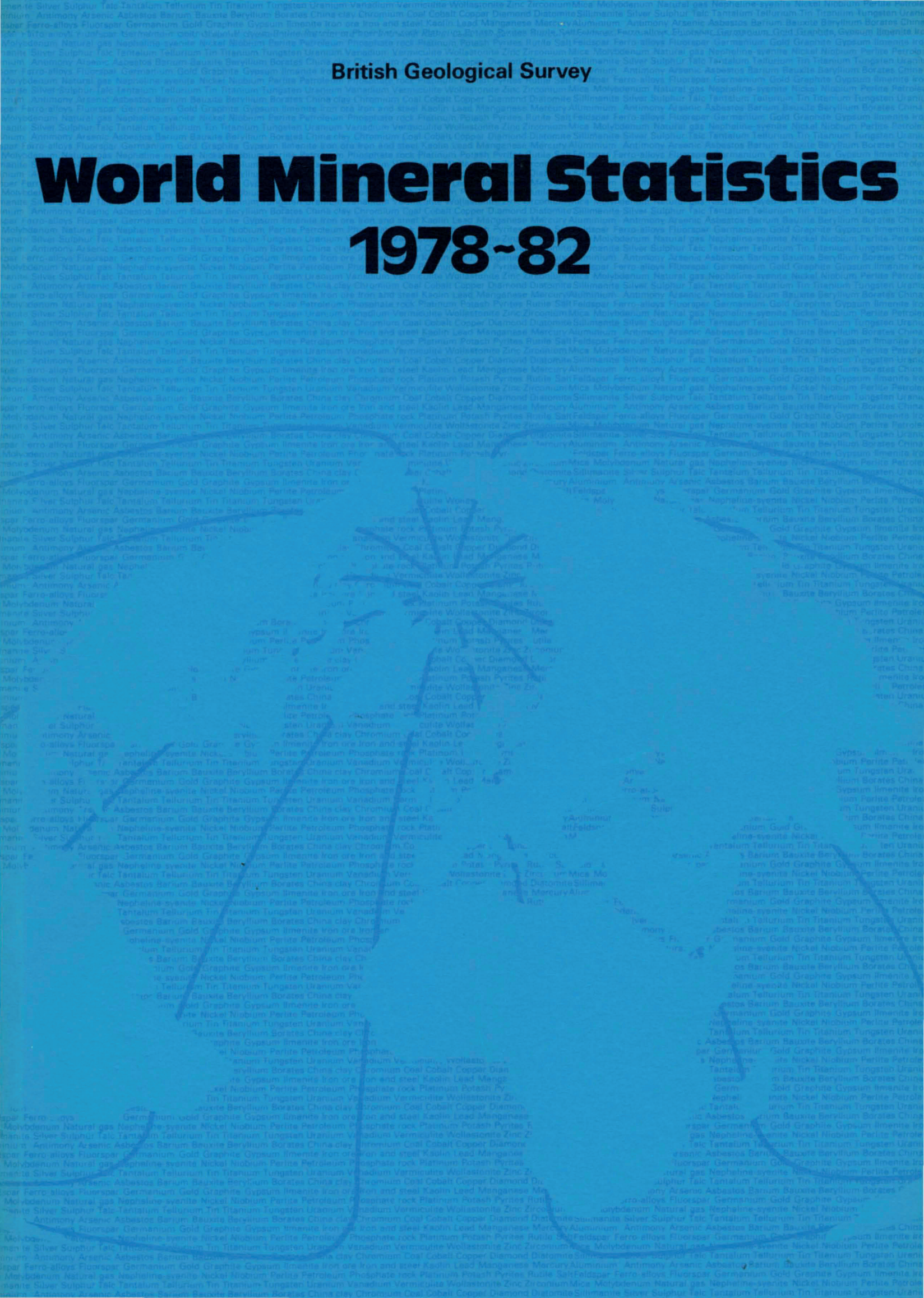


World Mineral Statistics 1978-82



BRITISH GEOLOGICAL SURVEY

Natural Environment Research Council

WORLD MINERAL STATISTICS 1978–82

Production: Exports: Imports

Compiled by G. J. Lofty, N. E. Sharp, J. A. Hillier, D. C. T. Singh, M. K. Lehall
and M. M. Davis

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On 1 January 1984 the Institute of Geological Sciences was renamed the British Geological Survey. It continues to carry out the geological survey of Great Britain and Northern Ireland (the latter as an agency service for the government of Northern Ireland), and of the surrounding continental shelf, as well as its basic research projects. It also undertakes programmes of British technical aid in geology in developing countries as arranged by the Overseas Development Administration.

The British Geological Survey is a component body of the Natural Environment Research Council.

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Compilers

Staff of the Minerals Strategy and Economics Research Group
British Geological Survey, London

PREFACE

For over sixty years the British Geological Survey and its predecessors have published statistics on the production of, and trade in, minerals throughout the world for the information of government, industry and the general public. The well-known series of annual publications, the *Statistical Summary of the Mineral Industry: World Production, Exports and Imports*, began with a volume containing information for the years 1913-18 and concluded with an edition, covering the period 1967-71, published in 1973. This was then succeeded by a new annual series entitled *World Mineral Statistics*, first published in 1978.

The first three editions of *World Mineral Statistics* presented data for 1970-78 inclusive, thus providing continuity with the old series. Each volume contained data for five years and was advanced two years at a time to bring the new series up to date as quickly as possible. The fourth volume, for the years 1975-79, re-established the principle of a one-year roll forward for successive editions and this seventh volume presents data for the period 1978-82. In each new volume, account is taken of revisions and information received after publication of the previous issue, so that the data for every year given are as up to date as is practicable. The objective remains to present the latest official information obtainable from primary sources, that is, from the individual producing and trading countries, rather than to reproduce data from compilations made by other organisations working in the field of world mineral statistics. Such sources have, however, been fully consulted and the invaluable assistance and co-operation provided to the British Geological Survey by those numerous national and international organisations is gratefully acknowledged.

The scope of the series has been increased with each volume, and data for a wide spectrum of metallic and industrial minerals are now given; new tables are added whenever the need arises. In this volume, it should be noted that for the first time statistics for the Federal Republic of Germany include shipments to, and purchases from, the German Democratic Republic.

With respect to trade information, our staff have continued their efforts to fill gaps in the reported data by analyses of world trade statistics.

It is hoped that this presentation of economic and statistical information will provide the reader with a comprehensive basis for interpreting and analysing the activities and trends of today's world mineral industry. Criticism and suggestions that might help us better to meet the changing needs of the users of this publication are cordially invited.

G M Brown, FRS
Director

British Geological Survey
Keyworth
Nottingham NG12 5GG

February 1984

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EXPLANATORY NOTES

Coverage

World Mineral Statistics covers the majority of economically important, and internationally traded, mineral commodities; with few exceptions its range is the same as that in the *Statistical Summary of the Mineral Industry*, the predecessor of this series, which was discontinued in 1971. For each commodity constant efforts are made to ensure that as many producing and trading countries as possible are reported and that trade data cover all major traded forms. For some commodities, where statistics on production and trade are not publicly available, estimates are made. Users of this compilation are advised that more statistical information than can be included in a publication of this nature is held on file in the Minerals Strategy and Economics Research Group and is available for consultation.

Arrangement of countries

After the United Kingdom, if listed, countries are ordered alphabetically in geographical groupings as follows:

- European Economic Community (EEC)
- Europe other than EEC; including the Soviet Union
- Africa
- North and Central America, including the Caribbean
- South America
- Asia
- Australasia, including the Pacific Islands

So far as possible the nomenclature follows the London Diplomatic List and United Nations usage.

Production

Metals Mine production of many metals is expressed in terms of metal content. This is clearly indicated at the head of the table, adjacent to the unit used. For aluminium, cobalt, copper, iron, lead, nickel, tin and zinc, mine production and metal production are shown in separate tables. Unless otherwise specified, metal production statistics relate to metal recovered from both domestic or imported materials, whether primary or secondary.

Canada Production of Canadian minerals is shown throughout by the official figures for 'sales and shipments'.

Trade

Federal Republic of Germany Data include shipments to, and purchases from, the German Democratic Republic.

South Africa Import data are taken from the trade statistics of the common customs area, which includes Botswana, Lesotho, South Africa, Namibia and Swaziland, and relate to this area as a whole. Where separate data are available for any of these countries they have also been shown even though this may result in some double counting.

Estimates for South African exports, based on reconstruction from importing countries, may include material originating in any of the countries of the common customs area and so involve some double counting on tables where these are listed separately.

USA US trade statistics show trade between the US customs territory and foreign countries, but exclude trade between the US and Puerto Rico, and between the US and the Virgin Islands (up to and including 1980), Guam, American Samoa and other US possessions. Also excluded is trade between any of these outlying areas, shipments from US possessions to foreign countries, and shipments for the use of the US Government in foreign countries.

United Kingdom Export data for 1981 are estimates obtained by adding together the figures for the months when exports were fully processed (January and February, and September to December) and those from sampling (March to August). The more detailed figures are likely to be unreliable and therefore should be used and interpreted with considerable caution.

General Although every effort has been made to provide comprehensive coverage of trade statistics the resulting trade compilations depend on the nature of the data available. The fact that a country is not shown as trading in a particular commodity does not necessarily imply that there is no trade in that item. The commodity may not be separately identified in the available trade statistics or may not be traded in significant quantities.

Where an estimate for a trade statistic has been reconstructed from the imports/exports of other countries, the resulting figure may be conservative, as complete coverage of world trade is seldom available.

In general, export statistics include re-exports. The distinction is only made when re-exports are recorded separately in the relevant national trade account and are deemed to be significant.

Tables showing trade in metals covered by Standard International Trade Classification (Revision 2) 688.0, 689.1 & 9, and 699.9 (Antimony, Bismuth, Cadmium, Chromium, Cobalt, Manganese, Molybdenum, Tantalum–Niobium, Titanium, Tungsten, Vanadium and Zirconium) include under the term 'metal', unwrought and wrought forms, powder, alloys, waste and scrap, unless these are separately shown. Trade tables of other metals include only unwrought forms under the term 'metal'.

Acknowledgements

Compilation of this volume of mineral statistics has been possible only by obtaining information from a very large number of organisations throughout the world, chiefly home and overseas government departments and specialist national or international authorities concerned with particular sectors of the minerals or metals industries. To all these bodies the British Geological Survey expresses its grateful acknowledgement for the information made available, whether in published form or provided by direct correspondence.

Among the numerous overseas government agencies which have provided valuable information, particular acknowledgement is made to the United States Bureau of Mines; the Department of Energy, Mines and Resources of Canada; the Bureau of Mineral Resources, Geology and Geophysics of Australia; the Department of Mines of South Africa; the Indian Bureau of Mines; and the Mines Departments of other countries whose regular statements, yearbooks and other reports are worthy of direct consultation by readers in search of detail.

Specialist commodity organisations which have kindly allowed information to be reproduced, include the British Sulphur Corporation, the International Lead and Zinc Study Group, the International Tin Council, the UK Iron and Steel Statistics Bureau, ISMA Ltd, Samuel Montagu & Company Ltd, the UN Food and Agriculture Organization, and the UNCTAD Committee on Tungsten. In a few instances, information on specific commodities has been obtained directly from company sources.

Supplementary information is also obtained from publications dealing with a wider range of commodities such as American Bureau of Metal Statistics, *Non-ferrous Metal Data*; Bureau de Documentation Minière, *Annales des Mines*; Engineering and Mining Journal, *Annual Review and Outlook*; Groupe IMETAL, *Annuaire Statistique Minemet*; Metallgesellschaft AG, *Metal Statistics*; Mining Journal, *Mining Annual Review*; Samim, *Metalli Non Ferrosi*; World Bureau of Metal Statistics, *World Metal Statistics*; World Mining, *Catalog, Survey & Directory*; and publications of the United Nations and its agencies.

Units

The statistics shown in this volume are expressed in metric units. The following factors are given for converting to non-metric units:

Tonnes × 0.9842 = long tons

Tonnes × 1.1023 = short tons

Kilograms × 2.2046 = pounds

Kilograms × 32.1507 = troy ounces

Cubic metres × 35.31467 = cubic feet

1 tonne of crude petroleum equals on average 7 barrels of crude petroleum.

Conversion of national currencies to pounds sterling has been made using the annual period average factors shown for each country in *International Financial Statistics* published by the International Monetary Fund.

Symbols

... Figures not available

0 Quantity less than half unit shown

– Nil

* Estimated

BGS British Geological Survey

Production of Bauxite

tonnes

Country	1978	1979	1980	1981	1982
France	2 042 000	2 044 000	1 925 000	1 865 000	1 687 000
Greece	2 614 343	2 723 255	3 258 856	3 218 231	2 845 498
Italy	24 410	26 095	23 260	19 000	23 810
Hungary	2 899 000	2 976 000	2 950 000	2 914 000	2 627 000
Romania	708 000	710 000	710 000	680 000	670 000
Soviet Union (a)	* 6 700 000	* 6 500 000	* 6 400 000	* 6 400 000	* 6 000 000
Spain	9 274	16 845	9 632	8 930	—
Turkey	449 126	155 163	546 546	589 727	508 391
Yugoslavia	2 566 000	3 012 000	3 138 383	3 249 000	3 668 000
Ghana	327 900	235 300	224 500	179 598	63 072
Guinea	11 648 000	14 652 700	13 427 100	12 832 700	11 478 900
Sierra Leone	804 647	583 262	673 969	609 625	630 000
Zimbabwe	4 818	5 076	4 281	5 139	7 533
Dominican Republic (b)	568 099	524 141	510 462	405 720	152 250
Haiti (c)	624 300	436 300	293 800	409 700	377 000
Jamaica	11 735 710	11 505 104	11 978 304	11 605 977	8 402 000
USA (b)	1 669 000	1 821 000	1 559 000	1 510 000	732 000
Brazil	1 401 101	2 883 745	6 688 015	6 969 140	5 043 000
Guyana	3 479 000	3 354 000	3 052 000	2 395 900	1 783 100
Suriname	5 021 000	4 769 000	4 893 000	4 125 000	3 276 300
China	* 1 400 000	* 1 500 000	* 1 700 000	* 1 800 000	* 1 950 000
India	1 663 000	1 952 000	1 785 000	1 932 000	1 847 000
Indonesia	1 007 746	1 051 905	1 249 123	1 203 380	704 252
Malaysia	615 060	386 520	920 356	700 866	589 000
Australia	24 292 511	27 583 429	27 178 974	25 441 392	23 625 042
World total	84 300 000	91 400 000	95 100 000	91 100 000	78 700 000

Note: In addition to the countries listed, Pakistan produces small amounts of bauxite

(a) Includes nepheline concentrates and alunite

(b) Dried bauxite equivalent

(c) Years ended 30 September of that stated

Production of Alumina

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	94 000	88 100	101 700	90 361	88 103
France	1 220 940	1 238 450	1 339 411	1 235 921	1 086 000
Germany, Federal Republic of	1 555 502	1 538 925	1 607 902	1 650 636	1 509 866
Greece	478 000	496 000	504 751	490 168	403 634
Italy	818 538	854 115	900 370	786 357	698 329
Czechoslovakia	64 363	64 200	147 525	149 283	151 219
German Democratic Republic	37 585	40 965	43 025	45 164	46 100
Hungary	797 971	802 025	816 648	792 000	745 000
Romania	449 000	502 000	534 000	558 000	585 000
Soviet Union	* 3 300 000	* 3 200 000	* 3 250 000	* 3 800 000	* 3 900 000
Spain	—	—	58	* 695 230	673 000
Turkey	74 244	75 143	137 519	131 400	84 204
Yugoslavia	496 479	836 428	1 058 366	1 037 227	1 072 000
Guinea	622 000	662 000	708 000	679 000	578 000
Canada	1 053 600	953 000	1 202 000	1 208 000	1 127 000
Jamaica	2 113 571	2 096 058	2 455 870	2 556 057	1 757 800
USA	* 5 960 000	* 6 450 000	* 6 810 000	* 5 960 000	4 130 000
Brazil	434 300	449 100	492 700	496 639	552 000
Guyana	249 500	280 000	296 300	157 000	73 000
Suriname	1 316 000	1 312 000	1 444 000	1 248 000	1 137 479
China	* 750 000	* 750 000	* 750 000	* 750 000	* 800 000
India	483 139	500 106	494 041	482 519	485 000
Japan	1 767 000	1 822 000	2 218 000	1 619 000	1 262 000
Taiwan	51 000	59 000	80 000	19 000	—
Australia	6 775 675	7 414 606	7 246 499	7 079 009	6 630 507
World total	31 000 000	32 500 000	34 600 000	33 700 000	29 600 000

Note: Where possible figures relate to the calcined equivalent weight (i.e. Al_2O_3) of alumina hydrate. In countries where all hydrate is destined for calcination, figures relate directly to calcined alumina

Production of Primary Aluminium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	346 200	359 474	374 446	339 183	240 806
France	391 385	395 090	431 945	435 609	390 413
Germany, Federal Republic of	739 543	741 946	730 669	728 875	722 688
Greece	144 000	145 040	146 777	148 230	136 612
Italy	271 707	270 185	291 199	269 495	232 861
Netherlands	261 164	257 719	258 621	261 983	250 925
Austria	91 284	92 694	94 393	94 219	93 908
Czechoslovakia	36 823	36 889	38 304	32 684	33 830
German Democratic Republic	* 65 000	* 60 000	* 62 000	* 60 000	* 58 000
Hungary	71 359	71 879	73 498	74 253	74 000
Iceland	73 537	71 047	73 111	73 476	75 241
Norway	638 559	663 916	653 377	633 585	636 934
Poland	100 000	96 600	95 100	66 000	42 700
Romania	213 000	217 000	241 000	242 000	240 000
Soviet Union	* 2 300 000	* 2 350 000	* 2 400 000	* 2 400 000	* 2 400 000
Spain	212 200	259 500	386 500	396 600	366 500
Sweden	82 019	81 955	81 195	81 795	78 900
Switzerland	79 468	82 974	86 302	82 221	75 256
Turkey	33 000	32 000	33 600	40 400	36 300
Yugoslavia	195 708	189 522	184 760	196 767	246 363
Cameroon	54 686	48 446	43 000	65 400	78 900
Egypt	100 400	101 200	120 000	142 000	141 000
Ghana	113 500	168 700	187 700	190 500	174 200
South Africa	81 000	86 300	86 600	83 701	107 100
Canada	1 048 469	860 286	1 068 198	1 115 691	1 064 800
Mexico	43 092	43 195	42 601	43 200	43 300
USA	4 357 900	4 556 878	4 653 585	4 489 000	3 274 000
Argentina	49 000	119 000	133 000	138 000	141 000
Brazil	186 365	238 397	260 611	256 418	299 054
Suriname	57 969	53 865	54 922	40 520	42 500
Venezuela	83 657	204 710	325 189	314 105	273 632
Bahrain	122 800	126 000	126 152	141 000	171 000
China	* 360 000	* 360 000	* 360 000	* 360 000	* 390 000
India	205 301	211 428	184 748	212 844	216 679
Iran	25 500	11 000	15 900	12 500	45 000
Japan	1 057 710	1 010 409	1 091 477	770 602	350 706
Korea, Republic of	17 700	17 500	17 800	17 400	15 000
Taiwan	50 512	56 218	63 549	30 532	10 120
Australia	263 361	269 575	303 494	379 427	380 796
New Zealand	149 832	153 557	154 741	153 979	163 420
World total	14 800 000	15 200 000	16 000 000	15 600 000	13 800 000

