.819.690	14,84	71.504.920,84	95.099.379.621,04	0,07519%
MINÉRIO DE FERRO	MG	SERRA DO SALITRE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EJR-EGB	4.819.690	8,43	40.620.347,32	95.099.379.621,04	0,04271%
MINÉRIO DE FERRO	MG	SERRA DO SALITRE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ELI-EDZ	4.819.690	5,46	26.315.507,40	95.099.379.621,04	0,02767%
MINÉRIO DE FERRO	MG	SERRA DO SALITRE	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EGB-EOM	4.819.690	2,98	14.362.676,20	95.099.379.621,04	0,01510%
MINÉRIO DE FERRO	MG	SIMAO PEREIRA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSA-FPN	59.146	7,63	451.402,27	95.099.379.621,04	0,00047%
MINÉRIO DE FERRO	MG	SIMAO PEREIRA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSI-FOT	59.146	5,57	329.384,07	95.099.379.621,04	0,00035%
MINÉRIO DE FERRO	MG	SIMAO PEREIRA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSR-FSA	59.146	2,59	153.069,85	95.099.379.621,04	0,00016%
MINÉRIO DE FERRO	MG	SIMAO PEREIRA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPN-FUN	59.146	1,10	64.942,31	95.099.379.621,04	0,00007%
MINÉRIO DE FERRO	MG	SIMAO PEREIRA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FUN-FAA	59.146	0,71	41.934,51	95.099.379.621,04	0,00004%
MINÉRIO DE FERRO	MG	SIMAO PEREIRA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOT-FDC	59.146	0,54	31.879,69	95.099.379.621,04	0,00003%
MINÉRIO DE FERRO	MG	SIMAO PEREIRA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDD-FSI	59.146	0,30	17.507,22	95.099.379.621,04	0,00002%
MINÉRIO DE FERRO	MG	TIMOTEO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VIC-VMR	30.814	5,02	154.593,84	95.099.379.621,04	0,00016%
MINÉRIO DE FERRO	MG	TIMOTEO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	72.439.773	5,02	363.430.341,14	95.099.379.621,04	0,38216%
MINÉRIO DE FERRO	MG	TIMOTEO	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	71.703.354	1,06	76.005.555,24	95.099.379.621,04	0,07992%
MINÉRIO DE FERRO	MG	TIMOTEO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VMR-VIC	1.655.868	5,02	8.307.489,76	95.099.379.621,04	0,00874%
MINÉRIO DE FERRO	MG	TIMOTEO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VAC-VMR	1.655.868	1,06	1.755.220,08	95.099.379.621,04	0,00185%
MINÉRIO DE FERRO	MG	TUMIRITINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VTR	366.416	12,45	4.562.245,62	95.099.379.621,04	0,00480%
MINÉRIO DE FERRO	MG	TUMIRITINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VGV	366.416	12,45	4.562.245,62	95.099.379.621,04	0,00480%
MINÉRIO DE FERRO	MG	TUMIRITINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VBC-VST	366.416	6,71	2.458.651,36	95.099.379.621,04	0,00259%
MINÉRIO DE FERRO	MG	TUMIRITINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VTR-VST	71.246.317	12,45	887.087.892,97	95.099.379.621,04	0,93280%
MINÉRIO DE FERRO	MG	TUMIRITINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VGV-VTR	71.246.317	12,45	887.087.892,97	95.099.379.621,04	0,93280%
MINÉRIO DE FERRO	MG	TUMIRITINGA	EFVM	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	VST-VBC	71.246.317	6,71	478.062.787,07	95.099.379.621,04	0,50270%
MINÉRIO DE FERRO	MG	VESPASIANO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ENG-EVP	2.100	4,03	8.467,20	95.099.379.621,04	0,00001%
MINÉRIO DE FERRO	MG	VESPASIANO	FCA	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	EVP-ERE	2.100	3,51	7.371,00	95.099.379.621,04	0,00001%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FVA	949.168	5,58	5.299.204,94	95.099.379.621,04	0,00557%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FWB	949.168	5,52	5.241.305,70	95.099.379.621,04	0,00551%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FSB	949.168	5,01	4.750.585,84	95.099.379.621,04	0,00500%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FBP	949.168	4,30	4.077.625,73	95.099.379.621,04	0,00429%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FPU	949.168	2,52	2.389.055,86	95.099.379.621,04	0,00251%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FPL	949.168	1,53	1.455.074,54	95.099.379.621,04	0,00153%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDQ-FAT	59.146	3,24	191.633,04	95.099.379.621,04	0,00020%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FDQ	59.146	2,77	163.656,98	95.099.379.621,04	0,00017%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FWB	97.012.067	5,58	541.618.370,06	95.099.379.621,04	0,56953%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FWB-FPU	97.012.067	5,52	535.700.633,97	95.099.379.621,04	0,56331%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	96.952.921	5,01	485.249.369,61	95.099.379.621,04	0,51026%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBP-FSB	96.952.921	4,30	416.509.748,62	95.099.379.621,04	0,43797%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPU-FBP	97.012.067	2,52	244.179.372,64	95.099.379.621,04	0,25676%
MINÉRIO DE FERRO	RJ	BARRA DO PIRAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	97.012.067	1,53	148.719.498,71	95.099.379.621,04	0,15638%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVP-FPT	344.156	9,25	3.184.131,31	95.099.379.621,04	0,00335%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FEU	344.156	4,79	1.648.163,08	95.099.379.621,04	0,00173%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FBM	344.156	3,93	1.351.500,61	95.099.379.621,04	0,00142%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FSE	344.156	2,39	822.532,84	95.099.379.621,04	0,00086%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FBB	344.156	0,43	149.363,70	95.099.379.621,04	0,00016%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	101.639.262	9,25	940.366.452,02	95.099.379.621,04	0,98883%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FSE	101.639.262	4,79	486.750.425,72	95.099.379.621,04	0,51183%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBM-FBB	102.500.564	3,93	402.519.714,83	95.099.379.621,04	0,42326%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSE-FBM	102.500.564	2,39	244.976.347,96	95.099.379.621,04	0,25760%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	102.500.564	0,43	44.485.244,78	95.099.379.621,04	0,04678%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFL-FPB	861.302	7,91	6.813.760,12	95.099.379.621,04	0,00716%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPB-FSE	861.302	7,02	6.042.894,83	95.099.379.621,04	0,00635%
MINÉRIO DE FERRO	RJ	BARRA MANSÁ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAN-FFL	861.302	0,51	437.541,42	95.099.379.621,04	0,00046%
MINÉRIO DE FERRO	RJ	COMENDADOR LEVY GASPARIAN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAA-FDD	59.146	1,16	68.609,36	95.099.379.621,04	0,00007%
MINÉRIO DE FERRO	RJ	COMENDADOR LEVY GASPARIAN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTR-FPP	59.146	1,12	66.361,81	95.099.379.621,04	0,00007%
MINÉRIO DE FERRO	RJ	COMENDADOR LEVY GASPARIAN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFP-FSR	59.146	5,78	341.568,15	95.099.379.621,04	0,00036%
MINÉRIO DE FERRO	RJ	COMENDADOR LEVY GASPARIAN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSR-FSA	59.146	0,34	19.991,35	95.099.379.621,04	0,00002%
MINÉRIO DE FERRO	RJ	COMENDADOR LEVY GASPARIAN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FUN-FAA	59.146	1,96	115.748,72	95.099.379.621,04	0,00012%
MINÉRIO DE FERRO	RJ	ENGENHEIRO PAULO DE FRONTIN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FPD	949.168	2,54	2.412.785,06	95.099.379.621,04	0,00254%
MINÉRIO DE FERRO	RJ	ENGENHEIRO PAULO DE FRONTIN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-FER	949.168	3,85	3.655.245,97	95.099.379.621,04	0,00384%
MINÉRIO DE FERRO	RJ	ENGENHEIRO PAULO DE FRONTIN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FHA	949.168	3,27	3.101.881,02	95.099.379.621,04	0,00326%
MINÉRIO DE FERRO	RJ	ENGENHEIRO PAULO DE FRONTIN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	96.952.921	3,27	316.842.145,83	95.099.379.621,04	0,33317%
MINÉRIO DE FERRO	RJ	ENGENHEIRO PAULO DE FRONTIN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FPD	96.952.921	3,85	373.365.698,77	95.099.379.621,04	0,39261%