Exports of Bauxite, Alumina and Aluminium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Bauxite	659	2 813	2 953	2 155	3 870
Alumina	10 823	11 204	9 892	8 850	8 595
Alumina hydrate	25 200	22 358	32 786	30 772	28 423
Unwrought	74 117	88 914	74 195	65 994	60 943
Unwrought alloys	86 479	118 071	117 335	102 544	58 573
Scrap	12 706	28 187	35 693	38 008	60 351
Belgium-Luxembourg					
Bauxite	689	4 531	1 787	654	1 216
Alumina	185	1 152	744	660	469
Unwrought	1 048	820	4 167	17 166	4 273
Unwrought alloys	9 137	10 022	15 415	12 500	9 480
Scrap	28 726	33 532	36 800	38 469	40 444
Denmark					
Bauxite	41 561	51 989	46 483	19 424	2 366
Unwrought	3 364	4 032	105	133	2
Unwrought alloys	6 498	5 936	6 880	7 511	8 283
Scrap	7 345	11 581	11 883	12 440	11 762
France					
Bauxite	17 437	12 471	10 768	6 620	92 369
Alumina	226 873	257 371	267 408	159 532	196 038
Alumina hydrate	76 158	69 530	79 306	79 376	84 994
Unwrought	84 660	75 592	84 059	89 456	95 359
Unwrought alloys	81 758	82 006	93 319	100 882	87 324
Scrap	33 969	39 790	47 219	48 988	60 757
Germany, Federal Republic of					
Bauxite	12 260	21 985	22 645	22 885	33 744
Alumina	426 662	298 443	333 433	402 156	253 697
Alumina hydrate	122 823	157 368	146 091	180 931	184 972
Unwrought	107 670	67 653	61 141	78 731	75 076
Unwrought alloys	163 941	180 213	162 539	174 240	180 344
Scrap	52 982	52 224	69 144	69 922	67 719
Greece					
Bauxite	1 688 716	1 808 505	2 340 172	1 587 714	1 441 203
Alumina	174 355	266 882	203 175	159 000	130 000
Unwrought	85 275	73 805	60 244	69 225	66 608
Scrap	908	349	1 013	426	93
Irish Republic					
Alumina	1 752	1 580	1 543	1 925	2 309
Unwrought (a)	2 325	2 523	2 206	2 173	1 876
Scrap	840	2 151	3 526	2 365	3 479
Italy					
Bauxite	12 240	27 565	24 129	18 229	8 240
Alumina	311 007	392 949	398 630	222 113	256 578
Alumina hydrate	16 592	24 947	25 379	9 087	13 410
Unwrought	49 195	13 045	3 510	20 758	30 624
Unwrought alloys	20 069	9 350	8 256	29 047	23 490
Scrap	1 693	1 644	2 406	3 168	3 381
Netherlands					
Bauxite	3 295	26 323	13 441	12 502	4 268
Alumina	39 098	59 128	51 339	40 318	46 957
Alumina hydrate	421	358	517	12	49
Unwrought	170 048	219 367	233 644	220 103	223 807
Unwrought alloys	124 395	140 032	131 692	131 893	126 995
Scrap	61 994	67 297	74 331	74 778	73 669
Austria					
Unwrought	11 685	10 306	9 797	24 968	27 635
Scrap	42 570	38 864	32 736	56 371	51 406
Bulgaria					
Unwrought (a)(f)	* 4 000	* 4 150	* 4 800	* 3 600	* 3 600
Finland					
Unwrought (a)	2 652	1 338	3 887	4 643	6 306
Hungary					
Bauxite	601 203	595 687	541 943	498 322	467 375
Alumina	688 002	691 989	686 171	626 404	542 286
Alumina hydrate	8 605	9 455	7 667	6 930	9 667
Unwrought	77 777	80 556	84 216	85 741	48 363
Scrap	12 128	10 970	9 372	8 709	8 740

Exports of Bauxite, Alumina and Aluminium

tonnes

Country	1978	1979	1980	1981	1982
Iceland					
Unwrought (a)	77 349	76 226	67 318	63 817	61 532
Norway					
Unwrought	416 859	339 149	295 283	338 668	332 013
Unwrought alloys	213 382	226 155	225 897	184 993	212 759
Scrap	21 520	23 841	18 591	20 677	21 858
Portugal					
Scrap	2 720	4 000	3 322	4 426	...
Romania					
Unwrought	70 300	65 000	93 800	98 200	...
Soviet Union					
Unwrought	* 560 000	* 560 000	* 560 000	* 600 000	* 600 000
Spain					
Alumina	47	69	88	23 907	7 374
Unwrought	2 134	35 772	72 318	111 129)
Unwrought alloys	3 704	7 098	34 464	51 552	) 145 285
Sweden					
Bauxite	5 717	730	27	—	673
Alumina	88	132	569	621	740
Unwrought	28 656	9 775	2 451	2 958	2 317
Unwrought alloys	9 873	9 786	15 276	34 796	32 904
Scrap	2 256	1 628	2 516	2 257	2 446
Switzerland					
Alumina	163	1 189	1 311	301	320
Unwrought & scrap	32 876	47 376	44 953	44 982	52 981
Turkey					
Bauxite	28 725	2 600	9 400	109 417	31 686
Alumina	20 870	1 500	74 600	63 018	...
Yugoslavia					
Bauxite	676 163	524 928	246 821	266 000	603 716
Alumina	52	46 365	428 066	613 172)
Alumina hydrate	102 066	417 387	225 358	19 955	) 506 365
Unwrought	55 641	41 639	50 546	58 171)
Unwrought alloys	3 089	4 540	3 325	300	) 91 045
Scrap	3 127	352	276	177	508
Cameroon					
Unwrought	7 244	30 518	9 708	44 500	55 400
Egypt					
Unwrought & scrap	69 235	41 240	33 310	76 466	...
Ghana					
Bauxite	293 156	203 000	223 000	151 000	...
Unwrought (a)	109 056	152 600	166 200	134 300	174 200
Guinea					
Bauxite (f)	* 9 200 000	* 8 800 000	* 9 300 000	* 10 300 000	* 10 200 000
Alumina (f)	* 400 000	* 400 000	* 325 000	* 207 000	* 150 000
Sierra Leone					
Bauxite	550 280	770 294	730 905	631 145	...
South Africa					
Unwrought (a)	* 37 400	* 29 400	* 12 600	* 3 300	* 16 000
Canada					
Alumina (b)	32 699	26 543	39 541	44 098	28 366
Unwrought	863 532	552 150	784 818	726 061	896 450
Scrap	57 774	70 464	78 615	78 782	62 796
Dominican Republic					
Bauxite	756 667	634 729	605 803	457 159	140 555
Haiti (e)					
Bauxite	629 524	609 057	579 440	428 811	377 051
Jamaica					
Bauxite	6 447 769	6 469 155	6 145 848	5 370 601	4 079 504
Alumina	2 139 703	2 061 202	2 361 139	2 545 149	1 752 755

Exports of Bauxite, Alumina and Aluminium

tonnes

Country	1978	1979	1980	1981	1982
USA					
Bauxite	34 040	32 905	38 539	85 964	120 145
of which: Re-exports	10 828	9 361	10 172	45 043	71 429
Alumina	501 552	547 915	828 770	732 202	582 563
Alumina hydrate	44 105	36 791	38 107	19 288	11 629
Unwrought	69 389	117 774	504 935	233 796	309 659
Unwrought alloys	45 677	64 917	144 114	48 739	54 473
Scrap	176 590	279 373	403 779	219 042	194 444
Argentina					
Unwrought	7 585	29 422	66 088	88 200	67 600
Brazil					
Bauxite	4 005	516 154	2 679 429	4 126 328	2 991 302
Guyana					
Bauxite, dried	1 014 484	1 027 383	1 010 211	1 011 297	690 320
Bauxite, calcined	587 619	550 273	602 974	496 187	372 818
Alumina	237 981	133 990	220 013	152 041	65 074
Alumina hydrate	13 189	12 595	9 771	—	—
Suriname					
Bauxite	2 285 000	1 736 954	1 767 000	1 268 000	...
Alumina	1 124 543	1 186 000	1 328 875	1 165 000	...
Unwrought	54 983	63 512	45 608	31 576	60 300
Venezuela					
Unwrought	16 967	102 707	209 068	233 945	208 600
Bahrain					
Unwrought (a)	140 100	130 234	77 546	74 793	166 014
China					
Bauxite (f)	* 107 000	* 258 000	* 528 000	* 490 000	* 345 000
Alumina (f)	* 10 000	* 22 000	* 33 000	* 30 000	* 19 000
Hong Kong					
Bauxite (Re-exports)	4 500	8 760	17 440	11 538	8 120
Alumina (Re-exports)	3 620	7	636	90	9
Alumina hydrate (Re-exports)	1 851	1 389	1 940	2 152	3 106
Unwrought (Re-exports)	5 605	5 980	10 365	16 401	48 910
Scrap	6 302	8 210	10 206	14 533	16 810
India					
Bauxite	3 360	43 708	...	...	...
Alumina	193 219	97 029	...	...	...
Unwrought (a)(c)	21	343	179	—	—
Indonesia					
Bauxite	911 105	1 091 032	1 112 622	956 369	746 784
Japan					
Bauxite	1 821	1 000	0	40	17
Alumina	124 105	205 841	393 882	361 947	273 130
Alumina hydrate	50 961	53 742	46 662	50 152	66 589
Unwrought	45 438	1 764	4 067	8 319	4 223
Unwrought alloys	9 156	6 182	3 577	3 841	2 458
Scrap	1 097	292	858	453	630
Malaysia					
Bauxite	506 292	470 151	718 300	...	...
Singapore					
Alumina	1 425	882	1 789	2 421	691
of which: Re-exports	1 043	879	1 214	392	690
Unwrought	3 665	3 226	4 053	3 052	5 861
of which: Re-exports	3 649	3 161	3 882	3 013	5 675
Scrap	4 228	22 517	6 438	6 196	7 450
Taiwan					
Alumina	2 380	104	3 740	1 366	3 284

Exports of Bauxite, Alumina and Aluminium

tonnes

Country	1978	1979	1980	1981	1982
Australia					
Bauxite	* 5 400 000	* 5 700 000	* 5 800 000	* 4 800 000	* 4 650 000
Alumina	6 310 213	6 534 193	6 994 275	6 509 249	5 976 727
Unwrought (a)	80 019	76 000	46 456	79 174	155 821
Scrap	8 363	10 965	14 000	13 910	26 788
New Zealand (d)					
Unwrought (a)	112 659	143 257	119 557	135 283	115 066
Scrap	1 543	1 583	2 573	2 264	2 034

Notes:

- 1 Except where alumina hydrate is separately specified, national trade figures for alumina can be considered as inclusive of hydrate
 - 2 In this table the term 'unwrought' aluminium corresponds to item 684.1 of the Standard International Trade Classification (Revision 2) and comprises ingots, blocks, unwrought bars, etc
 - 3 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) Including alloys
 (b) Officially described as 'Aluminium ores and concentrates' but believed to be mostly alumina
 (c) Years ended 31 March following that stated
 (d) Years ended 30 June of that stated
 (e) Years ended 30 September of that stated
 (f) BGS estimates, based on known imports into certain countries

Imports of Bauxite, Alumina and Aluminium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Bauxite, uncalcined	288 426	257 172	241 585	231 919	301 911
Bauxite, calcined	135 630	155 585	167 571	93 652	91 186
Alumina	695 887	596 323	806 343	630 422	449 340
Alumina hydrate	3 466	13 510	3 733	5 734	7 694
Unwrought	78 228	75 131	74 063	56 347	75 569
Unwrought alloys	113 380	110 349	97 360	67 000	78 611
Scrap	4 976	6 282	5 792	4 038	4 085
Belgium-Luxembourg					
Bauxite	32 867	40 903	35 936	33 050	26 574
Alumina	6 201	7 303	7 059	7 595	7 699
Alumina hydrate	15 633	16 566	14 460	16 040	15 188
Unwrought	175 926	175 774	183 376	184 525	197 133
Unwrought alloys	90 908	76 997	69 124	60 430	70 311
Scrap	15 351	26 556	33 316	39 095	51 240
Denmark					
Bauxite	10 143	89 385	90 555	68 507	16
Alumina	511	772	1 379	1 398	1 145
Alumina hydrate	3 783	2 392	2 689	3 656	2 377
Unwrought	5 981	11 323	5 101	1 384	1 274
Unwrought alloys	11 141	9 787	16 819	17 183	20 822
Scrap	1 638	1 377	2 270	2 623	2 635
France					
Bauxite	1 954 504	1 720 059	1 358 030	1 989 144	1 253 080
Alumina	37 231	16 154	21 924	15 635	62 912
Alumina hydrate	18 550	22 033	22 720	18 330	17 294
Unwrought	160 732	168 745	187 996	175 779	214 044
Unwrought alloys	130 095	146 357	144 638	124 596	137 946
Scrap	42 286	52 228	56 675	60 592	59 550
Germany, Federal Republic of					
Bauxite	3 613 821	3 694 216	4 177 043	3 910 619	3 532 830
Alumina	486 069	458 120	440 704	468 675	489 597
Alumina hydrate	2 080	1 712	1 437	1 854	2 599
Unwrought	268 764	317 937	379 019	315 287	372 252
Unwrought alloys	165 070	193 525	229 734	184 760	193 078
Scrap	148 673	164 414	174 773	160 984	173 592
Greece					
Bauxite	1 057	5 877	6 502	...	30
Alumina	215	285	146	133	185
Alumina hydrate	352	347	73	202	218
Unwrought	374	367	153	2 840	3 970
Irish Republic					
Alumina	3 239	3 536	3 998	4 289	4 043
Unwrought (a)	6 333	7 888	5 486	2 522	2 757
Italy					
Bauxite	1 644 740	2 287 342	2 298 753	1 709 124	1 578 079
Alumina	139 505	164 816	161 711	152 665	48 782
Alumina hydrate	27 336	14 974	18 476	17 146	20 764
Unwrought	119 944	126 721	172 029	108 835	107 719
Unwrought alloys	70 541	109 925	122 787	99 996	103 434
Scrap	82 849	97 408	123 463	93 640	94 223
Netherlands					
Bauxite	151 521	193 695	196 261	145 039	126 673
Alumina	542 576	562 993	585 774	598 990	566 795
Alumina hydrate	21 861	24 577	18 126	23 570	25 448
Unwrought	106 553	127 852	185 830	132 576	164 876
Unwrought alloys	38 955	39 479	30 001	28 773	30 626
Scrap	30 515	33 468	44 713	39 589	41 782
Austria					
Bauxite	40 226	40 231	41 706	36 655	24 945
Alumina	198 667	192 829	225 671	266 526	212 331
Alumina hydrate	7 890	7 628	6 756	7 888	7 653
Unwrought	14 891	30 663	35 182	33 160	43 909
Scrap	47 061	44 137	52 632	68 023	67 352
Bulgaria					
Unwrought (a)(f)	* 1 000	* 3 500	* 9 600	* 15 700	* 4 400

Imports of Bauxite, Alumina and Aluminium

tonnes

Country	1978	1979	1980	1981	1982
Czechoslovakia					
Bauxite	456 000	436 274	465 716	454 000	474 000
Unwrought (a)	95 000	88 000	93 000	82 000	66 000
Finland					
Bauxite	265	4 044	4 131	3 925	5 588
Alumina	287	429	708	876	791
Alumina hydrate	24 045	27 409	28 551	30 522	26 933
Unwrought	18 191	21 073	23 048	26 080	24 241
Unwrought alloys	3 520	3 818	3 689	2 670	2 975
Scrap	13	3 849	2 475	6 100	8 668
German Democratic Republic					
Bauxite	251 500	133 800	120 600	67 200	109 900
Alumina (f)	* 107 600	* 97 000	* 99 500	* 101 800	* 101 200
Unwrought (a)(f)	* 43 000	* 37 500	* 49 400	* 53 800	* 47 500
Hungary					
Unwrought	165 859	180 187	187 865	154 499	137 087
Iceland					
Alumina	141 907	142 469	145 906	134 167	117 331
Norway					
Bauxite	3 706	20 641	6 894	0	3 297
Alumina	1 197 810	1 165 392	1 441 859	1 208 258	1 108 901
Alumina hydrate	31 682	41 105	37 608	34 630	28 082
Unwrought	3 615	3 155	7 330	8 202	7 819
Unwrought alloys	4 334	5 746	9 068	6 614	13 110
Scrap	355	124	2 503	148	1 164
Poland					
Bauxite	100 558	95 074	83 146	39 436	41 015
Alumina	313 209	283 038	287 206	240 400	207 000
Unwrought	96 149	...	88 742	64 533	83 826
Portugal					
Alumina	8 193	6 285	4 665	8 366	...
Unwrought	20 223	21 803	27 494	42 348	49 400
Romania					
Bauxite (f)	* 820 500	* 668 560	* 1 051 500	* 453 400	* 585 700
Alumina (f)	* 25 600	* 13 730 700	* 10 000	* 20 400	* 11 700
Soviet Union					
Bauxite	* 3 500 000	* 3 500 000	* 3 500 000	* 3 700 000	* 3 700 000
Alumina	* 1 000 000	* 1 000 000	* 1 200 000	* 1 300 000	* 1 300 000
Spain					
Bauxite	117 544	142 818	349 384	825 545	919 056
Alumina	432 221	559 221	706 573	228 724	* 40 000
Unwrought	31 127	6 496	1 279	8 744	) 18 314
Unwrought alloys	6 845	656	1 884	4 894)
Scrap	3 108	4 080	5 630	5 768	8 902
Sweden					
Bauxite	58 167	67 573	65 313	40 967	49 838
Alumina	145 338	150 290	191 699	167 874	156 820
Alumina hydrate	39 898	49 299	43 255	47 624	47 761
Unwrought	24 065	23 319	22 267	22 005	29 914
Unwrought alloys	10 103	13 437	14 624	16 681	15 564
Scrap	2 936	5 840	3 479	2 960	2 674
Switzerland					
Bauxite	7 693	6 995	5 533	772	379
Alumina	152 844	151 287	174 110	171 709	135 364
Unwrought & scrap	35 314	41 184	54 162	37 574	48 076
Turkey					
Alumina	171	138	79	207	330
Unwrought	11 245	13 022	11 163	34 237	35 102
Yugoslavia					
Bauxite	43 643	63 883	217 595	394 180	177 445
Alumina	30 162	1 367	1 284	60 623	33 739
Unwrought	40 704	40 655	58 342	50 571	) 31 390
Unwrought alloys	885	564	297	1 262)
Cameroon					
Alumina	81 600	67 183	86 472	...	...
Egypt					
Unwrought & scrap	839	1 857	1 590	495	...