MINÉRIO DE FERRO	RJ	ENGENHEIRO PAULO DE FRONTIN	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	96.952.921	2,54	246.454.325,18	95.099.379.621,04	0,25915%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOS	949.168	7,97	7.567.716,46	95.099.379.621,04	0,00796%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FBA	8.466	6,29	53.225,74	95.099.379.621,04	0,00006%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FXS	44.853.055	2,29	102.713.495,95	95.099.379.621,04	0,10801%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FCG	8.466	1,89	16.009,21	95.099.379.621,04	0,00002%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	6.837.614	6,84	46.782.954,99	95.099.379.621,04	0,04919%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOP	10.740.525	3,00	32.221.575,00	95.099.379.621,04	0,03388%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	96.952.921	7,97	773.005.639,13	95.099.379.621,04	0,81284%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FCG	27.824.624	6,29	174.933.411,09	95.099.379.621,04	0,18395%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FXS-FBA	605.012	2,29	1.385.477,48	95.099.379.621,04	0,00146%
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	27.824.624	1,89	52.616.363,98	95.099.379.621,04	0,05533%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	RJ	ITAGUAI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-FBA	335.690	6,84	2.296.790,98	95.099.379.621,04	0,00242%
MINÉRIO DE FERRO	RJ	ITATIAIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEP-FIA	861.302	5,95	5.126.469,50	95.099.379.621,04	0,00539%
MINÉRIO DE FERRO	RJ	ITATIAIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIA-FMU	861.302	3,51	3.022.153,68	95.099.379.621,04	0,00318%
MINÉRIO DE FERRO	RJ	ITATIAIA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMU-FAN	861.302	4,67	4.022.194,21	95.099.379.621,04	0,00423%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FSS	8.466	4,44	37.572,11	95.099.379.621,04	0,00004%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FCG	8.466	3,73	31.544,32	95.099.379.621,04	0,00003%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGI-FIB	8.466	3,56	30.096,63	95.099.379.621,04	0,00003%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FIB	27.824.624	4,44	123.485.681,31	95.099.379.621,04	0,12985%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCG-FIS	27.824.624	3,73	103.674.549,02	95.099.379.621,04	0,10902%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIB-FGI	27.824.624	3,56	98.916.538,32	95.099.379.621,04	0,10401%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIS-FTY	27.824.624	5,09	141.502.890,00	95.099.379.621,04	0,14879%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FSS	27.824.624	7,46	207.612.667,33	95.099.379.621,04	0,21831%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSS-FTY	8.466	7,46	63.168,83	95.099.379.621,04	0,00007%
MINÉRIO DE FERRO	RJ	MANGARATIBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTY-FIS	8.466	5,09	43.054,08	95.099.379.621,04	0,00005%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FMA	949.168	5,43	5.156.829,74	95.099.379.621,04	0,00542%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FME	949.168	2,11	2.006.541,15	95.099.379.621,04	0,00211%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FMG	949.168	2,07	1.962.879,42	95.099.379.621,04	0,00206%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FER-FHA	949.168	0,90	851.403,70	95.099.379.621,04	0,00090%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FSB	949.168	0,21	200.274,45	95.099.379.621,04	0,00021%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMA-FME	96.952.921	5,43	526.745.219,79	95.099.379.621,04	0,55389%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FME-FHA	96.952.921	2,11	204.958.474,99	95.099.379.621,04	0,21552%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMG-FMA	96.952.921	2,07	200.498.640,63	95.099.379.621,04	0,21083%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHA-FER	96.952.921	0,90	86.966.770,14	95.099.379.621,04	0,09145%
MINÉRIO DE FERRO	RJ	MENDES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSB-FMG	96.952.921	0,21	20.457.066,33	95.099.379.621,04	0,02151%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-F39	949.168	4,79	4.543.667,22	95.099.379.621,04	0,00478%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FMB	949.168	3,97	3.767.247,79	95.099.379.621,04	0,00396%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FPD	949.168	3,21	3.047.778,45	95.099.379.621,04	0,00320%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FHE	949.168	2,39	2.266.613,18	95.099.379.621,04	0,00238%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FQS	949.168	1,06	1.001.372,24	95.099.379.621,04	0,00105%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	F39-FMB	96.952.921	4,79	464.113.632,83	95.099.379.621,04	0,48803%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMB-FHE	96.952.921	3,97	384.806.143,45	95.099.379.621,04	0,40464%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPD-F39	96.952.921	3,21	311.315.829,33	95.099.379.621,04	0,32736%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FHE-FQS	96.952.921	2,39	231.523.575,35	95.099.379.621,04	0,24345%
MINÉRIO DE FERRO	RJ	PARACAMBI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	96.952.921	1,06	102.285.331,66	95.099.379.621,04	0,10756%
MINÉRIO DE FERRO	RJ	PARAIBA DO SUL	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBN-FCQ	59.146	0,23	13.603,58	95.099.379.621,04	0,00001%
MINÉRIO DE FERRO	RJ	PARAIBA DO SUL	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVC-FPS	59.146	8,11	479.614,91	95.099.379.621,04	0,00050%
MINÉRIO DE FERRO	RJ	PARAIBA DO SUL	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAP-FVC	59.146	5,37	317.614,02	95.099.379.621,04	0,00033%
MINÉRIO DE FERRO	RJ	PARAIBA DO SUL	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPS-FBN	59.146	5,31	313.769,53	95.099.379.621,04	0,00033%
MINÉRIO DE FERRO	RJ	PINHEIRAL	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVA-FPL	949.168	6,58	6.240.779,60	95.099.379.621,04	0,00656%
MINÉRIO DE FERRO	RJ	PINHEIRAL	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FRK	949.168	5,29	5.021.098,72	95.099.379.621,04	0,00528%
MINÉRIO DE FERRO	RJ	PINHEIRAL	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FVA	97.012.067	6,58	637.854.340,53	95.099.379.621,04	0,67072%
MINÉRIO DE FERRO	RJ	PINHEIRAL	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	97.012.067	5,29	513.193.834,43	95.099.379.621,04	0,53964%
MINÉRIO DE FERRO	RJ	PORTO REAL	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAN-FFL	861.302	7,32	6.305.591,94	95.099.379.621,04	0,00663%
MINÉRIO DE FERRO	RJ	QUATIS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FOA	344.156	11,45	3.940.586,20	95.099.379.621,04	0,00414%
MINÉRIO DE FERRO	RJ	QUATIS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEU-FPT	344.156	7,75	2.668.241,47	95.099.379.621,04	0,00281%
MINÉRIO DE FERRO	RJ	QUATIS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FJQ	344.156	5,09	1.750.721,57	95.099.379.621,04	0,00184%
MINÉRIO DE FERRO	RJ	QUATIS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	101.639.262	11,45	1.163.769.549,90	95.099.379.621,04	1,22374%
MINÉRIO DE FERRO	RJ	QUATIS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPT-FEU	101.639.262	7,75	788.009.198,29	95.099.379.621,04	0,82862%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	RJ	QUATIS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FPT	101.639.262	5,09	517.038.925,79	95.099.379.621,04	0,54368%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FFU	344.156	9,46	3.256.748,23	95.099.379.621,04	0,00342%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FRP	344.156	3,64	1.252.039,53	95.099.379.621,04	0,00132%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FJQ-FOA	344.156	2,64	908.571,84	95.099.379.621,04	0,00096%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFU-FOA	101.639.262	9,46	961.812.336,31	95.099.379.621,04	1,01138%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRP-FFU	101.639.262	3,64	369.763.635,16	95.099.379.621,04	0,38882%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOA-FJQ	101.639.262	2,64	268.327.651,68	95.099.379.621,04	0,28215%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAN-FFL	861.302	8,08	6.962.765,37	95.099.379.621,04	0,00732%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEP-FIA	861.302	6,41	5.516.639,31	95.099.379.621,04	0,00580%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQU-FEP	861.302	2,58	2.220.436,56	95.099.379.621,04	0,00233%