Imports of Bauxite, Alumina and Aluminium

tonnes

Country	1978	1979	1980	1981	1982
Ghana					
Alumina	193 224	...	...	...	...
Unwrought (a)	2 095	...	...	...	...
Madagascar					
Unwrought & scrap	1 112	589	348	...	...
Morocco					
Bauxite	780	810	519	6 931	8 142
Alumina	1 725	1 853	2 399	2 044	2 378
Unwrought (a)	382	331	1 060	1 083	1 216
Nigeria					
Unwrought (a)	1 617	3 156	...	...	...
South Africa					
Bauxite	18 119	23 699	24 742	15 304	26 970
Alumina	184 956	174 109	164 725	180 066	277 492
Unwrought	614	620	282	2 417	661
Scrap	518	405	1 809	9 160	2 679
Tanzania					
Unwrought (a)	4 734	2 111	2 959	4 541	...
Canada					
Bauxite	2 434 436	2 149 636	3 504 369	2 702 283	2 574 719
Alumina	1 056 190	952 584	983 972	1 020 550	939 267
Unwrought	11 481	23 985	9 908	14 316	24 379
Scrap	27 162	30 681	30 724	33 413	36 756
Mexico					
Bauxite	50 733	61 593	90 098	...	...
Alumina	93 932	96 767	87 790	...	...
Alumina hydrate	14 751	18 501	16 063	...	...
Unwrought & scrap (a)	43 113	65 285	70 146	...	...
Panama					
Unwrought (a)	946	1 226	1 254	816	1 340
USA					
Bauxite, crude dried	14 036 476	14 239 807	13 896 210	13 856 785	11 049 652
Bauxite, calcined	251 786	266 736	377 812	353 417	190 042
Alumina	3 961 962	3 837 475	4 357 535	3 977 845	3 166 389
Unwrought	339 601	238 359	245 177	359 200	340 570
Unwrought alloys	345 995	279 016	281 467	285 264	275 816
Scrap	83 599	61 975	54 251	74 384	67 434
Argentina					
Bauxite	18 560	21 629	18 527	...	...
Alumina	82 515	220 852	246 541	...	...
Alumina hydrate	4 344	8 834	5 148	...	...
Brazil					
Bauxite	10 091	15 574	13 175	14 970	8 598
Alumina	23 981	70 080	63 825	26 785	86 921
Alumina hydrate	354	535	282	82	74
Unwrought	53 070	45 008	38 797	18 034	5 520
Unwrought alloys	7 257	6 809	7 905	10 207	5 247
Scrap	22 333	22 764	11 145	5 340	3 750
Chile					
Unwrought	4 270	...	...	...	...
Colombia					
Bauxite	1 200	4 738	3 841	5 922	2 150
Unwrought (a)	17 346	16 364	13 444	15 734	14 265
Ecuador					
Unwrought	1 820	3 757	4 471	...	...
Peru					
Bauxite	4 755	4 967	6 661	7 341	3 664
Alumina	1 378	2 661	2 707	1 260	750
Unwrought	3 174	2 746	5 409	4 761	3 852
Uruguay					
Bauxite	951	1 590	4 432	4 068	3 411
Alumina	1 033	1 288	799	638	290
Unwrought	3 350	3 680	3 329	1 979	628

Imports of Bauxite, Alumina and Aluminium

tonnes

Country	1978	1979	1980	1981	1982
Venezuela					
Bauxite	6 022	66 747	34 290	32 695	...
Alumina	150 113	360 194	) 503 846	696 667	...
Alumina hydrate	1 015	23 655)		
Unwrought	39 913	8 023	97	467	1 300
China					
Unwrought (a)(f)	* 155 000	* 66 700	* 67 300	* 35 300	* 186 300
Hong Kong					
Bauxite	7 070	9 400	15 092	11 602	10 172
Alumina	1 081	243	979	86	321
Alumina hydrate	1 937	1 422	2 100	2 141	3 527
Unwrought	28 481	30 515	40 469	38 020	72 204
Scrap	473	468	1 074	580	672
India (c)					
Alumina	782	494	439	...	...
Unwrought	17 996	40 654	85 546	) 36 800	4 000
Unwrought alloys	33	19	283)	
Indonesia					
Alumina	21 866	14 358	19 316	39 859	66 109
Unwrought	12 288	15 150	14 131	21 161	33 677
Iran (e)					
Alumina	* 1 350	569	1 293	44 377	...
Unwrought	15 370	1 776	7 464	29 051	...
Israel (b)					
Alumina	489	983	1 554	1 769	...
Unwrought	24 790	19 073	19 738	14 200	13 757
Japan					
Bauxite	4 742 993	4 597 104	5 707 708	4 352 440	3 439 361
Alumina	757 322	758 631	731 245	639 355	154 288
Alumina hydrate	1 596	2 162	3 857	1 139	1 518
Unwrought	598 120	748 438	750 080	943 623	1 220 404
Unwrought alloys	142 084	135 459	160 005	185 699	226 162
Scrap	139 612	181 531	275 696	204 863	181 667
Korea, Republic of					
Bauxite	1 979	1 860	2 247	4 907	5 334
Alumina	60 752	63 329	59 327	65 856	56 952
Unwrought (a)	86 500	82 803	73 818	98 583	302 267
Scrap	...	5 308	3 862	5 699	7 299
Malaysia					
Alumina	8 104	10 241	6 877	...	...
Unwrought (a)	8 566	14 488	16 482	...	...
Pakistan (d)					
Scrap	52 385	10 044	11 905	13 483	11 525
Philippines					
Bauxite	4 112	9 909	8 219	12 592	3 762
Alumina	1 549	2 743	1 201	1 395	644
Unwrought	8 668	19 352	9 461	6 178	9 538
Unwrought alloys	8 122	9 060	8 190	4 229	8 933
Singapore					
Bauxite	7 242	11 000	400	19	0
Alumina	4 460	7 583	8 186	6 625	10 792
Unwrought	7 862	6 038	9 092	8 432	11 085
Scrap	399	384	433	394	642
Syria					
Unwrought & scrap	1 508	1 289	592	3 457	...
Taiwan					
Bauxite	171 182	209 618	260 438	106 754	30 373
Alumina	39 760	63 652	57 915	37 612	17 024
Alumina hydrate	2 819	3 876	1 111	1 711	1 569
Unwrought	48 672	52 860	58 320	47 752	88 569
Scrap	10 095	13 768	19 255	16 847	15 775
Thailand					
Bauxite	5 911	10 191	205	8 964	285
Alumina	525	1 469	1 456	1 325	1 078
Alumina hydrate	3 456	7 399	11 560	8 635	10 773
Unwrought	29 684	38 467	40 209	46 865	55 010
Unwrought alloys	4 335	4 739	4 699	4 909	3 840
Scrap	456	1 142	81	96	59

Imports of Bauxite, Alumina and Aluminium

tonnes

Country	1978	1979	1980	1981	1982
Australia					
Alumina	3 524	4 210	3 967	3 619	3 663
Unwrought (a)	359	4 330	10 221	9 261	13 700
Scrap	1 337	1 463	2 243	3 008	3 527
New Zealand (d)					
Alumina	331 403	320 599	265 290	325 738	346 055
Unwrought	180	263	390	622	7 436

Notes:

- 1 Except where alumina hydrate is separately specified, national trade figures for alumina can be considered as inclusive of hydrate
 - 2 In this table the term 'unwrought' aluminium corresponds to item 684.1 of the Standard International Trade Classification (Revision 2) and comprises ingots, blocks, unwrought bars, etc
 - 3 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) Including alloys
 (b) Figures may be incomplete as value only given in Israeli trade return for imports from some countries
 (c) Years ended 31 March following that stated
 (d) Years ended 30 June of that stated
 (e) Years ended 20 March following that stated
 (f) BGS estimates, based on known exports from certain countries

Mine Production of Antimony

tonnes (metal content)

Country	1978	1979	1980	1981	1982
France	—	—	—	156	333
Italy	931	950	713	696	339
Austria	550	655	691	667	711
Czechoslovakia	* 510	530	820	739	* 700
Soviet Union	* 7 000	* 7 500	* 7 000	* 6 500	* 6 500
Spain	442	501	625	646	710
Turkey	1 984	495	977	838	1 324
Yugoslavia	2 676	2 037	1 680	1 455	1 517
Algeria	* 60	* 60	—	—	—
Morocco	1 483	850	575	504	845
South Africa	9 095	11 651	13 067	9 810	9 134
Zimbabwe	121	158	150	137	195
Canada	3 005	3 025	2 394	1 714	224
Guatemala	230	639	700	500	—
Honduras	79	45	23	—	—
Mexico	2 457	2 872	2 176	1 800	1 565
USA	1 213	844	327	914	(c) 456
Bolivia	12 672	13 019	15 465	15 301	13 978
Brazil	274	73	46	40	—
Peru (a)	745	546	344	235	296
Burma	590	680	440	350	—
China	* 10 000	* 10 000	* 10 000	* 10 000	* 9 000
Malaysia	291	307	133	191	128
Pakistan	104	31	40	60	—
Thailand	3 548	3 625	3 603	1 480	823
Australia (b)	1 580	1 539	1 356	1 126	1 203
World total	61 600	62 600	63 300	55 900	50 000

Notes:

- 1 This table includes antimony content of antimonial lead alloys
- 2 In addition to the countries listed, Afghanistan, Hungary, Iran and Romania are also believed to produce antimony

(a) Includes Sb content of antimonial lead plus Sb content of ores for export

(b) Includes Sb content of lead and zinc concentrates

(c) Excludes Sb content of antimonial lead

Antimony

Exports of Antimony

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ore	—	396	824	...	...
Metal	497	173	54	30	118
Oxide (a)	* 4 200	* 3 000	* 2 300	* 2 700	* 3 200
France					
Ore	7	770	104	271	177
Metal	392	126	124	77	77
Oxide	4 654	4 677	4 947	6 309	4 914
Germany, Federal Republic of					
Metal	19	17	47	101	10
Oxide	319	344	261	481	422
Italy					
Metal	61	20	3	51	4
Oxide	487	301	204	240	220
Netherlands					
Metal	39	136	79	21	22
Oxide	407	474	341	213	331
Austria					
Ore	414	493	291	26	—
Sulphide (b)	0	20	28	91	74
Spain					
Metal	464	593	370	568	...
Sweden					
Metal	12	13	2	—	—
Turkey					
Ore	1 400	400	1 447	755	...
Metal	565	290	319	190	...
Yugoslavia					
Metal	1 485	975	1 055	1 220	...
Morocco					
Ore	2 267	1 966	1 159	1 260	1 796
South Africa					
Ore	3 173	11 379	3 029	* 5 900	* 3 000
Oxide (a)	* 2 800	* 6 600	* 6 400	* 4 200	* 2 900
Guatemala					
Ores & concentrates	286	1 323	1 292	556	0
Mexico					
Ores & concentrates	4 508	1 311	1 051	...	...
Metal	384	533	194	...	...
USA					
Metal	639	488	452	317	783
Oxide	216	630	838	420	305
Bolivia					
Ore (c)	8 136	13 266	7 386	11 173	...
Metal	1 266	1 571	3 576	4 165	...
Oxide	1 125	1 798	1 661	2 422	...
Peru					
Ores & concentrates	796	738	377	...	...
Metal	386	102	...	...	...
Burma (d)					
Ores & concentrates	392	1 100	201	300	...
China (a)					
Ores & concentrates	* 500	* 3 200	* 3 900	* 3 500	* 3 900
Metal	* 5 100	* 5 900	* 3 100	* 2 900	* 4 500
Oxide	* 1 200	* 1 700	* 2 300	* 2 500	* 2 600
Japan					
Metal	102	59	41	29	21
Thailand					
Ore	5 594	5 690	5 704	5 268	2 796
Metal	73	60	5	16	—
Australia					
Ores & concentrates	3 040	1 356	1 376	1 159	...

(a) BGS estimates, based on known imports into certain countries

(b) Believed to be crude liquated sulphide

(c) Sb content

(d) Years ended 31 March following that stated

Imports of Antimony

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal	317	413	347	365	297
Oxide	253	272	510	717	856
Belgium-Luxembourg					
Ore	5 179	6 662	5 177	5 147	3 962
Metal	230	335	32	8	198
Oxide	110	240	193	338	283
Denmark					
Metal	9	24	10	10	10
Oxide	27	26	32	36	39
France					
Ore	9 984	10 794	8 823	10 998	8 844
Metal	818	886	348	552	1 143
Oxide	454	434	425	373	357
Germany, Federal Republic of					
Ore	3 040	3 126	3 002	1 954	1 640
Metal	747	567	538	595	441
Oxide	3 406	3 896	3 351	3 567	3 899
Greece					
Metal	63	13	6	2	..
Italy					
Metal	152	122	112	79	252
Oxide	406	626	528	422	427
Netherlands					
Metal	90	132	112	48	75
Oxide	1 059	1 141	985	907	948
Austria					
Metal	52	56	63	52	48
Bulgaria					
Metal (b)	* 800	* 400	* 250	* 400	
Finland					
Metal	39	35	15	20	16
Norway					
Metal	22	28	43	20	30
Spain					
Ore	564	664	659	480	..
Metal	126	199	32	47	..
Oxide	307	242	210	194	
Sweden					
Metal	21	19	14	25	12
Switzerland					
Metal	126	28	91	55	45
Yugoslavia					
Ores & concentrates	2 576	3 261	4 201	3 550	..
Metal	145	..	0	—	..
Algeria					
Metal	35	262	30	..	..
Morocco					
Metal	2	9	30	—	—
Canada					
Oxide	907	794	944	936	780
Mexico					
Oxide	63	..	..	..
USA					
Ore	7 867	14 283	10 019	9 810	5 087
Liquated	54	45	34	96	80
Metal	4 015	3 376	2 367	2 672	2 103
Oxide	9 702	12 384	11 108	11 040	9 465

Antimony

Imports of Antimony

tonnes

Country	1978	1979	1980	1981	1982
Argentina					
Ore	220	399	246	...	...
Brazil					
Ore	655	1 641	623	443	588
Metal	284	177	132	107	331
Oxide	392	597	786	300	133
Sulphide	5	9	11	3	6
Venezuela					
Metal	179	122	...	...	...
Sulphide	21	1	...	...	...
India					
Ore	106	1	—	...	...
Metal	811	450	565	...	...
Oxide (a)	114	67	62	...	...
Japan					
Ores & concentrates	6 553	6 702	6 996	6 531	3 993
Metal	1 611	3 202	1 563	2 366	2 493
Oxide	...	...	...	1 048	1 150
Sulphide	43	16	58	92	116
Korea, Republic of					
Ores & concentrates	192	480	224	547	391
Malaysia					
Metal	75	67	53	...	...
Australia					
Metal	87	51	36	50	...

(a) Years ended 31 March following that stated

(b) BGS estimates, based on known exports from certain countries

Production of White Arsenic

tonnes

Country	1978	1979	1980	1981	1982
France	5 280	* 5 500	10 000	10 000	9 700
Germany, Federal Republic of	* 360	—	* 360	* 360	* 360
Portugal	253	155	185	196	* 200
Soviet Union	* 7 600	* 7 700	* 7 700	* 7 750	* 7 800
Sweden	6 100	* 5 100	* 4 100	* 4 000	* 4 100
Namibia (a)	2 401	2 221	1 288	1 370	1 895
Zimbabwe	129	—	79	21	—
Mexico (b)	6 244	6 535	6 930	6 516	* 6 400
Peru	1 257	2 440	2 427	* 2 500	* 2 500
Japan	91	182	284	* 300	...
Korea, Republic of	548	* 590	...	...	...

Notes:

- 1 This table includes calculated trioxide equivalents of arsenic metal produced except where this would involve double counting
- 2 In addition to the countries listed, Argentina, Austria, Belgium, China, Czechoslovakia, German Democratic Republic, Finland, Hungary, Spain, United Kingdom and Yugoslavia are also believed to produce arsenic

(a) Output of Tsumeb Corp. only, trioxide equivalent of reported black arsenic

(b) Including trioxide equivalent of black arsenic

Exports of Arsenic

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
White arsenic	81	853	165	165	44
Metallic arsenic (a)	12	13	29	10	58
France					
White arsenic	12 937	10 264	7 886	7 877	7 503
Metallic arsenic	146	41	104	87	90
Germany, Federal Republic of					
White arsenic	56	122	928	884	745
Italy					
White arsenic	25	20	73	75	106
Netherlands					
White arsenic	2	81	27	7	12
Mexico					
White arsenic	2 802	3 305	3 817	...	..
Bolivia					
White arsenic	—	80	81	127	...
Peru					
White arsenic	29	1 519	351	...	...
Hong Kong					
White arsenic (Re-exports)	8	7	38	76	295
Japan					
White arsenic	6	...	—	—	—
Korea, Republic of					
White arsenic	—	60	116	337	643

Note: This table does not purport to be comprehensive: data relating to arsenic are not fully recorded by many countries

(a) May include some tellurium

Imports of Arsenic

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
White arsenic			5 481	8 053	7 116
Metallic arsenic (a)	119	137	105	105	141
Belgium-Luxembourg					
White arsenic	40	9	37	32	52
Metallic arsenic (a)	73	115	100	90	86
Denmark					
White arsenic	3	0	10	10	10
Metallic arsenic (a)	16	17	17	18	11
France					
White arsenic	69	15	107	181	128
Metallic arsenic	60	113	211	143	117
Germany, Federal Republic of					
White arsenic	508	675	545	688	444
Metallic arsenic (a)	56	54	49	75	77
Greece					
White arsenic	68	29	79	—	—
Italy					
White arsenic	785	817	837	734	598
Metallic arsenic (a)	78	63	57	65	65
Netherlands					
White arsenic	291	147	4	31	13
Finland					
White arsenic (d)	916	1 097	1 220	1 644	1 555
Spain					
White arsenic	308	299	131	241	...
Metallic arsenic	14	19	18	35	...
Switzerland					
White arsenic (d)	26	58	6	80	3
Turkey					
White arsenic	51	43	35	34	...
Yugoslavia					
White arsenic	...	66	102	101	57
Metallic arsenic	36	138	85	58	...
Morocco					
White arsenic	—	0	10	—	5
South Africa					
White arsenic (d)	52	34	—	141	...
Metallic arsenic	17	10	12	12	14
USA					
White arsenic	9 350	11 181	11 366	17 199	14 599
Metallic arsenic	335	367	241	293	136
Argentina					
White arsenic	132	445	251	...	...
Brazil					
White arsenic	562	830	496	116	392
Metallic arsenic	39	59	54	5	2
Chile					
White arsenic	297	...	...	...	...
Colombia					
White arsenic	78	18	...	...	...
Uruguay					
White arsenic	50	69	28	7	24
Venezuela					
White arsenic	20	44	17	2	...
Hong Kong					
White arsenic	10	18	46	75	157
India (b)					
White arsenic	580	1 017	171	...	...
Metallic arsenic	...	31	11	...	...
Indonesia					
White arsenic	142	107	99	64	62
Japan					
White arsenic	751	999	716	450	599
Korea, Republic of					
White arsenic	22	17	—	0	0

Arsenic

Imports of Arsenic

tonnes

Country	1978	1979	1980	1981	1982
Malaysia					
White arsenic	100	1 850	713	...	...
Philippines					
White arsenic (d)	152	246	75	162	218
Taiwan					
White arsenic	213	681	190	220	174
Thailand					
White arsenic (d)	58	152	93	75	289
Australia					
White arsenic	456	936	904	1 225	...
New Zealand (c)					
White arsenic (d)	1 872	2 070	1 888	2 574	3 146

Note: This table does not purport to be comprehensive: data relating to arsenic are not fully recorded by many countries

- (a) May include some tellurium
- (b) Years ended 31 March following that stated
- (c) Years ended 30 June of that stated
- (d) Includes pentoxide and/or arsenic acid

Production of Asbestos

tonnes

Country	1978	1979	1980	1981	1982
Italy	135 401	143 931	157 794	137 000	116 410
Bulgaria	700	600	650	400	* 400
Czechoslovakia	575	564	617	388	342
Soviet Union	* 1 945 000	* 2 020 000	* 2 070 000	* 2 105 000	* 2 180 000
Turkey	13 380	38 967	8 882	2 833	23 283
Yugoslavia	10 304	9 959	10 468	12 206	11 657
Egypt	349	238	316	325	* 310
Mozambique	—	789	* 800	* 800	* 800
South Africa					
Amosite	40 526	39 058	51 646	56 834	43 457
Crocidolite	137 171	118 301	119 148	102 337	87 263
Chrysotile	79 511	91 828	106 940	76 772	81 140
Swaziland					
Chrysotile	36 951	34 294	32 833	35 264	30 145
Zimbabwe					
Chrysotile	248 861	259 891	250 949	247 503	197 682
Canada					
Chrysotile	1 421 808	1 492 719	1 323 053	1 121 845	821 816
USA (a)	93 097	93 354	80 079	75 618	63 515
Argentina	1 069	1 371	1 261	1 400	* 1 300
Brazil	122 815	138 457	170 403	138 417	144 832
Afghanistan	* 13 000	* 4 000	...	...	...
China	* 250 000	* 250 000	* 250 000	* 250 000	* 250 000
Cyprus					
Chrysotile	34 359	35 472	35 535	24 703	18 997
India					
Amphibole	24 623	32 094	33 716	24 515	23 945
Japan					
Chrysotile	5 746	3 362	3 897	3 950	* 3 500
Korea, Republic of	13 616	14 804	9 854	14 084	15 933
Taiwan	2 031	2 957	683	2 317	2 392
Australia					
Chrysotile	62 744	79 721	92 418	45 494	* 45 000
World total	4 700 000	4 900 000	4 800 000	4 500 000	4 200 000

Note: In addition to the countries listed, Democratic P.R. of Korea and Romania are also believed to produce asbestos

(a) Sold or used by producers

Exports of Unmanufactured Asbestos

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	522	616	1 114	1 758	1 860
Belgium-Luxembourg	221	131	57	222	1 084
Denmark	268	80	48	12	3
France	532	1 348	1 574	1 331	1 586
Germany, Federal Republic of	44 215	65 365	27 333	43 034	47 239
Italy	68 958	74 478	63 815	51 438	48 648
Netherlands	393	56	36	269	88
Hungary	* 2 600	* 5 100	* 5 300	...	...
Soviet Union	* 600 000	* 450 000	* 600 000	* 625 000	* 650 000
Sweden	1	112	14	—	—
Switzerland	37	142	43	164	348
Yugoslavia	1 902	1 983	2 506	2 938	2 589
South Africa (a)	* 385 000	* 439 000	* 381 000	* 253 000	* 225 000
Swaziland	38 083	37 065	31 435	23 309	26 310
Zimbabwe	212 437	285 021	274 258	198 958	168 812
Canada					
Crude	1	20	—	10	555
Fibre	690 679	719 074	653 461	508 861	454 440
Shorts	708 391	741 947	564 379	542 435	425 781
USA	41 782	42 137	48 666	64 418	58 767
China (a)	* 6 000	* 11 100	* 9 000	* 8 600	* 4 700
Cyprus	29 338	39 106	30 446	29 081	19 115
Hong Kong (Re-exports)	225	1 844	8 492	3 127	1 141
Japan	756	147	428	680	723
Singapore	5 901	9 535	10 461	11 603	8 939
Australia	37 094	54 041	51 172	38 576	...