MINÉRIO DE FERRO	RJ	RESENDE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FMU-FAN	861.302	3,99	3.433.296,19	95.099.379.621,04	0,00361%
MINÉRIO DE FERRO	RJ	RIO DAS FLORES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBL-FAI	59.146	0,57	33.417,49	95.099.379.621,04	0,00004%
MINÉRIO DE FERRO	RJ	RIO DE JANEIRO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-HSG	6.837.614	10,18	69.572.722,45	95.099.379.621,04	0,07316%
MINÉRIO DE FERRO	RJ	RIO DE JANEIRO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-HIT	6.837.614	0,70	4.752.141,73	95.099.379.621,04	0,00500%
MINÉRIO DE FERRO	RJ	RIO DE JANEIRO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	HIT-FBA	335.690	0,70	233.304,55	95.099.379.621,04	0,00025%
MINÉRIO DE FERRO	RJ	SEROPEDICA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FFX	949.168	9,98	9.475.544,14	95.099.379.621,04	0,00996%
MINÉRIO DE FERRO	RJ	SEROPEDICA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FGD	949.168	8,42	7.994.842,06	95.099.379.621,04	0,00841%
MINÉRIO DE FERRO	RJ	SEROPEDICA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FQS	949.168	3,00	2.850.351,50	95.099.379.621,04	0,00300%
MINÉRIO DE FERRO	RJ	SEROPEDICA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBA-FOS	949.168	2,12	2.009.388,66	95.099.379.621,04	0,00211%
MINÉRIO DE FERRO	RJ	SEROPEDICA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FFX-FOS	96.952.921	9,98	967.881.010,34	95.099.379.621,04	1,01776%
MINÉRIO DE FERRO	RJ	SEROPEDICA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGD-FFX	96.952.921	8,42	816.634.453,58	95.099.379.621,04	0,85872%
MINÉRIO DE FERRO	RJ	SEROPEDICA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQS-FGD	96.952.921	3,00	291.149.621,76	95.099.379.621,04	0,30615%
MINÉRIO DE FERRO	RJ	SEROPEDICA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FOS-FBA	96.952.921	2,12	205.249.333,76	95.099.379.621,04	0,21583%
MINÉRIO DE FERRO	RJ	TRES RIOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBN-FCQ	59.146	3,45	203.935,41	95.099.379.621,04	0,00021%
MINÉRIO DE FERRO	RJ	TRES RIOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCQ-FTR	59.146	1,46	86.234,87	95.099.379.621,04	0,00009%
MINÉRIO DE FERRO	RJ	TRES RIOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCQ-FTR	59.146	1,45	85.879,99	95.099.379.621,04	0,00009%
MINÉRIO DE FERRO	RJ	TRES RIOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBN-FCQ	59.146	1,12	66.184,37	95.099.379.621,04	0,00007%
MINÉRIO DE FERRO	RJ	TRES RIOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTR-FFP	59.146	4,83	285.556,89	95.099.379.621,04	0,00030%
MINÉRIO DE FERRO	RJ	VALENCA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVS-FBJ	59.146	2,74	161.882,60	95.099.379.621,04	0,00017%
MINÉRIO DE FERRO	RJ	VALENCA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBJ-FBL	59.146	2,58	152.596,68	95.099.379.621,04	0,00016%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBJ-FBL	59.146	11,89	703.009,36	95.099.379.621,04	0,00074%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBL-FAI	59.146	7,80	461.043,07	95.099.379.621,04	0,00048%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAT-FDR	59.146	7,34	434.190,79	95.099.379.621,04	0,00046%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDR-FVS	59.146	7,10	419.936,60	95.099.379.621,04	0,00044%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAI-FSL	59.146	4,75	280.825,21	95.099.379.621,04	0,00030%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FNY-FAP	59.146	4,25	251.488,79	95.099.379.621,04	0,00026%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAP-FVC	59.146	3,28	193.821,44	95.099.379.621,04	0,00020%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FNC-FNY	59.146	2,76	163.124,67	95.099.379.621,04	0,00017%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSL-FNC	59.146	2,73	161.527,73	95.099.379.621,04	0,00017%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVS-FBJ	59.146	1,36	80.201,98	95.099.379.621,04	0,00008%
MINÉRIO DE FERRO	RJ	VASSOURAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDQ-FAT	59.146	0,10	5.737,16	95.099.379.621,04	0,00001%