(a) BGS estimates, based on known imports into certain countries

Imports of Unmanufactured Asbestos

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	117 617	116 665	94 640	67 186	52 260
Belgium-Luxembourg	53 737	50 754	47 880	31 374	27 744
Denmark	21 470	26 865	13 713	5 886	9 701
France	110 612	126 476	127 123	102 318	83 639
Germany, Federal Republic of	345 817	386 383	392 978	171 708	148 845
Greece	14 756	15 214	14 180	14 666	7 102
Irish Republic	8 014	7 564	8 413	6 173	5 777
Italy	47 189	77 152	86 550	65 942	56 884
Netherlands	41 357	28 235	19 042	9 927	5 107
Albania (d)	* 1 400	* 1 700	* 2 400	* 2 700	* 2 500
Austria	30 807	23 912	20 241	26 643	27 082
Bulgaria (d)	* 2 100	* 3 330	* 500	* 450	* 350
Czechoslovakia	44 028	41 804	46 197	49 195	48 699
Finland	5 415	3 019	5 040	3 573	4 291
German Democratic Republic	62 600	62 000	74 400	50 200	61 200
Hungary	39 100	37 540	48 402	33 999	33 688
Iceland	11	7	5	7	4
Norway	517	490	103	149	14
Poland	102 376	103 372	83 272	79 837	72 831
Portugal	17 111	11 213	19 953	18 870	...
Romania (d)	* 11 400	* 10 800	* 4 900	* 4 700	* 2 500
Spain	79 338	74 000	66 944	59 937	...
Sweden	1 334	861	1 195	1 101	1 039
Switzerland	22 794	20 689	21 029	16 886	5 455
Turkey	17 105	10 247	16 671	21 521	20 012
Yugoslavia	47 796	47 475	60 023	57 762	58 611
Algeria	9 415	10 234	21 305	...	...
Burundi	36	401	125	424	...
Canary Islands	236	161	131	0	...
Egypt	11 334	476	4 387	26 828	...
Ghana	14 969	...	...	...	...
Kenya	797	1 348	1 403	865	...
Libya	5 033	2 050	307	...	...
Morocco	5 649	4 756	6 770	6 630	8 086
Mozambique	...	...	1 082	...	...
Nigeria	142 242	139 795	...	...	...
Senegal	910	1 459	1 177	1 047	...
South Africa	15 151	18 203	19 518	29 231	12 903
Tunisia	1 749	3 658	5 838	8 397	...
Uganda	...	...	132	...	...
Zaire	617	427	118	...	...
Zambia	2 946	...	...	...	...
Canada	766	1 969	1 156	934	573
Costa Rica	1 243	1 167	1 318	762	1 192
El Salvador	3 243	3 312	3 324	2 865	...
Guatemala	4 127	1 013	1 825	1 257	376
Honduras	2 062	1 260	2 102	1 731	...
Jamaica	352	370	4	78	491
Mexico	60 359	71 648	79 014	...	...
Nicaragua	1 362	2	848	...	...
Panama	349	445	283	241	320
USA					
Amosite	1 170	462	364	680	389
Crocidolite	16 865	13 828	7 597	7 376	7 904
Chrysotile	531 416	487 191	305 358	314 212	211 902
Other unmanufactured	20 975	11 606	13 976	15 345	21 538
Argentina	13 368	21 801	20 149	...	...
Brazil	37 650	35 763	24 799	13 019	13 192
Chile	9 324	...	...	...	...
Colombia	18 049	20 920	27 057	21 492	25 945
Ecuador	6 184	5 986	7 138	...	...
Peru	3 616	3 209	4 870	7 408	3 801
Uruguay	1 463	2 681	2 427	1 203	623
Venezuela	19 385	14 523	9 111	11 742	...

Imports of Unmanufactured Asbestos

tonnes

Country	1978	1979	1980	1981	1982
Burma (e)	737	1 385	1 825	2 776	...
Dubai	8 337	4 205	4 631	10 359	...
Hong Kong	2 406	1 844	8 776	3 297	1 336
India	51 895	48 458	63 176	...	...
Indonesia	14 781	14 616	23 047	27 062	18 765
Iran (a)	6 674	10 569	23 392	31 539	...
Israel (c)	4 879	28 317	3 050	6 232	4 467
Japan	234 901	291 531	305 408	237 963	229 125
Korea, Republic of	48 898	58 616	36 787	53 787	44 038
Kuwait	6 285	10 044	2 084	2 018	...
Malaysia	23 961	37 861	32 242	...	...
Pakistan (b)	8 738	6 638	10 679	5 690	4 462
Philippines	4 822	6 570	4 467	5 499	2 200
Saudi Arabia	6 993	24 169	52 225	10 102	15 882
Singapore	9 168	12 318	16 661	16 824	9 767
Sri Lanka	1 940	11 780	6 188	4 222	2 399
Syria	3 352	1 050	4 076	4 245	...
Taiwan	24 892	29 103	31 247	30 121	30 020
Thailand	50 690	72 528	58 756	57 193	54 333
Australia	42 115	23 735	25 239	20 960	20 200
New Zealand (b)	8 525	9 818	4 952	6 173	3 891

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

(c) Figures may be incomplete as value only given in Israeli trade return for imports from some countries

(d) BGS estimates, based on known exports from certain countries

(e) Years ended 31 March following that stated

Production of Barytes

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	54 409	45 000	54 000	63 308	81 000
France	210 000	222 000	225 000	172 000	143 000
Germany, Federal Republic of	168 586	161 661	175 380	165 189	361 762
Greece	110 841	109 344	98 529	116 773	119 747
Irish Republic	343 753	319 000	260 000	274 000	266 000
Italy	236 832	214 630	203 038	174 057	180 022
Austria	242	305	249	...	—
Czechoslovakia	65 000	67 803	61 052	* 61 000	* 61 000
German Democratic Republic	* 35 000	* 35 000	* 35 000	* 35 000	* 35 000
Poland	90 300	96 000	96 300	85 300	90 600
Portugal	503	704	1 200	1 350	1 300
Romania	* 82 000	* 82 000	* 80 000	* 79 000	* 78 000
Soviet Union	* 475 000	* 500 000	* 510 000	* 510 000	* 520 000
Spain	71 457	74 700	59 827	52 695	* 50 000
Turkey	100 904	100 005	128 352	185 555	107 393
Yugoslavia	42 800	46 073	47 818	44 179	* 45 000
Algeria	74 400	102 500	97 980	* 99 000	* 100 000
Egypt	3 136	2 272	4 532	2 108	* 3 000
Kenya	303	363	6 647	2 591	—
Morocco	176 813	286 467	320 585	463 869	418 200
South Africa	2 355	2 494	2 635	2 247	3 177
Tunisia	14 000	18 000	26 000	24 700	33 900
Zimbabwe	878	449	195	—	800
Canada	99 339	67 035	* 95 000	* 80 000	* 30 000
Mexico	231 485	151 162	269 322	317 738	323 753
USA (b)	1 969 000	1 916 000	2 037 000	2 585 000	1 674 000
Argentina	45 685	54 928	49 623	49 000	53 000
Brazil	107 492	108 042	104 752	116 340	* 120 000
Chile	182 422	226 767	225 529	259 349	292 000
Colombia	3 500	3 500	3 500	3 380	3 000
Peru	396 000	445 000	415 000	409 000	* 360 000
Afghanistan (c)	12 700	2 700	—	...	...
Burma (a)	42 202	26 053	4 819	10 160	19 958
China	* 400 000	* 500 000	* 680 000	* 800 000	* 900 000
India	388 582	490 699	442 326	399 000	325 679
Iran (c)	* 200 000	* 180 000	* 150 000	* 75 000	* 80 000
Japan	77 036	53 736	54 862	59 584	59 000
Korea, Dem. P.R. of	* 110 000	* 110 000	* 110 000	* 100 000	—
Korea, Republic of	1 005	728	410	—	—
Malaysia	5 079	1 401	—	19 365	25 272
Pakistan	16 303	32 433	14 054	26 985	* 23 600
Philippines	5 548	6 667	5 355	2 135	8 742
Thailand	274 564	378 654	305 057	307 046	330 948
Australia	13 790	94 066	38 633	41 266	* 40 000
World total	6 900 000	7 300 000	7 500 000	8 300 000	7 400 000

Notes:

- 1 This table may include small quantities of witherite
- 2 In addition to the countries listed, Bulgaria and Cuba are believed to produce barytes

(a) Years ended 31 March following that stated

(b) Sold or used by producers

(c) Years ended 20 March following that stated

Exports of Barytes

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	3 424	4 622	4 051	4 226	11 427
Belgium-Luxembourg	408	430	13 656	19 278	13 099
France	116 535	121 722	98 255	102 439	94 558
Germany, Federal Republic of	38 178	38 720	44 446	54 627	39 886
Greece	48 256	38 587	55 259	822	36 758
Irish Republic	322 853	302 317	272 643	260 691	267 501
Italy	73 863	89 352	105 978	67 792	71 914
Netherlands	94 774	77 548	122 537	86 412	80 306
Czechoslovakia	* 8 500	7 000	8 000	(b)* 1 200	(b)* 2 400
Norway	4 627	1 627	272	3 612	1 611
Portugal	3	283	1 000	—	...
Romania (b)	* 600	* 1 200	* 800	* 300	* 400
Spain	90 793	74 677	52 017	65 826	...
Turkey	124 123	95 844	81 666	187 931	171 483
Yugoslavia	16 495	13 965	19 077	16 200	20 452
Morocco	224 842	277 346	333 820	452 976	465 340
Tunisia	1 109	200	2 840	1 040	...
Canada	62 593	2 038	650	405	483
Mexico	98 950	126 666	115 599	...	...
Trinidad & Tobago	1 469	527	1 037	1	...
USA	33 179	96 117	87 833	56 913	44 171
Bolivia	2 889	2 228	8 694	2 130	...
Brazil	34 000	43 520	18 125	24 255	19 730
Chile	122 535	...	...	...	...
Peru	323 166	319 935	127 868	...	...
China (b)	* 152 700	* 358 100	* 618 100	* 804 800	* 833 600
India	201 042	338 312	...	...	...
Indonesia	12 546	7 159	6 451	10 644	2 829
Israel (c)	708	82	72	...	...
Japan	2 894	1 002	1 902	4 768	4
Malaysia	1 262	2 281	405	...	...
Pakistan (a)	—	3 750	1 700	—	—
Singapore	35 615	52 521	37 667	22 203	10 204
of which: Re-exports	6 282	12 695	10 233	14 926	9 623
Thailand	195 122	288 852	361 334	234 091	285 889
Australia	969	1 232	48 108	1 903	...

Note: Trade in barytes is reported under item 278.92 of the Standard International Trade Classification (Revision 2) and is described as 'barytes and witherite'. However, only small quantities of witherite are traded

(a) Years ended 30 June of that stated

(b) BGS estimates, based on known imports into certain countries

(c) Figures may be incomplete as value only given in Israeli trade return for exports to some countries

Imports of Barytes

Country	1978	1979	1980	1981	1982
United Kingdom	80 315	90 355	142 384	113 007	116 386
Belgium-Luxembourg	8 293	8 082	8 407	8 003	8 427
Denmark	5 863	3 951	12 461	16 951	18 269
France	8 983	14 427	14 610	12 936	18 884
Germany, Federal Republic of	196 465	208 437	209 182	166 066	177 686
Irish Republic	425	558	717	319	300
Italy	13 871	13 634	7 531	9 665	10 328
Netherlands	124 608	201 894	81 728	98 928	75 748
Austria	6 976	3 227	5 752	8 273	6 649
Finland	952	1 224	1 168	2 632	2 664
Hungary	* 18 500	* 8 200	19 000	16 215	...
Norway	63 204	102 981	111 392	100 991	87 836
Poland	21 653	* 1 130	* 4 100	...	...
Portugal	458	645	2 000	2 233	...
Romania (b)	* 8 900	* 17 300	* 20 500	* 13 600	* 9 000
Soviet Union	* 450 000	* 450 000	* 500 000	* 500 000	* 500 000
Spain	3 321	2 518	849	566	...
Sweden	4 660	5 493	3 992	4 567	5 440
Switzerland	2 880	2 291	3 181	2 092	1 795
Yugoslavia	1 206	1 204	1 147	490	498
Algeria	98 895	68 092	37 258	...	...
Cameroon	15 750	25 903	21 416	...	...
Gabon	576	1 926	207	1 410	12 124
Ivory Coast	3 505	345	256	19 273	...
South Africa	2 437	19 168	5 672	3 693	1 789
Tunisia	1 568	2 480	233	103	...
Canada	18 230	20 765	45 157	16 278	23 457
Mexico	525	92 832	127 491	...	...
Trinidad & Tobago	61 870	35 662	26 666	82 882	...
USA	1 191 819	1 374 724	1 702 332	1 765 286	2 126 645
Argentina	1 480	4 293	6 418	...	...
Brazil	240	156	175	74	60
Colombia	12 555	8 793	8 010	6 164	6 497
Venezuela	87 152	126 410	141 349	158 863	...
Abu Dhabi	—	1 472	16 189	24 843	...
Hong Kong	258	335	1 169	915	1 173
Indonesia	22 295	19 881	21 031	25 863	70 833
Japan	21 278	24 565	40 173	45 251	40 187
Malaysia	265	224	6 424	...	...
Philippines	1 169	1 054	1 893	50	85
Saudi Arabia	3 812	553	41 268	26 597	46 699
Singapore	14 858	50 774	66 343	29 698	19 494
Syria	2 326	—	510	—	...
Taiwan	10 340	2 870	7 605	3 035	600
Australia	541	1 189	1 273	1 112	...
New Zealand (a)	1 169	1 582	1 332	4 545	1 385

Note: Trade in barytes is reported under item 278.92 of the Standard International Trade Classification (Revision 2) and is described as 'barytes and witherite'. However, only small quantities of witherite are traded

(a) Years ended 30 June of that stated

(b) BGS estimates, based on known exports from certain countries

Production of Bentonite and Fuller's Earth

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Fuller's earth (a)	167 000	171 000	163 000	185 000	187 000
France					
Bentonite	10 144	16 069	...	2 511	1 070
Greece					
Bentonite	385 067	696 286	499 424	374 948	348 677
Italy					
Bentonite	224 208	282 446	322 888	277 370	237 330
Fuller's earth	10 143	1 080	4 300	5 495	7 000
Hungary					
Bentonite	82 000	72 488	77 685	80 531	84 934
Poland					
Bentonite	89 820	161 587	157 090	142 806	145 413
Romania					
Bentonite	162 000	180 000	176 500	* 176 000	* 175 000
Spain					
Bentonite	108 318	120 678	97 705	117 727	* 120 000
Attapulгите	39 230	62 423	48 020	47 227	* 48 000
Sepiolite	131 817	202 810	252 304	288 499	...
Turkey					
Bentonite	8 280	7 937	* 13 000	30 687	* 31 000
Fuller's earth	...	...	139 702	119 813	127 179
Yugoslavia					
Bentonite	154 000	...	136 080	...	...
Algeria					
Bentonite	35 664	* 36 000	* 36 000	* 38 000	* 38 000
Fuller's earth	4 847	* 5 000	5 000	5 100	* 5 100
Egypt					
Bentonite	3 441	3 500	5 200	3 700	4 032
Morocco					
Bentonite	4 800	1 015	3 284	2 906	4 457
Fuller's earth (g)	29 880	13 586	17 430	19 750	* 20 000
Mozambique					
Bentonite	3 000	1 656	* 1 500	* 1 500	* 1 500
Senegal					
Attapulгите	6 930	13 000	27 651	32 973	* 90 000
South Africa					
Bentonite	34 519	46 394	51 815	44 372	30 827
Attapulгите	2 773	4 062	3 684	5 221	4 596
Fuller's earth	258	919	720	434	311
Mexico					
Bentonite	140 325	169 848	176 028	220 454	* 200 000
Fuller's earth	40 615	48 820	56 858	65 378	* 65 000
USA					
Bentonite (c)	4 052 944	4 011 639	3 796 223	4 487 987	2 943 633
Fuller's earth (c)(f)	1 387 647	1 422 690	1 391 443	1 502 166	1 526 479
Argentina					
Bentonite	106 957	157 382	131 384	122 719	124 662
Fuller's earth	3 482	5 445	4 722	5 246	5 419
Brazil					
Bentonite	167 614	212 503	247 954	166 338	164 016
Peru					
Bentonite	18 805	17 851	18 200	30 500	* 31 000
Burma (d)					
Bentonite	890	2 188	2 182	2 317	1 463
Cyprus	8 500	5 300	8 852	42 290	13 324
India					
Bentonite	153 026	146 922	158 675	142 870	...
Fuller's earth	16 297	17 343	30 985	31 812	...
Iran					
Bentonite	* 40 000	* 20 000	* 20 000	* 10 000	* 11 000
Israel					
Bentonite (e)	6 900	6 287	18 321	12 581	* 13 000
Japan					
Bentonite	* 400 000	* 400 000	548 327	511 780	483 482

Production of Bentonite and Fuller's Earth

tonnes

Country	1978	1979	1980	1981	1982
Pakistan					
Bentonite	1 113	1 265	1 347	1 048	* 1 100
Fuller's earth	* 16 000	42 822	24 463	17 571	* 21 000
Philippines					
Bentonite	1 569	3 123	5 053	5 527	* 5 000
Australia					
Bentonite	4 656	6 626	10 988	16 905	* 11 500
Fuller's earth	68	* 50	* 50	* 50	* 50
New Zealand					
Bentonite	9 824	4 954	3 000	1 885	6 220
World total Bentonite	6 418 000	6 946 000	6 741 000	7 204 000	5 511 000
World total Fuller's earth (b)	1 957 000	2 111 000	2 170 000	2 332 000	2 427 000

Notes:

- 1 Bentonites consist of montmorillonite (one of the smectite group of clay minerals) and occur in two main varieties, calcium bentonite, the most commonly occurring, and sodium bentonite, industrially the more important. Calcium bentonite can be converted to sodium bentonite by a sodium-exchange process. In some countries, such as the United Kingdom, calcium bentonite is known as fuller's earth, a term which is also used to refer to attapulgite, a mineralogically distinct clay mineral but exhibiting similar properties
 - 2 In addition to the countries listed, Austria, Canada, China, Federal Republic of Germany, Soviet Union and Tanzania are also believed to produce bentonite and France, Iran and Japan may produce fuller's earth
- (a) BGS estimates of saleable production based on data from producing companies
- (b) Including attapulgite and sepiolite
- (c) Sold or used by producers
- (d) Years ended 31 March following that stated
- (e) A low grade form of bentonite, known as metabentonite
- (f) Mostly attapulgite
- (g) Smectite

Exports of Bentonite and Fuller's Earth

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Bentonite	13 954	11 975	19 017	29 479	22 066
Fuller's earth	3 772	3 866	6 045	8 914	12 049
Belgium-Luxembourg					
Bentonite	8 273	11 574	10 831	6 247	4 804
Fuller's earth	441	1 326	508	58	232
France					
Bentonite	10 371	5 887	6 880	12 630	15 304
Fuller's earth	1 016	929	1 999	1 808	9 958
Germany, Federal Republic of					
Bentonite	25 014	26 250	29 755	23 956	21 122
Fuller's earth	1 086	3 411	5 220	4 485	3 865
Greece					
Bentonite	332 008	450 173	468 911	757 534	314 533
Italy					
Bentonite	20 217	31 273	18 936	36 297	21 261
Netherlands					
Bentonite	23 839	26 462	35 210	31 619	22 687
Fuller's earth	1 060	822	845	15 017	762
Hungary					
Bentonite	14 156	14 797	15 604	18 218	21 527
Spain					
Bentonite	37 881	39 876	32 581	29 689	...
Turkey					
Bentonite	3 394	4 995	5 360	8 833	...
Yugoslavia					
Bentonite	136	297	1 401	348	...
Morocco					
Bentonite	812	0	—	—	—
Fuller's earth (a)	10 965	12 634	17 384	17 143	18 350
Senegal					
Fuller's earth (b)	3 645	240	3 185	7 764	...
South Africa					
Bentonite	874	1 064	1 630	1 798	995
USA					
Bentonite	656 248	773 674	814 421	781 987	605 745
Fuller's earth	53 654	67 081	104 073	100 976	84 321
Argentina					
Bentonite	10 181	9 180	5 529	...	...
Colombia					
Bentonite	134	14	165	1 366	1 441
Venezuela					
Bentonite	337	—	...	...	...