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FVR	949.168	6,76	6.413.528,18	95.099.379.621,04	0,00674%
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FIV	344.156	3,19	1.096.825,17	95.099.379.621,04	0,00115%
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPL-FRK	949.168	2,79	2.650.077,06	95.099.379.621,04	0,00279%
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FBB	344.156	1,40	480.441,78	95.099.379.621,04	0,00051%
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVR-FRK	97.012.067	6,76	655.510.536,72	95.099.379.621,04	0,68929%
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIV-FVR	102.500.564	3,19	326.669.297,47	95.099.379.621,04	0,34350%
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRK-FPL	97.012.067	2,79	270.857.691,06	95.099.379.621,04	0,28482%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	RJ	VOLTA REDONDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FBB-FIV	102.500.564	1,40	143.090.787,34	95.099.379.621,04	0,15046%
MINÉRIO DE FERRO	SP	APARECIDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRA-FAD	861.302	5,88	5.060.149,25	95.099.379.621,04	0,00532%
MINÉRIO DE FERRO	SP	APARECIDA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAD-FGU	861.302	1,88	1.617.525,16	95.099.379.621,04	0,00170%
MINÉRIO DE FERRO	SP	CACAPAVA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCA-FUI	829.038	7,86	6.517.067,72	95.099.379.621,04	0,00685%
MINÉRIO DE FERRO	SP	CACAPAVA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEA-FCA	829.038	6,84	5.673.936,07	95.099.379.621,04	0,00597%
MINÉRIO DE FERRO	SP	CACHOEIRA PAULISTA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLR-FCP	861.302	4,36	3.758.721,93	95.099.379.621,04	0,00395%
MINÉRIO DE FERRO	SP	CACHOEIRA PAULISTA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCP-FCZ	861.302	3,27	2.817.318,84	95.099.379.621,04	0,00296%
MINÉRIO DE FERRO	SP	CANAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLR-FCP	861.302	5,89	5.071.346,18	95.099.379.621,04	0,00533%
MINÉRIO DE FERRO	SP	CRUZEIRO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCP-FCZ	861.302	7,83	6.745.717,26	95.099.379.621,04	0,00709%
MINÉRIO DE FERRO	SP	CRUZEIRO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCZ-FVQ	861.302	4,55	3.916.340,19	95.099.379.621,04	0,00412%
MINÉRIO DE FERRO	SP	GUARAREMA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIP-FRE	829.038	9,78	8.107.991,64	95.099.379.621,04	0,00853%
MINÉRIO DE FERRO	SP	GUARATINGUETA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGU-FEN	861.302	5,06	4.357.326,82	95.099.379.621,04	0,00458%
MINÉRIO DE FERRO	SP	GUARATINGUETA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FAD-FGU	861.302	2,93	2.522.753,56	95.099.379.621,04	0,00265%
MINÉRIO DE FERRO	SP	GUARATINGUETA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEN-FLR	861.302	2,26	1.949.126,43	95.099.379.621,04	0,00205%
MINÉRIO DE FERRO	SP	ITAQUAQUECETUBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	IRA-FPI	829.038	9,92	8.223.227,92	95.099.379.621,04	0,00865%
MINÉRIO DE FERRO	SP	ITAQUAQUECETUBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ISU-IRA	829.038	0,90	748.621,31	95.099.379.621,04	0,00079%
MINÉRIO DE FERRO	SP	ITAQUAQUECETUBA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPI-FST	829.038	3,90	3.235.735,31	95.099.379.621,04	0,00340%
MINÉRIO DE FERRO	SP	JACAREI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRE-FPA	829.038	15,86	13.146.884,60	95.099.379.621,04	0,01382%
MINÉRIO DE FERRO	SP	JACAREI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPA-FSJ	829.038	2,59	2.148.866,50	95.099.379.621,04	0,00226%
MINÉRIO DE FERRO	SP	JACAREI	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIP-FRE	829.038	0,54	443.535,33	95.099.379.621,04	0,00047%
MINÉRIO DE FERRO	SP	LAVRINHAS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCZ-FVQ	861.302	10,18	8.764.609,15	95.099.379.621,04	0,00922%
MINÉRIO DE FERRO	SP	LORENA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEN-FLR	861.302	5,10	4.393.501,50	95.099.379.621,04	0,00462%
MINÉRIO DE FERRO	SP	LORENA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FLR-FCP	861.302	4,73	4.069.651,95	95.099.379.621,04	0,00428%
MINÉRIO DE FERRO	SP	MOGI DAS CRUZES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FST-FIP	829.038	10,24	8.487.691,04	95.099.379.621,04	0,00893%
MINÉRIO DE FERRO	SP	MOGI DAS CRUZES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPI-FST	829.038	8,78	7.280.611,72	95.099.379.621,04	0,00766%
MINÉRIO DE FERRO	SP	MOGI DAS CRUZES	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FIP-FRE	829.038	3,46	2.865.155,33	95.099.379.621,04	0,00301%
MINÉRIO DE FERRO	SP	PINDAMONHANGABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTA-FPG	829.038	6,41	5.310.817,43	95.099.379.621,04	0,00558%
MINÉRIO DE FERRO	SP	PINDAMONHANGABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPG-FCT	829.038	6,28	5.203.871,53	95.099.379.621,04	0,00547%
MINÉRIO DE FERRO	SP	PINDAMONHANGABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCT-FPR	861.302	5,97	5.137.666,43	95.099.379.621,04	0,00540%
MINÉRIO DE FERRO	SP	PINDAMONHANGABA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCT-FPR	861.302	0,79	676.983,37	95.099.379.621,04	0,00071%
MINÉRIO DE FERRO	SP	POA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ISU-IRA	829.038	2,61	2.161.302,07	95.099.379.621,04	0,00227%
MINÉRIO DE FERRO	SP	QUELUZ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FVQ-FQU	861.302	8,89	7.653.529,57	95.099.379.621,04	0,00805%
MINÉRIO DE FERRO	SP	QUELUZ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FQU-FEP	861.302	8,07	6.954.152,35	95.099.379.621,04	0,00731%
MINÉRIO DE FERRO	SP	QUELUZ	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCZ-FVQ	861.302	0,54	463.380,48	95.099.379.621,04	0,00049%
MINÉRIO DE FERRO	SP	ROSEIRA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FRA-FAD	861.302	4,61	3.969.740,92	95.099.379.621,04	0,00417%
MINÉRIO DE FERRO	SP	ROSEIRA	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPR-FRA	861.302	3,30	2.837.990,09	95.099.379.621,04	0,00298%
MINÉRIO DE FERRO	SP	SAO JOSE DOS CAMPOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FPA-FSJ	829.038	11,30	9.365.642,29	95.099.379.621,04	0,00985%
MINÉRIO DE FERRO	SP	SAO JOSE DOS CAMPOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FSJ-FEM	829.038	6,17	5.116.822,54	95.099.379.621,04	0,00538%
MINÉRIO DE FERRO	SP	SAO JOSE DOS CAMPOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEM-FEG	829.038	5,01	4.150.993,27	95.099.379.621,04	0,00436%
MINÉRIO DE FERRO	SP	SAO JOSE DOS CAMPOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEG-FEA	829.038	1,76	1.461.593,99	95.099.379.621,04	0,00154%
MINÉRIO DE FERRO	SP	SAO JOSE DOS CAMPOS	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FEA-FCA	829.038	1,20	997.332,71	95.099.379.621,04	0,00105%
MINÉRIO DE FERRO	SP	SUZANO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	ISU-IRA	829.038	6,25	5.180.658,46	95.099.379.621,04	0,00545%
MINÉRIO DE FERRO	SP	TAUBATE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FUI-FTA	829.038	5,90	4.891.324,20	95.099.379.621,04	0,00514%
MINÉRIO DE FERRO	SP	TAUBATE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FCA-FUI	829.038	4,01	3.323.613,34	95.099.379.621,04	0,00349%
MINÉRIO DE FERRO	SP	TAUBATE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTA-FPG	829.038	3,72	3.082.363,28	95.099.379.621,04	0,00324%
MINÉRIO DE FERRO	SP	TREMEMBE	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FTA-FPG	829.038	4,21	3.492.737,09	95.099.379.621,04	0,00367%
MINÉRIO DE FERRO	MS	CORUMBA	RMO	15	MS	RMO	JAM-JAB	2.520.391	18,48	46.574.305,29	133.106.889,49	34,99015%
MINÉRIO DE FERRO	MS	CORUMBA	RMO	15	MS	RMO	JAB-JKE	2.520.391	29,99	75.578.964,92	133.106.889,49	56,78066%

Substância	UF	Município	Ferrovia	Conj.	UF conj.	Ferr. conj.	Trecho	Quant. (t)	Ext. (km)	TKUm	TKUf	Índice
MINÉRIO DE FERRO	MS	CORUMBA	RMO	15	MS	RMO	JKE-JPC	2.520.391	4,35	10.953.619,29	133.106.889,49	8,22919%
MINÉRIO DE MANGANÊS	MA	ACAILANDIA	EFC	16	MA, PA	EFC	QMA-QAL	298.336	21,09	6.291.607,90	223.456.945,70	2,81558%
MINÉRIO DE MANGANÊS	MA	ACAILANDIA	EFC	16	MA, PA	EFC	QAL-QNV	298.336	93,02	27.752.408,06	223.456.945,70	12,41958%
MINÉRIO DE MANGANÊS	MA	ALTO ALEGRE DO PINDARE	EFC	16	MA, PA	EFC	QNV-QSI	298.336	85,71	25.570.080,22	223.456.945,70	11,44296%