Exports of Bentonite and Fuller's Earth

tonnes

Country	1978	1979	1980	1981	1982
India					
Bentonite	19 811	19 775	...	...	...
Fuller's earth	1 242	2 613	...	...	...
Indonesia					
Bentonite	2 736	1 268	2 946	4 932	6 909
Kuwait					
Bentonite	21 012	3 217	13 913	34 486	...
Singapore					
Bentonite	...	21 600	25 596	29 853	19 312
of which: Re-exports	...	3 939	7 299	12 252	14 228
Fuller's earth	...	5 066	9 335	9 266	11 239
of which: Re-exports	...	5 055	9 295	9 200	11 236
Taiwan					
Bentonite	27	80	49	65	104

Notes:

- 1 See note 1 to production table
- 2 The figures in this table refer to natural and sodium-exchanged bentonite, and fuller's earth, Standard International Trade Classification (Revision 2) 278.21. Activated bentonite and fuller's earth, Standard International Trade Classification (Revision 2) 598.92(b) are excluded. However, some countries are believed to include sodium-exchanged bentonite, often referred to as activated bentonite, under Standard International Trade Classification (Revision 2) 598.92(b), e.g. Italy

- (a) Smectite
(b) Attapulgite

Imports of Bentonite and Fuller's Earth

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Bentonite	46 083	74 861	76 462	55 153	46 328
Fuller's earth	103	522	2 803	1 809	1 381
Belgium-Luxembourg					
Bentonite	28 628	24 553	38 519	25 798	21 336
Fuller's earth	4 261	12 445	18 604	5 281	1 556
Denmark					
Bentonite	3 612	3 652	4 996	3 918	3 555
Fuller's earth	403	571	672	920	1 183
France					
Bentonite	87 235	92 464	76 063	89 112	99 081
Fuller's earth	1 283	2 028	1 899	1 425	4 510
Germany, Federal Republic of					
Bentonite	45 879	66 841	78 043	77 231	70 476
Fuller's earth	6 785	5 282	5 676	5 706	5 369
Greece					
Bentonite	243	153	693	350	1 250
Italy					
Bentonite	54 673	29 912	55 438	25 440	42 504
Fuller's earth	2 435	1 991	1 316	1 123	2 362
Netherlands					
Bentonite	54 913	62 633	64 756	60 382	84 738
Fuller's earth	3 784	2 265	4 118	2 794	2 762
Austria					
Bentonite	514	594	888	954	839
German Democratic Republic					
Bentonite (c)	* 9 990	* 10 540	* 11 000	* 11 400	* 10 400
Fuller's earth (c)	—	* 250	* 300	* 300	* 500
Norway					
Bentonite	31 442	39 185	46 914	48 315	36 955
Fuller's earth	910	112	244	416	341
Poland					
Bentonite	* 3 960	* 4 050	* 4 600	...	...
Portugal					
Bentonite	22 991	22 477	23 447	...	...
Spain					
Bentonite	28 285	35 277	31 664	27 977	...
Sweden					
Bentonite	3 189	7 292	4 462	3 339	5 546
Algeria					
Bentonite (b)	11 686	18 891	12 699	...	...
Ivory Coast					
Bentonite	508	461	1 445	2 412	...
Morocco					
Fuller's earth	402	350	312	225	93
Senegal					
Bentonite	1 198	300	0	—	...
Tunisia					
Bentonite	(b) 15 034	(b) 21 450	3 025	...	...
Zimbabwe					
Fuller's earth	109	988	419	322	...
Canada					
Bentonite	353 790	638 307	471 684	311 459	238 069
Fuller's earth	823	1 710	1 385	784	1 081
Mexico					
Bentonite	4 679	9 736	6 675	...	...
USA					
Bentonite	43	74	140	72	140
Fuller's earth	76	168	270	196	38
Brazil					
Bentonite	14 354	21 594	13 174	13 691	8 057
Chile					
Bentonite	2 430	...	...	...	...
Colombia					
Bentonite	3 545	2 322	4 666	6 608	10 138

Imports of Bentonite and Fuller's Earth

tonnes

Country	1978	1979	1980	1981	1982
Peru					
Bentonite	2 269	1 884	161	910	774
Uruguay					
Bentonite	162	323	132	209	99
Venezuela					
Bentonite	27 357	22 433	...	...	...
India					
Bentonite	14	45	455	...	...
Fuller's earth	471	381	144	...	...
Indonesia					
Bentonite	25 313	9 164	6 137	19 529	30 679
Korea, Republic of					
Bentonite	...	3 075	2 017	1 651	1 549
Kuwait					
Bentonite	35 607	1 731	58 681	39 722	...
Malaysia					
Bentonite	834	1 487	3 758	...	...
Fuller's earth	8 103	19 106	26 854	...	...
Pakistan (a)					
Fuller's earth	561	306	60	199	719
Philippines	9 663	10 257	7 147	15 211	8 455
Singapore					
Bentonite	...	46 377	46 778	68 208	45 614
Fuller's earth	...	3 187	4 856	6 280	8 878
Taiwan					
Bentonite	5 077	6 895	6 435	7 237	6 174
Thailand					
Bentonite	2 163	2 141	848	2 563	1 417
Australia					
Bentonite	30 355	57 241	55 917	43 034	...

Notes:

- 1 See note 1 to production table
- 2 The figures in this table refer to natural and sodium-exchanged bentonite, and fuller's earth, Standard International Trade Classification (Revision 2) 278.21. Activated bentonite and fuller's earth, Standard International Trade Classification (Revision 2) 598.92(b) are excluded. However, some countries are believed to include sodium-exchanged bentonite, often referred to as activated bentonite, under Standard International Trade Classification (Revision 2) 598.92(b), e.g. Italy

- (a) Years ended 30 June of that stated
(b) Including crude kaolin
(c) BGS estimates, based on known exports from certain countries

Mine Production of Bismuth

tonnes (metal content)

Country	1978	1979	1980	1981	1982
France	79	95	67	64	78
Germany, Federal Republic of	* 10	* 10	* 10	* 10	* 10
Italy	9	19	43	15	28
Romania	* 80	* 80	* 80	* 80	* 80
Soviet Union	* 70	* 73	* 72	* 75	* 78
Yugoslavia	13	23	83	102	49
Canada (a)	145	137	149	168	126
Mexico	978	754	770	656	606
USA	* 400	* 400	* 400	* 400	* 400
Bolivia	482	10	11	11	4
Peru (a)	610	526	491	638	* 700
China	* 240	* 260	* 260	* 260	* 260
Japan	623	458	338	478	* 480
Korea, Republic of	122	87	123	100	95
Australia	1 054	* 1 000	* 900	* 850	* 750
World total	4 900	3 900	3 800	3 900	3 700

Notes:

- 1 The figures in this table are in some instances derived from reported bismuth content of refined and impure metal plus recoverable bismuth in ores and concentrates exported. Production for some countries may include bismuth produced from imported ores but it is thought that any resulting duplication is insignificant in the countries shown
 - 2 In addition to the countries listed, Belgium, Brazil, Bulgaria, German Democratic Republic and Namibia are also believed to produce bismuth
- (a) Includes Bi content of bullion and concentrates exported

Exports of Bismuth

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Compounds	58	16	16	16	...
Metal	399	255	308	311	319
France					
Compounds	292	102	91	80	49
Metal	7	49	11	8	3
Germany, Federal Republic of					
Compounds	105	63	122	67	93
Metal	517	407	316	328	251
Italy					
Compounds	227	696	1	1	1
Metal	30	6	5	12	18
Netherlands					
Compounds	25	37	13	14	7
Metal	66	27	31	33	55
Yugoslavia					
Compounds	11	16	...	...	...
Mexico					
Metal	641	240	165	...	...
USA					
Metal	163	198	60	38	24
Bolivia					
Ores (a)	14	—	—	2	...
Metal	117	46	547	—	...
Peru					
Metal	105	373	554	...	...
Japan					
Metal	287	181	242	252	242
Korea, Republic of					
Metal	38	134	119	91	83

(a) Bi content

Imports of Bismuth

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal	325	335	389	292	351
Belgium-Luxembourg					
Compounds	37	18	18	22	2
France					
Compounds	4	44	45	2	2
Metal	346	322	362	288	197
Germany, Federal Republic of					
Compounds	21	22	15	11	5
Metal	113	211	268	185	331
Italy					
Compounds	24	21	39	24	24
Metal	62	55	63	40	39
Netherlands					
Compounds	171	152	365	112	6
Metal	52	54	62	36	18
Spain					
Metal	96	102	72	73	...
Turkey					
Compounds	8	5	12	6	...
Yugoslavia					
Compounds	5	6	7	3	...
Metal	18	5	4	0	...
Morocco					
Compounds	19	5	6	3	5
USA					
Metal	1 208	1 077	1 008	1 105	919
Argentina					
Metal	8	12	18	...	...
Brazil					
Compounds	11	4	4	8	12
Metal	34	44	52	47	34
India					
Metal	97	66	23	...	...
Australia					
Metal	22	13	13	14	...

Production of Bromine

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom	25 100 000	29 162 000	26 388 000	27 605 000	29 770 000
France	16 200 000	18 997 000	16 480 000	17 261 000	* 16 000 000
Germany, Federal Republic of	3 893 000	4 020 000	* 4 000 000	3 567 000	3 073 000
Italy	* 600 000	* 600 000	* 600 000	* 580 000	* 600 000
Soviet Union	* 65 320 000	* 66 220 000	* 67 130 000	* 68 000 000	* 68 000 000
Spain	* 400 000	* 400 000	* 400 000	* 400 000	* 360 000
USA (a)	202 549 000	225 600 000	171 535 000	171 048 000	* 181 900 000
India	451 000	313 000	261 000	1 011 000	494 000
Israel	34 550 000	45 813 000	44 059 000	44 020 000	* 70 000 000
Japan	* 12 000 000	* 11 800 000	* 12 000 000	* 12 000 000	* 12 000 000
World total	361 100 000	402 900 000	342 900 000	345 500 000	382 200 000

(a) Elemental bromine sold as such or used in the preparation of bromine compounds by primary producers

Exports of Bromine

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom	1 834 619	1 705 486	1 784 207	1 350 481	2 150 846
Belgium-Luxembourg	138 000	411 900	1 923 300	76 200	—
Germany, Federal Republic of	112 100	13 200	10 600	10 300	10 500
Italy	14 900	—	—	106	25 000
Netherlands	1 193 000	871 000	845 000	804 000	1 152 000
USA	2 900 000	4 600 000	3 700 000	* 4 000 000	...
Israel (a)	* 11 300 000	* 13 500 000	* 11 700 000	* 12 900 000	* 15 100 000

Note: In general, trade in bromine compounds is not separately distinguished from other halogen salts and has therefore not been included in this table

(a) BGS estimates, based on known imports into certain countries

Imports of Bromine

Country	1978	1979	1980	1981	1982
United Kingdom	4 006 331	4 168 041	4 642 218	5 025 781	4 629 255
Belgium-Luxembourg	249 000	828 100	1 972 200	665 900	793 600
Denmark	121 900	90 200	97 400	86 100	77 200
France	2 762 000	2 542 000	2 817 000	2 348 000	4 209 000
Germany, Federal Republic of	1 871 000	3 007 600	2 982 100	2 908 400	3 361 500
Greece	683	—	—	—	—
Italy	1 974 600	3 008 434	2 701 120	1 276 393	2 484 700
Netherlands	3 286 000	4 401 000	3 766 000	3 192 000	3 296 000
Hungary	587 000	1 036 000	618 000	713 000	579 000
Portugal	500	1 400	600	...	...
Spain	46 908	205 000	256 000	275 000	...
Turkey	84	—	473	147	...
Yugoslavia	11 812	10 001	9 397	3 000	...
Algeria	—	166	6 101	...	...
Morocco	40	6	57	93	22
South Africa	50 900	54 700	75 900	94 500	55 000
Mexico	1 240 899	...	...	...	...
USA	303 673	15 267	564	354	69
Argentina	61 800	78 731	42 521	...	...
Brazil	33 587	31 611	24 518	39 676	22 576
Venezuela	4 027	14 716	...	...	...
India (a)	192 770	411 430	429 294	...	...
Korea, Republic of	...	154 530	121 610	100 398	154 270
Saudi Arabia	...	13 235	16 812	...	—
Syria	9 500	10 131	58	—	...
Taiwan	5 708	18	153	127	151
Thailand	39	33	13	23	37

Note: In general, trade in bromine compounds is not separately distinguished from other halogen salts and has therefore not been included in this table

(a) Years ended 31 March following that stated

Production of Cadmium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	291	424	375	278	354
Belgium	1 164	1 440	1 527	1 176	996
France	694	689	792	664	793
Germany, Federal Republic of	1 182	1 266	1 194	1 192	1 030
Italy	378	526	568	482	475
Netherlands	402	416	455	518	497
Austria	33	34	36	55	49
Bulgaria	* 210	* 210	* 200	* 200	* 200
Finland	611	590	580	621	570
German Democratic Republic	* 18	* 15	* 16	* 16	* 16
Norway	120	115	130	117	102
Poland	* 761	* 773	* 698	* 580	* 570
Romania	* 90	* 90	* 85	* 80	* 75
Soviet Union	* 3 000	* 3 000	* 2 900	* 2 800	* 2 800
Spain	253	222	309	303	286
Turkey	15	12	10	—	—
Yugoslavia	186	289	201	208	174
Algeria	34	50	50	50	50
Namibia (a)	79	81	70	—	110
Zaire	186	212	168	230	281
Canada (b)	1 265	1 455	1 303	1 293	1 109
Mexico	897	830	778	590	607
USA (b)	1 653	1 823	1 578	1 603	1 007
Argentina	22	36	18	—	21
Brazil	10	21	41	28	73
Peru	169	190	172	312	429
China	* 220	* 250	* 250	* 270	* 300
India	113	166	89	113	131
Japan	2 531	2 598	2 173	1 977	2 021
Korea, Dem. P.R. of	* 150	* 150	* 140	* 130	* 100
Korea, Republic of	40	50	365	300	320
Australia	747	804	1 012	1 031	1 010
World total	17 500	18 800	18 300	17 200	16 600

(a) Thought to be a by-product of the smelting of zinc ores in South Africa

(b) Includes cadmium sponge and/or secondary metal

Exports of Cadmium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal	155	73	128	37	144
Sulphide	11	1	21	8	1
Belgium-Luxembourg					
Metal	736	810	870	576	547
Sulphide	43	29	22	26	43
France					
Metal	219	478	265	251	361
Germany, Federal Republic of					
Metal (a)	313	494	300	604	617
Oxide	18	22	28	38	14
Sulphide	24	28	...	...	...
Italy	124	259	322	258	79
Netherlands	373	528	404	505	646
Austria	20	25	31	32	53
Bulgaria (b)	* 75	* 65	* 50	* 35	* 40
Finland	507	707	565	554	658
Norway	97	156	114	94	139
Soviet Union	* 500	* 500	* 500	* 450	* 450
Spain	149	194	298	204	...
Yugoslavia	176	133	105	35	...
Zaire	—	74	* 100	* 200	...
Canada	1 259	1 293	1 096	1 453	771
Mexico	763	632	559	...	...
USA	328	212	244	240	12
Bolivia	93	8	—	—	...
Peru	198	210	179	...	...
Japan	111	151	229	938	1 145
Korea, Dem. P.R. of (b)	...	* 80	* 60	* 50	* 30
Korea, Republic of	...	566	314	360	152
Australia	744	625	794	993	...

(a) Including rhenium

(b) BGS estimates, based on known imports into certain countries

Cadmium

Imports of Cadmium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	1 174	1 432	793	982	872
Belgium-Luxembourg	1 032	1 166	1 029	1 131	1 199
Denmark	10	9	4	5	3
France					
Metal	649	735	659	598	618
Sulphide	54	68	48	44	54
Germany, Federal Republic of					
Metal	994	1 165	1 145	673	783
Oxide	428	539	550	417	487
Italy					
Metal	179	88	68	86	37
Sulphide	35	15	28	10	12
Netherlands					
Metal	55	85	68	118	155
Sulphide	17	25	15	12	4
Austria	4	3	5	3	3
Czechoslovakia	369	251	206	228	220
Sweden	132	168	268	186	224
Soviet Union	* 260	* 265	* 150	* 150	* 150
Turkey	9	—	3	3	...
USA	2 881	2 572	2 617	3 090	2 305
Brazil					
Metal	55	248	210	156	107
Oxide	181	108	109	88	92
India	66	61	66	...	...

Production of Chromium Ores and Concentrates

tonnes

Country	1978	1979	1980	1981	1982
Greece (b)	32 878	44 767	33 614	20 856	23 238
Albania	* 1 000 000	* 1 020 000	* 1 100 000	* 1 140 000	* 1 200 000
Finland (a)(b)	178 500	177 300	186 400	202 400	180 251
Soviet Union	* 2 300 000	* 2 400 000	* 2 450 000	* 2 400 000	* 2 450 000
Turkey (b)	466 711	418 978	383 141	401 112	450 956
Yugoslavia	1 907	168	—	—	—
Madagascar (b)	119 283	128 347	146 529	99 689	51 937
South Africa	3 144 741	3 296 962	3 414 410	2 869 505	2 163 973
Sudan	23 680	28 176	25 609	25 515	19 260
Zimbabwe	477 765	541 742	552 475	536 052	432 410
Cuba	28 776	28 200	28 457	21 000	27 000
Brazil	269 870	340 385	313 067	236 390	* 250 000
Cyprus	15 339	15 743	16 612	10 548	2 818
India	266 293	309 841	321 318	336 095	323 000
Iran	* 198 000	* 136 000	* 80 000	* 30 000	* 40 000
Japan	9 000	9 051	10 031	9 100	10 900
Pakistan	* 12 000	2 467	3 115	1 427	* 3 000
Philippines	539 898	556 110	496 060	439 256	355 471
Vietnam	* 12 700	* 13 500	* 15 500	* 15 500	* 15 500
New Caledonia	8 229	12 407	2 188	—	49 826
World total	9 100 000	9 500 000	9 600 000	8 800 000	8 000 000

Note: In addition to the countries listed, Bulgaria, China and Democratic P.R. of Korea are also believed to produce chromite

(a) Including foundry sand

(b) Concentrates

Exports of Chromium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates	38	222	891	1 192	980
Metal	2 249	2 121	2 569	2 275	1 945
Belgium-Luxembourg					
Ores & concentrates	447	19	27	—	—
Metal	421	504	464	398	280
France					
Ores & concentrates	983	1 379	1 616	2 033	1 554
Metal	611	720	699	774	590
Germany, Federal Republic of					
Ores & concentrates	3 212	8 807	5 412	3 459	12 959
Metal	126	225	275	164	101
Greece					
Ores & concentrates	20 381	29 140	32 318	15 885	12 175
Italy					
Ores & concentrates	3 606	2 673	2 034	3 046	436
Metal	90	19	9	5	2
Netherlands					
Ores & concentrates	15 150	14 417	18 726	16 577	21 130
Metal	56	2	3	31	5
Albania					
Ores & concentrates (c)	* 294 000	* 872 000	* 534 000	* 485 000	* 637 000
Austria					
Ores & concentrates	923	1 028	291	109	49
Finland					
Ores & concentrates	364 461	308 847	206 547	250 898	199 806
Soviet Union					
Ores & concentrates	738 000	775 000	567 000	567 000	561 000
Turkey					
Ores & concentrates	284 558	322 046	334 555	308 280	303 822
Yugoslavia					
Ores & concentrates	5 854	10 475	11 537	12 483	12 477
Madagascar					
Ores & concentrates	144 662	109 147	134 528	...	...
South Africa					
Ores & concentrates	1 422 588	1 269 487	1 237 203	1 171 608	865 560
Zimbabwe					
Ores & concentrates	20 042	11 463	14 828	4 279	...
Cuba					
Ores & concentrates	30 611	40 753	34 768	...	...
USA					
Ores & concentrates	47 414	41 290	45 003	124 502	60 993
of which: Re-exports	26 564	25 802	39 640	60 389	53 586
Metal	529	164	324	365	220
Brazil					
Ores & concentrates	81 859	45 215	—	—	240
Cyprus					
Ores & concentrates	11 148	10 698	7 500	10 689	11 868
India					
Ores & concentrates	67 102	236 017	...	...	...
Iran (a)					
Ores & concentrates	23 504	12 500	10 000	(c)* 5 000	...
Japan					
Ores & concentrates	1 636	1 786	5 678	607	744
Pakistan (b)					
Ores & concentrates	4 086	—	—	—	—
Philippines					
Ores & concentrates	455 681	496 770	484 109	397 381	279 017
New Caledonia					
Ores & concentrates	4 345	11 563	7 292	—	18 750

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

(c) BGS estimates, based on known imports into certain countries

Imports of Chromium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates	138 152	92 041	92 573	76 495	64 547
Metal	222	(a)* 300	(a)* 300	(a)* 200	(a)* 200
Belgium-Luxembourg					
Ores & concentrates	2 309	1 903	1 671	1 832	2 108
Metal	910	543	275	219	298
France					
Ores & concentrates	242 480	261 701	278 773	146 435	111 459
Metal	64	246	394	300	90
Germany, Federal Republic of					
Ores & concentrates	371 738	546 786	328 847	268 237	244 279
Metal	698	883	862	569	601
Greece					
Ores & concentrates	1 619	2 449	6 931	3 951	20
Irish Republic					
Ores & concentrates	5 579	6 222	1	5 623	—
Italy					
Ores & concentrates	140 186	232 445	171 045	91 806	159 431
Metal	206	206	186	175	126
Netherlands					
Ores & concentrates	6 398	6 866	27 176	18 189	31 355
Metal	81	59	126	46	64
Austria					
Ores & concentrates	61 947	57 077	77 407	42 334	49 906
Czechoslovakia					
Ores & concentrates	180 000	168 000	182 000	180 000	204 000
German Democratic Republic					
Ores & concentrates (b)	51 700	44 600	40 100	49 100	46 800
Hungary					
Ores & concentrates (c)	17 000	17 000	15 000	15 000	14 000
Norway					
Ores & concentrates	5 372	36 357	293	27 203	23 311
Poland					
Ores & concentrates	198 540	211 248	197 975	181 902	204 000
Portugal					
Ores & concentrates	692	733	457	352	...
Spain					
Ores & concentrates	95 165	117 977	84 558	70 330	...
Sweden					
Ores & concentrates	557 522	673 537	332 525	406 996	305 447
Metal	215	215	144	200	155
Yugoslavia					
Ores & concentrates	219 069	297 919	278 799	325 185	189 699
South Africa					
Ores & concentrates	1 348	845	7 430	8 147	121
Canada					
Ores & concentrates (b)	46 898	40 007	41 468	69 606	11 770
Mexico					
Ores & concentrates	50 919	55 086	36 906	...	...
USA					
Ores & concentrates	919 000	906 834	892 318	814 949	459 900
Metal	3 171	3 247	3 719	3 221	1 725
Argentina					
Ores & concentrates	1 985	6 217	9 734	...	...
Brazil					
Ores & concentrates	18 651	24 575	31 437	21 966	4 381
Chile					
Ores & concentrates	5 959	...	...	...	...
Peru					
Ores & concentrates	4 082	3 375	3 657	3 382	5 540
Venezuela					
Ores & concentrates	5 600	5 255	4 951	1 954	...

Chromium

Imports of Chromium

tonnes

Country	1978	1979	1980	1981	1982
China					
Ores & concentrates (a)	* 15 000	* 64 700	* 50 000	* 80 000	* 225 000
Japan					
Ores & concentrates	669 987	962 251	950 039	743 937	694 521
Korea, Dem P.R. of					
Ores & concentrates	* 10 000	* 7 000	* 19 000	...	...
Korea, Republic of					
Ores & concentrates	3 758	9 344	5 264	3 501	4 846
Taiwan					
Ores & concentrates	3 327	6 653	6 363	1 270	1 856
Australia					
Ores & concentrates	12 088	11 884	15 476	7 997	...

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) BGS estimates, based on known exports from certain countries

(b) Cr₂O₃ content

(c) Exports from Soviet Union

Production of Coal

Country	1978	1979	1980	1981	1982
United Kingdom					
Mined—					
Anthracite	1 453 000	1 693 000	1 607 000	1 566 000	1 406 000
Bituminous	106 075 000	106 082 000	110 823 000	108 907 000	104 755 000
Opencast—					
Anthracite	1 499 000	1 337 000	1 295 000	1 343 000	1 478 000
Bituminous	12 668 000	11 525 000	14 484 000	13 485 000	13 788 000
Belgium					
Anthracite	627 500	510 530	375 460	321 000	262 000
Bituminous	5 962 768	5 613 973	5 948 574	5 815 446	6 539 000
France					
Anthracite & bituminous	19 690 000	18 611 000	18 135 000	18 588 000	16 896 000
Lignite	2 732 000	2 450 000	2 585 000	2 945 000	3 060 000
Germany, Federal Republic of					
Anthracite & bituminous	83 936 000	86 318 439	87 145 911	88 459 000	89 014 000
Brown coal	123 559 000	130 579 000	129 833 000	130 620 000	127 307 000
Greece					
Lignite	21 698 151	23 647 398	23 505 701	27 214 469	27 188 514
Irish Republic					
Anthracite & semi-bituminous	30 400	62 000	63 000	70 000	62 000
Italy					
Lignite	1 868 078	2 122 926	1 932 571	1 957 958	1 912 675
Albania					
Brown coal & lignite	* 1 200 000	* 1 430 000	* 1 540 000	* 1 600 000	* 1 740 000
Austria					
Brown coal & lignite	3 075 680	2 740 742	2 864 967	3 061 262	3 297 488
Bulgaria					
Anthracite & bituminous	273 000	274 000	267 000	245 661	241 000
Brown coal & lignite	25 531 000	27 955 000	29 946 000	28 995 000	31 941 000
Czechoslovakia					
Bituminous	27 971 000	28 114 000	28 201 000	27 513 000	27 463 000
Brown coal	92 450 000	93 731 000	92 529 000	93 096 000	95 504 000
Lignite	3 269 000	3 201 000	3 197 000	3 269 000	3 440 000
German Democratic Republic					
Bituminous	85 000	—	—	—	—
Brown coal	235 264 000	256 063 000	258 097 000	266 734 000	276 038 000
Hungary					
Bituminous	2 953 902	3 002 567	3 065 389	3 065 763	3 039 000
Brown coal	14 301 627	14 181 758	14 156 496	14 463 295	14 754 000
Lignite	8 413 988	8 474 713	8 478 981	8 413 123	8 286 000
Norway					
Spitzbergen (d)—					
Bituminous	402 084	280 280	288 412	409 729	335 511
Poland					
Bituminous	192 622 000	201 000 084	193 121 000	163 022 000	189 314 000
Brown coal	41 005 000	38 083 000	36 866 000	35 616 000	37 649 000
Portugal					
Anthracite	180 102	179 118	177 451	183 760	178 540
Romania					
Anthracite & bituminous	8 794 000	9 299 000	9 686 000	8 286 000	7 200 000
Lignite	22 019 000	24 956 000	27 448 000	) 28 641 000	30 700 000
Brown coal	641 000	633 000	680 000		
Soviet Union					
Anthracite & bituminous	557 140 000	533 960 000	552 954 000	544 213 000	556 000 000
Lignite	166 484 000	164 704 000	163 417 000	159 831 000	162 000 000
Spain					
Anthracite	3 830 589	3 795 709	4 074 042	4 862 970	5 195 052
Bituminous	7 667 695	8 048 732	9 069 931	9 808 854	10 388 664
Lignite	8 271 535	10 696 392	15 390 196	20 886 388	23 494 404

Production of Coal

tonnes

Country	1978	1979	1980	1981	1982
Turkey					
Bituminous	7 741 311	7 199 786	6 598 755	7 284 834	7 222 871
Lignite	18 030 048	15 602 578	16 997 916	18 950 943	20 485 510
Yugoslavia					
Bituminous	471 000	434 000	388 000	384 000	389 000
Lignite	30 360 000	32 329 000	36 949 000	40 958 000	43 454 000
Brown coal	8 853 000	9 351 000	9 665 000	10 581 000	10 744 000
Botswana	314 486	355 115	371 395	380 698	410 367
Morocco					
Anthracite	720 000	710 000	680 000	703 000	735 000
Mozambique					
Bituminous	118 000	320 000	408 000	* 500 000	...
Nigeria					
Sub-bituminous	264 000	172 147	193 225	115 893	152 020
South Africa					
Anthracite	2 150 038	3 308 727	3 895 455	4 017 426	3 525 691
Bituminous	88 207 790	100 459 139	111 224 519	126 403 276	140 650 263
Swaziland					
Bituminous	165 874	168 409	175 984	157 701	115 043
Tanzania					
Bituminous	6 541	5 572	4 250	3 000	...
Zaire					
Bituminous	96 771	99 220	136 506	139 706	* 140 000
Zambia					
Bituminous	615 145	598 507	568 799	527 340	603 934
Zimbabwe					
Bituminous	3 065 804	3 186 433	3 133 036	2 866 323	2 772 980
Canada					
Bituminous	17 141 000	18 432 000	20 151 000	21 739 000	22 296 000
Sub-bituminous	8 278 000	9 569 000	10 542 000	11 551 000	13 021 000
Lignite	5 058 000	5 012 000	5 971 000	6 798 000	7 494 000
Mexico					
Bituminous	6 755 556	7 356 696	7 009 716	8 086 474	* 7 000 000
USA					
Anthracite	4 569 000	4 400 000	5 500 000	4 900 000	3 800 000
Bituminous & lignite	603 393 000	704 200 000	747 200 000	742 400 000	752 200 000
Argentina					
Lignite	434 141	726 939	389 395	497 546	515 500
Brazil					
Bituminous & lignite	4 105 899	4 996 566	4 839 428	5 470 675	* 6 200 000
Chile					
Bituminous	1 089 842	915 002	995 561	1 147 122	973 482
Colombia					
Bituminous	4 754 000	4 885 000	5 260 000	5 030 000	6 500 000
Peru					
Anthracite	66 000	51 000	47 000	* 50 000	...
Venezuela					
Bituminous	80 643	55 304	43 979	45 736	46 506
Afghanistan (c)					
Bituminous	217 500	132 000	145 000	125 000	...
Burma (b)	12 184	13 818	11 213	38 102	* 38 200
China	* 618 000 000	* 635 000 000	* 620 000 000	* 620 000 000	* 644 000 000
India					
Bituminous	101 973 000	103 845 000	109 152 000	123 058 000	* 128 000 000
Lignite	3 613 000	3 264 000	4 549 000	5 965 000	* 7 000 000
Indonesia					
Bituminous	264 180	278 589	303 990	367 000	480 763
Iran (c)					
Bituminous	* 900 000	* 900 000	* 700 000	* 600 000	* 700 000
Japan					
Anthracite & bituminous	18 991 274	17 640 804	18 026 455	17 687 375	* 17 600 000
Lignite	36 839	30 492	26 193	11 549	...

Production of Coal

Coal

tonnes

Country	1978	1979	1980	1981	1982
Korea, Dem P.R. of					
Anthracite	* 35 000 000	* 35 000 000	* 36 000 000	* 36 000 000)
Bituminous	* 8 800 000	* 8 800 000	* 8 800 000	* 8 800 000	) * 50 800 000
Lignite	* 200 000	* 200 000	* 200 000	* 200 000)
Korea, Republic of					
Anthracite	18 054 000	18 208 000	18 624 000	19 865 000	20 115 600
Mongolia (a)	* 3 798 000	* 4 114 000	* 4 376 000	* 4 300 000	...
Pakistan (a)	* 1 036 000	1 346 000	1 694 447	1 562 008	* 1 765 000
Philippines					
Bituminous	255 054	263 132	325 008	318 170	530 000
Taiwan					
Bituminous	2 883 904	2 719 751	2 573 530	2 445 782	2 383 579
Thailand					
Lignite	638 942	1 356 467	1 426 566	1 686 044	1 963 764
Vietnam					
Anthracite	6 000 000	5 300 000	5 300 000	5 900 000	...
Australia					
Bituminous	74 094 000	76 794 000	77 428 000	93 674 000	* 95 000 000
Sub-bituminous	5 733 000	6 365 000	7 196 000	7 195 000	* 7 000 000
Brown coal	32 860 000	32 597 000	32 894 000	32 964 000	37 811 000
New Zealand					
Bituminous	363 800	382 500	486 500	474 600	427 000
Sub-bituminous	1 667 800	1 354 800	1 466 700	1 509 700	1 594 700
Lignite	150 900	209 000	208 000	211 900	221 900
World total	3 558 000 000	3 716 000 000	3 804 000 000	3 834 000 000	3 962 000 000

Note: There is no international agreement as to the separate definition of lignite and brown coal. In some cases they are distinguished. Elsewhere both may be aggregated under one or other term

- (a) Including lignite
- (b) Years ended 31 March following that stated
- (c) Years ended 20 March following that stated
- (d) Not including production from mines controlled by the Soviet Union

Exports of Coal

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Anthracite	532 683	846 216	1 014 614	893 170	551 945
Other	1 730 615	1 493 160	3 026 143	8 619 348	6 837 177
Briquettes	145 725	174 391	118 906	104 020	126 338
Belgium-Luxembourg					
Anthracite	49 448	65 208	48 012	72 493	71 561
Other	196 087	380 041	490 031	820 440	676 747
Briquettes	25 630	59 036	25 399	16 254	13 254
Denmark	2 692	2 791	4 103	3 115	1 170
France					
Anthracite	177 588	133 318	100 603	67 402	86 606
Lignite	6 370	6 852	6 617	6 492	4 630
Other	354 161	436 236	358 726	687 584	717 082
Briquettes	27 786	41 368	50 249	26 716	21 727
Germany, Federal Republic of					
Brown coal	66 075	163 615	275 152	259 859	217 977
Other (b)	18 656 165	15 607 169	12 369 332	11 995 765	9 944 737
Briquettes	825 302	985 793	959 407	953 583	872 308
Irish Republic (b)	57 945	65 760	38 446	9 235	3 430
Italy (b)	5 544	13 019	18 718	19 773	4 490
Netherlands					
Anthracite	141 169	272 568	213 439	250 490	188 252
Other	343 844	759 518	1 333 147	659 795	481 105
Briquettes	4 828	11 089	3 309	2 893	3 850
Austria					
Brown coal	5 433	11 575	24 052	19 518	15 291
Czechoslovakia					
Brown coal	1 515 000	1 647 000	2 160 000	2 527 000	2 710 000
Other	3 745 000	3 366 000	3 728 000	2 605 000	2 822 000
German Democratic Republic					
Briquettes	2 211 000	1 806 000	2 212 000	2 789 000	3 947 000
Hungary					
Brown coal	37 460	20 983	44 547	42 422	35 085
Norway	77 042	63 577	91 120	84 140	96 386
Poland					
Brown coal	3 332 000	2 974 000	1 569 000	1 383 000	941 000
Other	40 099 000	41 437 000	31 048 000	15 159 000	28 462 000
Soviet Union					
Anthracite	* 4 700 000	* 4 700 000	* 4 000 000	* 4 000 000	* 4 000 000
Other	* 22 500 000	* 23 000 000	* 23 000 000	* 23 000 000	* 23 000 000
Spain					
Anthracite	16 232	14 455	17 167	13 767	...
Sweden (b)	31 555	24 499	3 994	1 152	868
Turkey					
Lignite	244 617	130 885	197 055	—	...
Other	520	1 485	2 000	—	4 000
Yugoslavia					
Brown coal	374 013	296 267	318 833	444 840	) 570 000
Lignite	23 762	77 211	78 660	75 291)
Morocco					
Anthracite	54 928	77 622	81 012	62 935	24 755
Mozambique	38 700	152 200	98 478	* 100 000	...
Nigeria	3 600	2 000	...	...	...
South Africa					
Anthracite	2 528 160	3 363 925	3 409 202	4 297 987	1 927 870
Bituminous	12 860 508	19 977 383	25 741 032	25 592 810	25 563 487
Swaziland	105 342	165 170	139 558	104 959	77 273
Zimbabwe	216 614	195 952	229 498	116 357	66 217
Canada	13 657 516	13 852 850	14 310 784	16 285 104	15 528 569
USA					
Anthracite	785 875	1 118 332	1 628 371	2 040 027	889 053
Bituminous	36 129 749	58 770 047	81 539 975	100 011 646	95 476 710
Lignite	20 703	23 940	59 025	44 201	47 775

Exports of Coal

tonnes

Country	1978	1979	1980	1981	1982
Argentina	656	2 922	650	...	...
Colombia					
Bituminous	148 955	128 895	87 462	88 759	173 729
Other	1 087	6 800	7 967	564	1 180
China (c)	* 797 100	* 1 760 600	* 2 865 500	* 3 017 100	* 3 577 200
India (a)	264 895	93 660	108 336	...	...
Indonesia	31 673	59 595	112 487	156 695	210 739
Japan	47 740	59 563	70 726	55 004	25 060
Korea, Dem. P.R. of	* 27 000	* 57 000	* 100 000	* 125 000	...
Australia	38 052 000	41 006 000	42 242 500	50 662 000	49 791 000

Note: This table excludes bunker shipments

(a) Years ended 31 March following that stated

(b) Including anthracite

(c) BGS estimates, based on known imports into certain countries

Imports of Coal

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Anthracite	217 423	251 281	320 145	329 641	616 871
Bituminous	1 380 833	2 339 793	2 405 025	2 604 762	2 578 556
Other	751 077	1 762 036	4 601 512	1 355 760	803 594
Briquettes	77 257	91 988	170 173	132 428	88 845
Belgium-Luxembourg					
Anthracite	2 189 474	2 218 140	1 807 545	1 705 916	1 526 643
Bituminous	3 287 223	4 620 384	4 014 611	4 524 142	4 503 272
Other	2 173 300	3 196 676	4 767 352	4 183 732	4 894 831
Briquettes	180 799	204 955	174 321	193 899	187 749
Denmark					
Coal	6 110 405	7 555 732	10 063 182	10 884 615	9 583 748
Briquettes	13 007	22 557	40 349	61 527	59 104
France					
Anthracite	2 164 335	2 313 018	2 534 097	1 488 523	1 054 155
Bituminous	6 377 855	8 309 293	8 743 025	8 579 265	7 721 993
Lignite	11 024	11 774	11 527	9 725	6 778
Other	15 240 876	16 085 533	18 535 618	17 302 886	13 079 929
Briquettes	431 919	432 546	305 761	262 769	313 624
Germany, Federal Republic of					
Anthracite	155 694	210 745	154 025	164 423	67 927
Brown coal	1 460 151	1 590 319	2 124 539	2 713 584	2 666 888
Other	6 408 807	7 562 192	8 969 458	10 155 991	10 568 689
Briquettes	13 942	15 421	17 821	16 065	14 642
Greece					
Anthracite	52 142	6 447	6 625	2 000	25 000
Other	323 747	447 991	474 057	167 000	361 000
Irish Republic					
Anthracite	56 479	48 705	36 825	36 894	40 610
Bituminous	783 550	1 167 219	1 168 360	1 251 847	1 195 501
Italy					
Anthracite	497 051	373 231	293 977	200 282	294 930
Bituminous	771 795	8 639 982	10 795 323	10 742 885	9 556 787
Lignite	26 572	41 828	47 506	18 248	41 766
Other	10 466 837	4 851 711	5 427 393	7 521 418	8 022 366
Briquettes	39 462	47 308	64 011	130 516	37 285
Netherlands					
Anthracite	337 572	286 047	417 808	419 242	329 366
Bituminous	2 852 649	3 643 113	3 398 559	3 207 889	3 466 754
Brown coal	54 930	153 764	156 168	149 208	120 707
Other	1 840 434	2 281 628	3 339 048	4 321 688	5 079 284
Briquettes	22 152	36 294	43 515	21 499	28 282
Albania (e)	* 168 000	* 261 000	* 159 000	* 187 000	* 308 000
Austria					
Anthracite	34 823	43 424	52 840	50 561	18 003
Brown coal	247 893	228 527	283 372	523 867	601 331
Other	2 257 001	2 750 492	2 805 265	2 663 210	2 833 702
Briquettes	285 943	299 286	325 686	369 119	470 274
Bulgaria	6 201 000	6 360 000	6 711 000	7 051 000	7 227 000
Czechoslovakia					
Brown coal	466 000	475 000	438 000	570 000	652 000
Other	5 591 000	5 492 000	5 058 000	4 423 000	4 980 000
Finland					
Anthracite	86 169	124 205	127 242	111 832	89 585
Other	4 703 069	4 647 005	4 542 386	5 537 729	4 594 492
German Democratic Republic (c)	5 936 000	8 657 000	6 828 000	5 361 000	4 739 000
Greenland	2 652	2 790	1 926	2 150	...
Hungary					
Coal (c)	1 420 029	1 514 663	1 622 633	1 678 129	1 996 684
Briquettes	500 134	462 037	503 747	523 792	489 471
Norway (a)					
Anthracite	79 535	92 940	103 425	79 128	63 267
Other	367 954	579 420	635 014	613 569	741 689
Poland					
Anthracite	30 000	26 000	30 000	31 000	30 000
Other	1 044 000	945 000	1 012 000	1 072 000	972 000