MINÉRIO DE MANGANÊS	MA	ANAJATUBA	EFC	16	MA, PA	EFC	QSI-QRO	298.336	20,55	6.131.699,81	223.456.945,70	2,74402%
MINÉRIO DE MANGANÊS	MA	ARARI	EFC	16	MA, PA	EFC	QSI-QRO	298.336	26,68	7.958.709,47	223.456.945,70	3,56163%
MINÉRIO DE MANGANÊS	MA	BACABEIRA	EFC	16	MA, PA	EFC	QSI-QRO	298.336	19,72	5.883.782,59	223.456.945,70	2,63307%
MINÉRIO DE MANGANÊS	MA	BACABEIRA	EFC	16	MA, PA	EFC	QRO-QPM	298.336	20,41	6.087.546,08	223.456.945,70	2,72426%
MINÉRIO DE MANGANÊS	MA	BOM JARDIM	EFC	16	MA, PA	EFC	QNV-QSI	298.336	5,86	1.748.248,96	223.456.945,70	0,78237%
MINÉRIO DE MANGANÊS	MA	BOM JESUS DAS SELVAS	EFC	16	MA, PA	EFC	QAL-QNV	298.336	28,94	8.633.843,84	223.456.945,70	3,86376%
MINÉRIO DE MANGANÊS	MA	BOM JESUS DAS SELVAS	EFC	16	MA, PA	EFC	QNV-QSI	298.336	20,24	6.038.618,98	223.456.945,70	2,70236%
MINÉRIO DE MANGANÊS	MA	BURITICUPU	EFC	16	MA, PA	EFC	QNV-QSI	298.336	28,36	8.460.808,96	223.456.945,70	3,78633%
MINÉRIO DE MANGANÊS	MA	CIDELANDIA	EFC	16	MA, PA	EFC	QMA-QAL	298.336	46,88	13.985.693,34	223.456.945,70	6,25879%
MINÉRIO DE MANGANÊS	MA	IGARAPE DO MEIO	EFC	16	MA, PA	EFC	QSI-QRO	298.336	26,17	7.805.961,44	223.456.945,70	3,49327%
MINÉRIO DE MANGANÊS	MA	ITAPECURU MIRIM	EFC	16	MA, PA	EFC	QSI-QRO	298.336	13,16	3.924.908,42	223.456.945,70	1,75645%
MINÉRIO DE MANGANÊS	MA	ITINGA DO MARANHAO	EFC	16	MA, PA	EFC	QAL-QNV	298.336	7,58	2.261.386,88	223.456.945,70	1,01200%
MINÉRIO DE MANGANÊS	MA	MIRANDA DO NORTE	EFC	16	MA, PA	EFC	QSI-QRO	298.336	8,32	2.482.752,19	223.456.945,70	1,11107%
MINÉRIO DE MANGANÊS	MA	MONCAO	EFC	16	MA, PA	EFC	QSI-QRO	298.336	12,92	3.853.009,44	223.456.945,70	1,72427%
MINÉRIO DE MANGANÊS	MA	PINDARE-MIRIM	EFC	16	MA, PA	EFC	QNV-QSI	298.336	12,71	3.791.253,89	223.456.945,70	1,69664%
MINÉRIO DE MANGANÊS	MA	SANTA INES	EFC	16	MA, PA	EFC	QSI-QRO	298.336	9,59	2.861.042,24	223.456.945,70	1,28036%
MINÉRIO DE MANGANÊS	MA	SANTA INES	EFC	16	MA, PA	EFC	QNV-QSI	298.336	1,61	481.514,30	223.456.945,70	0,21548%
MINÉRIO DE MANGANÊS	MA	SANTA LUZIA	EFC	16	MA, PA	EFC	QNV-QSI	298.336	4,29	1.279.861,44	223.456.945,70	0,57276%
MINÉRIO DE MANGANÊS	MA	SANTA RITA	EFC	16	MA, PA	EFC	QSI-QRO	298.336	14,86	4.431.781,28	223.456.945,70	1,98328%
MINÉRIO DE MANGANÊS	MA	SAO FRANCISCO DO BREJAO	EFC	16	MA, PA	EFC	QMA-QAL	298.336	5,04	1.504.210,11	223.456.945,70	0,67315%
MINÉRIO DE MANGANÊS	MA	SAO LUIS	EFC	16	MA, PA	EFC	QPM-APB	298.336	7,10	2.118.185,60	223.456.945,70	0,94792%
MINÉRIO DE MANGANÊS	MA	SAO LUIS	EFC	16	MA, PA	EFC	A99-QPI	298.336	2,77	826.092,38	223.456.945,70	0,36969%
MINÉRIO DE MANGANÊS	MA	SAO LUIS	EFC	16	MA, PA	EFC	A03-A99	298.336	1,47	437.360,58	223.456.945,70	0,19572%
MINÉRIO DE MANGANÊS	MA	SAO LUIS	EFC	16	MA, PA	EFC	APB-ABL	298.336	0,70	208.835,20	223.456.945,70	0,09346%
MINÉRIO DE MANGANÊS	MA	SAO LUIS	EFC	16	MA, PA	EFC	ABL-A03	298.336	0,30	89.500,80	223.456.945,70	0,04005%
MINÉRIO DE MANGANÊS	MA	SAO LUIS	EFC	16	MA, PA	EFC	QRO-QPM	298.336	18,64	5.560.684,70	223.456.945,70	2,48848%
MINÉRIO DE MANGANÊS	MA	SAO PEDRO DA AGUA BRANCA	EFC	16	MA, PA	EFC	QMA-QAL	298.336	48,42	14.446.025,79	223.456.945,70	6,46479%
MINÉRIO DE MANGANÊS	MA	TUFILANDIA	EFC	16	MA, PA	EFC	QNV-QSI	298.336	14,42	4.300.811,78	223.456.945,70	1,92467%
MINÉRIO DE MANGANÊS	MA	VILA NOVA DOS MARTIRIOS	EFC	16	MA, PA	EFC	QMA-QAL	298.336	34,96	10.428.931,55	223.456.945,70	4,66709%
MINÉRIO DE MANGANÊS	MA	VITORIA DO MEARIM	EFC	16	MA, PA	EFC	QSI-QRO	298.336	21,48	6.407.958,94	223.456.945,70	2,86765%
MINÉRIO DE MANGANÊS	PA	BOM JESUS DO TO	EFC	16	MA, PA	EFC	QMA-QAL	298.336	42,94	12.810.249,50	223.456.945,70	5,73276%
MINÉRIO DE MANGANÊS	PA	MARABA	EFC	16	MA, PA	EFC	QMA-QAL	298.336	22,13	6.601.579,01	223.456.945,70	2,95430%
AREIA	MG	NAZARENO	MRS	4	MG, RJ, SP	MRS	FDE-FGT	10.854	1,40	15.163,04	98.999.876,06	0,01532%
MINÉRIO DE FERRO	MG	NAZARENO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FGT-FDE	344.156	1,40	480.785,93	95.099.379.621,04	0,00051%
MINÉRIO DE FERRO	MG	NAZARENO	MRS	14	BA, ES, MG, RJ, SP	EFVM, FCA, MRS	FDE-FGT	101.242.028	1,40	141.435.113,12	95.099.379.621,04	0,14872%
CALCÁRIO DOLOMÍTICO	MG	NAZARENO	MRS	5	ES, MG, RJ	EFVM, FCA, MRS	FGT-FRN	166.731	1,43	238.758,79	726.767.418,64	0,03285%