Imports of Coal

Coal

tonnes

Country	1978	1979	1980	1981	1982
Portugal					
Anthracite	7 961	4 578	11 182	13 000	...
Other	425 322	371 366	299 109	335 203	...
Romania	4 668 500	3 844 800	3 949 000	* 3 500 000	...
Soviet Union	* 10 000 000	* 10 000 000	* 9 000 000	* 8 000 000	* 9 000 000
Spain					
Anthracite	7 479	5 310	8 205	—	...
Brown coal	6 391	7 086	6 705	6 810	...
Other	3 369 128	4 186 399	5 669 941	7 044 941	...
Sweden					
Anthracite	31 757	43 638	44 949	10 064	26 143
Other	1 512 949	2 075 556	2 136 679	2 017 561	2 856 200
Switzerland					
Anthracite	141 499	317 049	573 437	862 858	471 399
Briquettes	49 180	61 618	65 803	60 355	45 197
Turkey	636 454	549 694	508 318	336 131	1 034 000
Yugoslavia					
Anthracite	209 565	200 496	137 465	208 498)
Lignite	399	—	—	—	) 3 537 000
Other	1 463 914	3 335 365	3 420 285	3 614 030)
Briquettes	139 447	51 550	111 948	156 988	115 000
Algeria	30 530	91 455	510 132	* 750 000	...
Egypt	857 267	356 990	802 050	1 266 508	...
Ghana	* 2 000	* 2 000	* 2 000	* 2 000	...
Kenya	47 738	15 875	15 562	90 929	...
Madagascar	13 206	28 863	27 114	* 30 000	...
Malawi	55 307	33 759	65 383	47 739	70 539
Morocco	7 860	10 474	9 951	10 071	41 211
Mozambique	137 400	182 300	71 755	* 71 800	...
South Africa	198 593	175 887	199 470	51 515	798
Tunisia	27 085	32 739	21 006	26 436	...
Zaire	42 999	12 058	* 10 000	...	...
Zimbabwe	16 840	22 951	75 418	43 299	...
Canada					
Anthracite	225 639	159 082	331 176	289 803	214 374
Bituminous	12 900 488	17 280 466	15 516 657	14 516 893	15 405 470
Other	99 834	101 330	202 370	170 388	82 645
Cuba	59 929	* 45 000	* 50 000	* 60 000	...
Mexico					
Lignite	2 696	7 539	6 438	...	...
Other	567 037	701 558	816 259	...	...
USA					
Bituminous	1 688 486	1 107 581	811 797	815 179	593 219
Other	1 472 684	784 084	301 181	148 563	99 886
Argentina	952 240	932 416	788 278	705 800	...
Brazil					
Anthracite	24 670	35 372	240 677	32 291	41 545
Bituminous	3 615 592	4 443 141	4 279 895	4 320 492	4 194 337
Chile	172 558	497 000	1 192 000	397 000	...
Peru					
Bituminous	51 424	49 593	26 366	23 928	24 568
Uruguay	403	4 136	3 545	1 403	—
Venezuela	31 734	33 787	44 089	36 617	...
Burma	* 210 000	* 200 000	* 210 000	* 215 000	...
Hong Kong	7 711	5 814	2 851	57 004	1 454 698
India	1 583	639 705	703 303	620 000	...
Indonesia	2 515	4 082	4 876	5 336	2 593
Iran (b)	* 83 000	* 51 000	* 60 000	* 60 000	...
Israel (d)	305	244	116	307 738	...
Japan					
Anthracite	1 052 253	1 028 255	1 191 229	872 732	630 197
Lignite	38 168	42 322	33 970	28 204	44 206
Other	51 124 931	57 525 808	67 036 601	77 397 668	78 461 180

Coal

Imports of Coal

tonnes

Country	1978	1979	1980	1981	1982
Korea, Dem. P.R. of	* 442 000	* 450 000	* 450 000	* 450 000	...
Korea, Republic of					
Anthracite	)	2 120 071	2 365 057	5 138 150	2 448 589
Bituminous	) 2 402 921	26 874	481 858	1 420 771	2 600 465
Other	)	4 191 046	4 449 438	5 890 120	6 443 931
Malaysia					
Anthracite	14 080	22 298	19 488	* 20 000	...
Pakistan (f)	16 054	97	19 456	160 933	538 307
Philippines	51 540	1 510	2 422	12 705	120 303
Syria	1 059	808	652	1 354	...
Taiwan	1 359 740	2 720 141	4 068 985	5 187 010	5 589 187
Thailand	12 990	20 178	15 230	15 311	98 954
Australia	22 696	16 016	2 159	1 781	12 183
New Caledonia	44 105	87 906	119 799	82 351	64 990

(a) Excludes coal imported from Spitzbergen

(b) Years ended 20 March following that stated

(c) Including anthracite

(d) Figures may be incomplete as value only given in Israeli trade return for imports from some countries

(e) BGS estimates, based on known exports from certain countries

(f) Years ended 30 June of that stated

Mine Production of Cobalt

tonnes (metal content)

Country	1978	1979	1980	1981	1982
Finland	1 623	1 332	950	940	1 038
Soviet Union	* 1 950	* 2 000	* 2 150	* 2 250	* 2 350
Botswana	261	294	226	254	254
Morocco	1 133	1 001	838	784	773
Zaire	13 146	13 599	14 482	11 124	5 573
Zambia	2 063	3 176	3 310	2 570	2 446
Zimbabwe	17	205	115	93	97
Canada	1 233	1 640	2 118	2 080	1 458
Cuba	* 1 400	* 1 300	* 1 500	* 1 600	* 1 500
Philippines	1 192	1 370	1 331	997	571
Australia	3 265	3 046	3 704	3 266	* 3 000
New Caledonia	2 015	2 414	2 598	2 343	1 804
World total	29 300	31 400	33 300	28 300	20 700

Note: There is frequently a considerable disparity between the cobalt content of ore raised and cobalt actually recovered. Figures in this table relate where possible to cobalt recovered. The principal exceptions to this are Australia and New Caledonia, the figures for which relate to cobalt in ore raised

Production of Cobalt Metal

tonnes

Country	1978	1979	1980	1981	1982
Belgium (a)	...	...	...	...	...
France	871	659	1 033	815	568
Germany, Federal Republic of	350	385	* 400	* 400	* 400
Czechoslovakia (b)	...	...	...	...	...
Finland	1 052	1 156	1 906	1 230	1 455
Norway	522	953	1 275	1 444	999
Soviet Union	* 3 500	* 3 600	* 3 750	* 3 850	* 3 950
Zaire	13 146	13 599	14 482	11 124	5 573
Zambia	2 063	3 176	3 310	2 570	2 446
Canada	519	605	692	910	785
USA	292	421	454	406	461
Japan	1 864	2 653	2 867	2 421	1 942
World total	24 200	27 200	30 200	25 200	18 600

Note: In addition to the production listed above, several countries, including the United Kingdom, France, Federal Republic of Germany and USA, are known to produce substantial amounts of cobalt compounds

- (a) Production not reported. Much of the metal recorded under Zaire is believed to be further processed in Belgium
- (b) Czechoslovakia is thought to recover cobalt from materials imported from Cuba. However no data are available to enable a reliable estimate to be made

Exports of Cobalt

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal	885	962	1 061	810	514
Oxides	411	244	279	838	500
Belgium-Luxembourg (a)					
Metal	* 4 000	* 3 300	* 2 300	* 1 400	* 1 300
Oxides	* 2 200	* 1 700	* 1 000	* 500	* 700
France					
Metal	1 100	797	831	805	780
Oxides	192	118	179	209	165
Germany, Federal Republic of					
Metal	796	847	821	619	817
Oxides	86	45	88	54	25
Italy	72	107	30	27	63
Netherlands					
Metal	100	254	196	60	117
Oxides	62	78	48	48	40
Finland	853	1 069	1 201	1 564	1 297
Norway	559	885	1 139	1 638	1 007
Sweden					
Metal	63	221	103	342	65
Oxides	0	85	0	2	1
Morocco					
Ore	8 922	7 530	7 489	6 333	5 017
Zaire	9 567	8 139	4 048	...	...
Zambia	1 793	3 060	1 924	...	...
Canada					
Metal	827	302	327	678	585
of which: Re-exports	111	114	2	2	0
Oxides	748	559	1 091	601	212
USA					
Metal	1 436	1 170	1 075	1 345	665
Oxides	816	1 357	780	220	240
Japan					
Oxides	87	41	85	13	10

(a) Exports of cobalt are not separately recorded. Figures shown are BGS estimates based on known imports into certain countries

Imports of Cobalt

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal	2 266	3 032	2 189	1 439	1 219
Oxides	1 141	683	1 333	890	363
Belgium-Luxembourg					
Oxides	66	54	43	74	62
Denmark					
Metal	33	30	19	14	16
Oxides	10	10	5	6	10
France					
Ore	9 727	7 684	5 696	6 460	5 767
Metal	964	897	1 141	1 133	1 721
Oxides	293	267	209	183	231
Germany, Federal Republic of					
Metal	2 059	1 848	1 703	1 212	1 451
Oxides	603	483	319	239	308
Italy					
Metal	369	338	258	209	252
Oxide	215	189	193	190	131
Netherlands					
Metal	78	194	180	52	140
Oxides	387	286	197	194	192
Austria					
Oxides	6	2	4	3	3
Finland					
Metal	306	418	7	252	2
Oxides	309	622	246	0	0
Norway					
Metal	3	18	69	502	341
Oxides	9	9	6	3	2
Portugal					
Oxide	6	9	4	6	...
Spain					
Oxides	143	75	72	94	...
Sweden					
Metal	484	509	530	555	273
Oxides	3	4	2	2	3
Switzerland					
Oxides	16	2	1	2	2
Turkey					
Oxides	200	21	25	41	42
Yugoslavia					
Oxides	32	22	17	53	20
South Africa					
Metal	139	64	100	82	77
Oxides	6	8	12	15	9
Mexico					
Metal	55	70	76	...	...
Oxides	122	118	187	...	...
USA					
Metal	7 479	8 567	6 783	6 308	5 397
Oxide	488	230	188	201	164
Argentina	48	57	62	...	...
Brazil					
Metal	312	237	303	237	239
Oxide	86	53	52	16	21
Venezuela					
Oxides	13	13	10	11	...
Hong Kong					
Oxide	41	18	18	42	26
India					
Metal	151	136	125	...	...
Oxide (a)	8	5	3	...	...

Imports of Cobalt

tonnes

Country	1978	1979	1980	1981	1982
Indonesia					
Oxides	9	6	5	17	64
Japan					
Metal	1 359	1 677	1 693	1 129	2 014
Oxide	615	651	292	227	305
Korea, Republic of					
Metal	34	70	56	54	88
Oxides	26	16	9	8	9
Taiwan					
Oxides	31	17	23	24	23
Australia					
Metal	29	30	23	50	...
Oxide	13	16	11	39	...

(a) Years ended 31 March following that stated

Mine Production of Copper

tonnes (metal content)

Country	1978	1979	1980	1981	1982
United Kingdom (a)	135	...	200	607	649
France	200	400	100	98	137
Germany, Federal Republic of	821	851	1 274	1 400	1 300
Greece	1 500	—	100	100	* 1 000
Irish Republic	4 700	5 000	4 000	3 400	1 573
Italy	531	489	600	800	138
Albania	11 500	9 700	11 500	12 000	14 000
Bulgaria	57 000	60 000	62 000	62 000	70 000
Czechoslovakia	8 200	9 000	11 500	9 200	10 000
Finland	52 089	44 349	53 000	38 200	38 145
German Democratic Republic	* 15 000	* 14 000	* 11 800	* 12 000	* 13 000
Hungary	203	116	—	—	—
Norway	29 073	28 659	28 891	28 123	27 942
Poland	312 000	340 000	343 000	294 600	376 000
Portugal	2 962	3 652	3 889	2 849	2 500
Romania	* 27 000	* 29 000	* 28 000	* 30 000	* 33 000
Soviet Union	* 1 140 000	* 1 130 000	* 1 130 000	* 1 140 000	* 1 180 000
Spain	40 448	42 982	48 483	56 423	54 600
Sweden	47 412	45 773	42 785	51 472	55 400
Turkey	27 188	30 521	21 300	32 085	32 548
Yugoslavia	123 319	111 421	114 786	110 961	119 300
Algeria	200	200	200	200	200
Botswana	14 615	14 563	15 553	17 819	18 375
Congo	595	1 000	1 300	245	100
Mauritania	1 773	—	—	—	—
Morocco	4 300	8 233	8 423	7 600	20 900
Mozambique	300	200	—	—	—
Namibia	37 700	41 900	39 200	44 300	48 800
South Africa	205 745	190 591	200 683	199 424	188 709
Uganda	7 200	—	—	—	—
Zaire	472 533	451 548	459 700	504 800	502 800
Zambia	654 012	586 046	609 935	587 442	529 641
Zimbabwe	33 848	29 724	26 901	24 583	24 693
Canada (b)	659 380	636 383	716 363	691 328	606 202
Cuba	2 821	2 840	3 350	2 900	2 700
Guatemala	2 023	1 768	842	726	* 700
Honduras	427	288	269	454	758
Mexico	87 186	107 109	175 399	230 466	239 091
USA	1 357 587	1 443 556	1 180 789	1 538 160	1 139 563
Argentina	319	89	182	100	100
Bolivia	3 267	1 797	1 882	2 637	2 300
Brazil	—	—	402	13 945	24 482
Chile	1 034 200	1 062 700	1 067 900	1 081 100	1 240 700
Colombia	100	84	111	113	* 100
Ecuador	508	666	923	825	100
Peru	366 753	390 720	366 800	327 614	356 300
Burma	* 100	* 100	* 100	* 100	* 100
China	* 160 000	* 160 000	* 165 000	* 170 000	* 175 000
Cyprus	4 678	1 200	—	259	820
India	26 640	27 717	26 819	25 200	24 000
Indonesia	58 000	60 198	58 990	62 550	73 033
Iran	6 000	3 000	1 000	2 000	43 000
Israel	—	—	400	4 400	4 100
Japan	71 951	59 960	52 553	51 513	51 031
Korea, Dem. P.R. of	* 15 000	* 15 000	* 12 000	* 12 000	* 12 000
Korea, Republic of	715	475	372	501	320

Mine Production of Copper

tonnes (metal content)

Country	1978	1979	1980	1981	1982
Malaysia	26 000	24 514	26 990	28 642	30 906
Mongolia	4 000	21 700	44 000	71 800	95 000
Philippines	263 589	298 300	304 504	302 328	293 100
Taiwan	800	600	500	500	400
Australia	222 111	237 610	243 540	231 339	246 770
Papua New Guinea	198 603	170 788	146 813	165 420	170 004
World total	7 900 000	8 000 000	7 900 000	8 300 000	8 200 000

(a) In a mixed copper-zinc concentrate

(b) Blister copper plus recoverable copper in ores and matte exported

Smelter Production of Copper

tonnes

Country	1978	1979	1980	1981	1982
Belgium	* 9 000	* 1 500	* 700	* 3 100	* 2 500
Germany, Federal Republic of	165 800	158 200	153 900	163 100	161 800
Albania	9 500	10 000	11 500	11 500	14 000
Bulgaria	57 000	58 000	59 000	62 000	70 000
Czechoslovakia	* 10 000	* 10 000	30 966	30 180	30 317
Finland	52 564	53 943	47 846	54 747	66 200
German Democratic Republic	* 16 000	* 18 000	* 16 000	* 16 000	* 17 000
Hungary	1 005	2 288	2 069	2 351	3 200
Norway	20 061	27 339	33 690	31 951	24 388
Poland	320 000	320 000	320 000	288 000	308 000
Portugal	3 000	5 500	6 600	3 200	1 500
Romania	38 880	41 120	40 675	* 39 500	* 40 000
Soviet Union	* 1 170 000	* 1 170 000	* 1 150 000	* 1 160 000	* 1 220 000
Spain	112 500	108 300	103 058	107 900	105 000
Sweden	53 177	51 655	45 749	60 576	72 504
Turkey	26 220	22 212	16 320	27 264	25 308
Yugoslavia	107 507	108 732	93 745	92 505	84 000
Namibia	45 900	42 700	40 000	39 700	49 800
South Africa	189 400	182 300	185 800	185 400	191 800
Uganda	980	—	—	—	—
Zaire (a)	392 825	371 932	425 716	468 200	466 400
Zambia (a)	653 900	595 104	601 348	560 616	584 790
Zimbabwe	34 200	31 400	26 300	30 100	30 500
Canada	425 300	384 500	492 700	479 000	366 600
Mexico	86 978	83 857	85 610	69 199	77 400
USA	1 288 378	1 335 607	1 008 397	1 316 756	975 695
Chile	927 400	949 600	953 100	953 800	1 046 800
Peru	319 000	371 400	348 600	302 300	328 271
China	* 170 000	* 170 000	* 175 000	* 190 000	* 205 000
India	19 480	21 455	28 489	25 856	32 548
Japan	905 900	921 400	929 800	980 100	1 044 800
Korea, Dem. P.R. of	* 20 000	* 18 000	* 17 000	* 17 000	* 17 000
Korea, Republic of	45 900	48 200	64 100	101 200	119 400
Taiwan	13 000	14 300	17 000	53 100	47 500
Australia	164 395	163 192	174 920	172 181	175 624
World total	7 900 000	7 900 000	7 700 000	8 100 000	8 000 000

Note: This table shows, where possible, primary metal in the form of blister and anode produced from concentrates, but may include some secondary metal produced from scrap, residues, etc.

(a) Including leach cathodes

Production of Refined Copper

Country	1978	1979	1980	1981	1982
United Kingdom	125 561	121 697	161 338	136 163	134 132
Belgium (a)	504 867	519 944	526 252	436 579	501 634
France	41 345	45 258	46 460	46 369	46 585
Germany, Federal Republic of	404 500	382 500	373 800	387 400	393 600
Italy	17 500	15 600	12 200	23 700	19 600
Albania	* 7 000	* 7 000	* 9 000	* 9 500	* 9 500
Austria	31 485	32 812	31 286	39 117	41 559
Bulgaria	62 000	62 000	63 000	62 000	65 000
Czechoslovakia	23 810	24 587	25 559	25 513	25 636
Finland	42 719	43 027	40 542	33 796	47 969
German Democratic Republic	* 49 000	* 51 000	* 51 000	* 54 000	* 51 000
Hungary	16 752	27 674	27 756	28 840	* 25 000
Norway	15 674	21 980	26 715	26 776	18 041
Poland	332 216	335 814	357 268	327 178	348 027
Portugal	2 839	3 373	4 480	4 855	4 600
Romania	* 66 700	* 66 300	* 65 000	* 60 000	* 55 000
Soviet Union	* 1 460 000	* 1 480 000	* 1 450 000	* 1 460 000	* 1 520 000
Spain	147 000	140 600	153 700	152 100	171 900
Sweden	64 438	61 676	55 713	61 892	62 300
Turkey	12 585	22 251	15 934	27 263	25 313
Yugoslavia	150 828	137 504	131 288	132 603	126 870
Egypt	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
South Africa	152 500	152 300	147 900	144 800	142 500
Zaire	102 900	103 100	144 000	151 300	175 115
Zambia	629 000	558 400	607 592	560 446	584 613
Zimbabwe	11 200	8 400	7 100	16 700	25 700
Canada	446 278	397 263	505 238	476 655	312 411
Mexico	74 990	81 781	85 610	71 300	75 400
USA	1 869 200	2 013 800	1 726 000	2 037 600	1 686 400
Brazil	45 000	53 110	63 000	45 000	57 000
Chile	748 200	780 100	810 700	775 600	851 600
Peru	185 400	230 300	230 600	209 100	224 900
China	* 290 000	* 290 000	* 295 000	* 300 000	* 300 000
India	11 682	14 707	18 010	16 058	* 20 000
Iran	* 6 000	* 3 000	* 1 000	* 1 000	* 1 000
Japan	959 070	983 700	1 014 292	1 050 120	1 074 974
Korea, Dem. P.R. of	* 25 000	* 22 000	* 19 000	* 19 000	* 19 000
Korea, Republic of	52 442	63 082	72 931	107 984	110 818
Taiwan	14 353	15 305	19 495	53 230	47 377
Australia	178 942	171 959	182 400	193 679	182 731
World total	9 400 000	9 500 000	9 600 000	9 800 000	9 600 000

Note: Figures relate to both primary and secondary refined copper, whether electrolytic or fire refined. Metal recovered from secondary materials by remelting alone is excluded

(a) Including alloys

Exports of Copper

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ore & matte	973	6	4	4	115
Unwrought—					
Unrefined	4	75	80	66	60
Refined	11 110	22 569	32 938	19 875	17 433
Alloys	28 780	25 418	27 544	23 095	15 149
Scrap	40 431	59 593	82 399	65 562	92 719
Belgium-Luxembourg					
Ore	3 443	733	716	727	630
Burnt cupreous pyrites	142 309	144 883	138 574	149 092	152 161
Unwrought—					
Matte, cement & unrefined	2 128	2 945	6 662	12 118	11 902
Refined	304 783	297 601	299 149	282 495	287 857
Alloys	6 466	7 971	8 222	8 551	6 717
Scrap	19 912	26 846	26 356	24 066	30 553
Denmark					
Unwrought	15	127	70	8	158
Unwrought alloys	867	1 110	1 040	1 447	1 124
Scrap	12 499	12 735	15 153	13 132	11 905
France					
Ore	0	564	1 618	801	648
Matte & cement	504	1 181	2 344	1 861	3 146
Unwrought—					
Unrefined	3 665	5 790	3 335	3 935	3 471
Refined	17 248	17 322	12 008	15 115	5 944
Alloys	4 343	4 691	3 711	4 510	2 374
Scrap	98 204	104 933	108 369	108 153	112 338
Germany, Federal Republic of					
Burnt cupreous pyrites	172	10 732	954	—	45
Matte & cement	300	96	617	282	41
Unwrought—					
Unrefined	29 589	22 384	24 976	18 870	18 771
Refined	112 695	99 599	76 271	63 079	71 490
Alloys	9 347	12 223	13 548	13 180	13 131
Scrap	70 550	73 289	86 810	88 881	61 514
Irish Republic					
Ores & concentrates	25 002	17 703	18 888	17 525	7 430
Unwrought	359	253	454	759	481
Scrap	5 869	5 910	6 698	7 119	8 260
Italy					
Ore	2 631	1 232	4 100	2 356	657
Matte & cement	45	328	1 073	1 232	440
Unwrought—					
Unrefined	877	72	113	221	297
Refined	751	424	2 613	2 687	2 339
Alloys	1 591	4 977	1 584	4 288	5 929
Scrap	9 088	15 712	11 149	24 531	19 042
Netherlands					
Unwrought	2 241	2 193	1 479	5 190	1 377
Unwrought alloys	2 312	3 079	4 466	5 997	4 024
Scrap	41 509	56 006	58 390	57 388	53 616
Albania					
Unwrought (f)	* 3 400	* 900	* 1 100	* 300	* 200
Austria					
Ore	91	116	5	19	—
Unwrought	17 238	18 774	17 955	20 181	17 242
Unwrought alloys	1 425	1 363	1 385	3 392	2 333
Scrap	2 474	3 242	3 713	5 410	5 022
Bulgaria					
Unwrought (f)	* 2 300	* 1 200	* 2 000	* 500	* 300
Finland					
Unwrought—					
Unrefined	2	10 113	5 945	20 392	13 773
Refined	16 048	5 551	2 473	1 247	4 425
Alloys	1 492	1 228	894	1 110	1 192
Scrap	217	521	234	241	209

Exports of Copper

Country	1978	1979	1980	1981	1982
Norway					
Ore	98 239	98 797	89 498	97 387	92 712
Unwrought—					
Unrefined	5 586	6 192	7 376	5 268	6 691
Refined	14 614	20 051	25 484	24 371	18 106
Alloys	1 587	1 601	1 966	1 693	1 193
Scrap	4 221	4 569	4 166	5 851	4 271
Poland					
Unwrought	146 688	133 720	144 754	142 514	176 447
Portugal					
Ore	100	1 004	550	1 100	...
Unwrought	815	3 144	1 258	2 884	...
Soviet Union					
Unwrought	* 247 000	* 247 000	* 247 000	* 247 000	* 247 000
Spain					
Ore	36	98	—	33 471	36 292
Matte	689	325	215	798	...
Unwrought	46 504	29 970	59 980	70 745	71 043
Unwrought alloys	5 890	5 868	6 319	3 642	2 394
Scrap	705	704	881	978	...
Sweden					
Ore	15 794	27 177	6 895	21 902	45 193
Unwrought—					
Unrefined	25	3 045	723	12 038	25 652
Refined	27 097	24 495	17 841	18 080	28 366
Alloys	2 748	3 683	2 480	4 813	2 966
Scrap	350	687	1 838	1 011	2 222
Switzerland					
Unwrought—					
Refined	557	4 024	2 201	725	870
Alloys	4 809	5 813	4 429	4 060	4 854
Scrap	4 972	12 119	12 075	11 458	13 259
Yugoslavia					
Unwrought	16 070	8 357	14 334	13 801	7 321
Scrap	3 682	7 948	6 129	4 035	3 048
Algeria					
Ore	800	985	—	...	...
Scrap	1 501	1 144	1 124	...	...
Botswana					
Matte (b)	15 600	10 800	20 000	17 300	19 300
Ivory Coast					
Matte & scrap	1 046	1 023	1 389	1 295	...
Mauritania					
Ore (b)	2 800	—	—	—	—
Morocco					
Ore	10 419	21 272	22 274	22 207	60 291
Matte	—	1 219	1 743	2 215	1 815
Scrap	1 462	1 902	1 591	1 860	2 616
Namibia					
Unwrought	45 700	44 800	41 300	38 600	44 400
Senegal					
Unwrought & scrap	746	816	797	737	...
South Africa (f)					
Ores & concentrates	* 50 000	* 72 000	* 85 000	* 79 000	* 73 000
Unwrought	* 224 100	* 180 000	* 169 000	* 152 000	* 152 000
Tunisia					
Unwrought & scrap (g)	359	867	832	1 525	...
Uganda					
Unwrought	...	8 296	...	...	...
Zaire					
Ores & concentrates	61 133	86 146	11 752	...	...
Unwrought—					
Unrefined (e)	301 290	266 164	272 733	277 433	323 332
Refined	103 645	70 041	154 158	150 834	156 035

Copper

Exports of Copper

tonnes

Country	1978	1979	1980	1981	1982
Zambia					
Unwrought—					
Unrefined	25 604	20 911	3 173	220	—
Refined	549 887	625 781	614 208	555 760	602 583
Zimbabwe					
Unwrought	35 802	26 772	24 732	14 387	22 700
Canada					
Ores, concentrates & matte (b)	282 159	315 211	286 076	276 810	257 930
Unwrought	247 750	191 226	335 374	262 848	233 115
Scrap	41 217	40 561	43 115	41 294	51 744
Cuba					
Concentrates	2 146	3 599	3 524	...	...
Mexico					
Concentrates (b)	559	18 742	89 787	147 500	132 000
Unwrought—					
Unrefined	903	500	1 141	10 200	9 500
Refined	1 322	...	...	...	...
Trinidad & Tobago					
Scrap	3 085	364	434	474	...
USA					
Ores & concentrates (b)	17 486	44 565	106 825	150 782	195 277
Unwrought—					
Unrefined	10 384	7 466	3 819	9 233	2 009
Refined	95 296	74 888	18 926	56 219	31 624
Alloys	7 899	7 571	3 460	4 399	5 175
Scrap	156 065	171 736	191 622	146 703	146 954
Bolivia					
Ore (b)	2 990	1 740	1 676	2 545	2 100
Chile					
Ores & concentrates (b)	99 100	90 700	122 600	111 500	) 200 900
Matte (b)	12 700	6 200	1 200	1 200	
Unwrought—					
Unrefined	162 200	165 000	151 300	172 700	199 800
Refined	703 000	746 200	769 100	752 100	807 400
Colombia					
Ore	3 631	3 714	4 354	3 317	857
Peru					
Ore	195 738	113 441	69 811	* 100 000	* 150 000
Unwrought—					
Unrefined	134 592	139 578	126 985	104 500	97 000
Refined	163 932	207 439	206 095	192 400	204 100
Cyprus					
Ores & concentrates	26 225	12 322	825	—	* 8 000
Hong Kong					
Scrap	11 219	14 482	17 354	18 288	19 302
Indonesia					
Ores & concentrates	186 601	168 634	193 509	197 146	191 749
Iran					
Ore (c)	* 17 000	* 9 000	* 4 000	...	...
Israel (h)					
Matte	148	85	(a) 2 522	...	...
Cement copper	—	36	79	5 845	5 535
Scrap	2 223	3 130	4 419	2 234	2 623
Japan					
Unwrought	55 383	52 469	216 406	43 192	48 417
Scrap	558	299	527	133	417
Malaysia					
Ore	122 050	102 054	107 416	* 120 000	...
Scrap	2 562	5 413	5 789	...	...
Philippines					
Ores & concentrates	895 299	1 049 124	1 141 855	1 138 628	1 060 405
Scrap	1 679	916	1 729	1 201	621
Singapore					
Scrap	9 896	15 543	16 066	13 849	15 328

Exports of Copper

tonnes

Country	1978	1979	1980	1981	1982
Taiwan					
Unwrought	408	236	272	232	184
Scrap	5 387	7 552	5 279	2 861	8 911
Australia					
Ores & concentrates	110 204	150 499	164 313	113 625	* 180 000
Matte & cement	4 504	6 886	5 797	3 526	...
Unwrought—					
Unrefined	4 144	28 756	18 100	18 773	7 212
Refined	60 065	46 978	50 784	61 612	45 321
Alloys	158	435	319	565	...
Scrap	348	348	601	405	...
New Zealand (d)					
Unwrought	217	59	—	32	40
Scrap	847	1 809	1 155	1 519	1 858
Papua New Guinea					
Ores & concentrates (b)	193 299	171 258	142 241	168 065	173 261

Note: In this table the term 'unwrought' copper corresponds to item 682.1 of the Standard International Trade Classification (Revision 2) and includes both unrefined (including blister) and refined copper. Additionally the term 'unwrought' as used here includes alloys unless these are separately specified. The term 'scrap' includes scrap alloys

- (a) Including unwrought and waste
- (b) Cu content
- (c) Years ended 20 March following that stated
- (d) Years ended 30 June of that stated
- (e) Including leach cathodes
- (f) BGS estimates, based on known imports into certain countries
- (g) Including matte
- (h) Figures may be incomplete as value only given in Israeli trade return for exports to some countries

Imports of Copper

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ore & matte	1 935	563	644	570	687
Unwrought—					
Unrefined	50 847	60 472	76 773	66 880	68 135
Electrolytic	336 264	299 992	257 066	207 185	244 775
Other refined	16 999	16 644	11 986	7 413	10 666
Alloys	1 204	670	596	588	1 302
Scrap	9 667	10 546	9 314	8 141	10 021
Belgium-Luxembourg					
Ore (i)	5 485	1 774	2 628	17 417	15 960
Burnt cupreous pyrites	13 240	7 964	3 104	1 375	70
Unwrought—					
Matte, cement & unrefined	196 244	172 410	189 986	203 637	213 831
Refined	361 165	343 106	317 255	278 264	255 273
Alloys	2 741	2 993	2 515	1 913	4 605
Scrap	64 993	100 383	124 528	104 715	113 628
Denmark					
Unwrought	5 164	3 518	3 105	1 354	67
Unwrought alloys	840	716	582	829	843
Scrap	1 460	2 909	3 123	5 281	4 244
France					
Ore	1	4	0	4	298
Burnt cupreous pyrites	—	—	3 883	5 732	—
Matte & cement	522	45	1 054	13	70
Unwrought—					
Unrefined	22 734	21 258	17 896	17 693	22 451
Refined	279 251	343 897	411 988	388 166	367 823
Alloys	4 229	4 139	4 583	4 661	4 901
Scrap	19 086	24 870	36 741	29 616	28 745
Germany, Federal Republic of					
Ore	531 355	483 740	537 883	481 142	553 963
Burnt cupreous pyrites	510 709	611 115	546 261	511 169	410 134
Matte & cement	7 561	12 249	11 026	4 675	6 309
Unwrought—					
Unrefined	109 225	62 785	51 680	65 706	81 223
Refined	428 794	457 415	451 645	381 748	423 208
Alloys	47 951	55 174	51 016	43 384	37 551
Scrap	137 563	170 002	180 971	151 352	177 122
Greece					
Unwrought	21 544	24 014	24 692	19 610	17 508
Unwrought alloys	341	717	265	420	234
Scrap	193	255	354	1 909	2 129
Irish Republic					
Unwrought	161	148	197	215	330
Italy					
Unwrought—					
Unrefined	4 654	6 802	2 241	1 143	1 061
Refined	351 646	338 464	372 834	317 082	318 919
Alloys	14 074	18 621	21 255	11 151	6 160
Scrap	69 579	76 309	99 524	59 318	71 728
Netherlands					
Unwrought	26 322	28 688	20 028	22 822	20 648
Unwrought alloys	1 699	2 382	1 520	3 340	1 806
Scrap	16 485	21 139	29 459	37 746	38 211
Austria					
Unwrought—					
Unrefined	15 948	7 887	5 479	3 637	4 911
Refined	4 406	3 664	9 261	8 659	8 711
Alloys	1 036	1 340	908	679	1 784
Scrap	15 602	23 280	20 113	18 074	29 009
Bulgaria					
Ore (a)	* 650	* 2 800	* 4 300	* 3 000	* 3 000
Czechoslovakia					
Unwrought	56 000	58 000	63 000	67 000	59 000

Imports of Copper

Country	1978	1979	1980	1981	1982
Finland					
Ore	4 192	24 705	9 934	53 626	74 305
Unwrought—					
Refined	13 913	11 806	23 436	20 060	18 435
Alloys	420	587	497	356	392
Scrap	366	1 002	1 768	2 004	2 318
German Democratic Republic					
Ores & concentrates (a)	* 16 950	* 10 300	* 19 500	* 10 100	...
Unwrought (a)	* 64 660	* 24 500	* 20 300	* 13 500	* 26 900
Scrap (a)	* 18 300	* 21 400	* 21 800	* 23 000	* 21 600
Hungary					
Unwrought (c)	32 888	25 995	28 962	35 799	33 428
Scrap	* 4 820	* 3 740	6 544	4 786	...
Norway					
Unwrought	1 216	1 098	721	659	590
Unwrought alloys	1 863	1 551	1 538	1 600	1 425
Scrap	414	228	331	232	47
Poland					
Unwrought	589	100	15	...	1 295
Portugal					
Ore	6 249	62	10	140	...
Unwrought	14 893	11 850	11 190	12 757	11 100
Scrap	2 981	1 340	1 853	220	...
Romania					
Unwrought	* 27 100	* 20 900	...	...	...
Soviet Union					
Ore (a)	* 110 600	* 91 800	* 111 300	* 57 100	* 40 000
Unwrought	* 8 000	* 8 000	* 11 000	* 11 000	* 11 000
Spain					
Ore	222 248	191 109	204 097	152 753	127 515
Matte & cement	11 785	11 304	3 758	8 659	13 152
Unwrought—					
Unrefined	2 704	1 193	24 979	31 560	22 778
Refined	37 527	51 656	24 039	19 423	11 666
Alloys	126	243	548	999	1 187
Scrap	11 466	18 951	35 812	32 236	36 868
Sweden					
Ore	34 323	33 153	50 070	89 062	96 844
Matte & cement	11 616	10 371	8 009	10 830	8 516
Unwrought	70 923	71 476	72 701	62 145	73 803
Unwrought alloys	3 797	3 689	4 611	3 637	3 668
Scrap	4 074	6 184	5 780	3 339	10 403
Switzerland					
Unwrought—					
Refined	21 852	11 037	9 396	10 046	8 615
Alloys	1 359	1 063	1 170	1 051	748
Scrap	4 952	3 395	3 566	3 762	3 695
Turkey					
Ore	—	—	14 012	29 979	—
Unwrought	1 894	2 282	11 345	9 358	6 164
Scrap	269	622	1 200	2 091	2 697
Yugoslavia					
Concentrates	23 994	7 739	47 817	11 561	9 691
Unwrought	40 061	36 095	50 412	67 037	52 334
Algeria					
Unwrought	4 325	2 399	5 418	...	...
Egypt					
Unwrought & scrap (b)	2 790	1 163	1 482	2 534	...
Morocco					
Unwrought	205	299	304	565	617

Imports of Copper

tonnes

Country	1978	1979	1980	1981	1982
South Africa					
Ores & concentrates	—	—	2 972	2 040	—
Unwrought	967	2 025	8 852	5 109	2 911
Unwrought alloys	111	101	161	71	128
Scrap	210	55	286	376	107
Canada					
Ores & concentrates (d)	18 427	2 653	12 896	19 551	12 362
Unwrought	21 441	32 541	13 466	24 777	28 028
Unwrought alloys	9 941	9 814	10 297	9 835	6 732
Scrap	27 539	35 442	35 051	37 973	41 113
Mexico					
Unwrought & scrap	22 203	22 565	43 117	101 867	...
USA					
Ores & concentrates (d)	20 916	22 021	13 756	30 200	93 904
Matte (d)	10 724	414	763	2 492	4 189
Unwrought—					
Unrefined (d)	78 683	68 137	45 777	72 971	110 468
Refined	414 697	215 161	458 112	354 899	284 773
Alloys	7 251	3 959	2 340	5 664	2 270
Scrap	34 454	36 276	35 226	41 740	35 225
Argentina					
Unwrought, refined	31 189	46 812	38 413	...	...
Brazil					
Unwrought, refined	156 989	190 175	208 159	152 910	182 947
Scrap	1 303	2 326	3 435	1 483	1 437
Colombia					
Unwrought	3 209	3 613	2 768	2 316	888
Uruguay					
Unwrought	67	235	217	135	4
Venezuela					
Unwrought—					
Refined	6 068	5 407	) 4 046	3 632	...
Alloys	660	258)		
China					
Unwrought	134 100	134 200	128 200	5 400	110 900
Hong Kong					
Unwrought	106	145	201	1 077	1 093
Scrap	1 644	2 198	4 927	1 202	2 010
India					
Unwrought (e)	69 695	43 257	51 508	52 100	56 700
Scrap	15 904	34 275	40 286	...	...
Indonesia					
Unwrought	292	5 062	12 248	14 849	17 532
Iran (f)					
Unwrought	292	446	568	7 076	...
Israel (h)					
Unwrought	206	387	135	396	...
Japan					
Ores & concentrates	2 817 967	2 969 026	3 103 557	3 338 326	3 627 797
Matte & cement	141	1 580	2 574	—	478
Unwrought	333 073	395 054	290 803	331 425	373 748
Unwrought alloys	50	102	105	31	574
Scrap	55 049	49 356	49 929	51 866	56 418
Korea, Republic of					
Ore	55 766	128 809	233 999	382 919	394 250
Matte & cement	...	1 848	3 341	2 398	8 495
Unwrought	...	26 277	15 471	28 675	30 112
Scrap	...	51 259	19 632	25 736	94 433
Kuwait					
Unwrought	1 783	1 764	3 011	3 546	...
Malaysia					
Unwrought	143	110	34	...	...
Pakistan (g)					
Scrap	3 292	835	803	...	...
Philippines					
Unwrought	6 462	5 335	4 961	5 734	5 610

Imports of Copper

Country	1978	1979	1980	1981	1982
Singapore					
Unwrought	165	241	554	271	411
Scrap	1 561	3 060	5 026	4 551	5 090
Syria					
Unwrought & scrap (b)	661	549	417	464	...
Taiwan					
Ores & concentrates	20 654	61 106	131 315	215 963	85 427
Matte & cement	4 968	962	14	26	6
Unwrought	33 928	56 021	66 186	40 152	27 402
Scrap	13 951	16 329	35 072	32 984	23 367
Thailand					
Unwrought	5 483	6 388	4 468	5 668	6 298
Scrap	672	512	337	373	222
Australia					
Unwrought	11	228	224	2 059	...
Unwrought alloys	120	283	18	37	...
Scrap	869	1 109	2 070	7 748	...
New Zealand (g)					
Unwrought	1 038	2 452	3 068	1 551	2 553

Note: In this table the term 'unwrought' copper corresponds to item 682.1 of the Standard International Trade Classification (Revision 2) and includes both unrefined (including blister) and refined copper. Additionally the term 'unwrought' as used here includes alloys unless these are separately specified. The term 'scrap' includes scrap alloys

- (a) BGS estimates, based on known exports from certain countries
- (b) Including matte
- (c) Including semi-manufactures
- (d) Cu content
- (e) Years ended 31 March following that stated
- (f) Years ended 20 March following that stated
- (g) Years ended 30 June of that stated
- (h) Figures may be incomplete as value only given in Israeli trade return for imports from some countries
- (i) Figures up to 1980 are partial figures. Imports from certain countries are confidential

Diamond

Production of Diamond

carats

Country	1978	1979	1980	1981	1982
Soviet Union	* 10 550 000	* 10 700 000	* 10 850 000	* 10 600 000	* 10 600 000
Angola	650 000	840 000	1 500 000	* 1 400 000	* 1 400 000
Botswana	2 799 000	4 394 000	5 101 000	4 960 252	7 768 840
Central African Republic	284 246	314 067	* 350 000	311 903	277 000
Ghana	1 423 000	1 225 600	1 149 200	836 482	682 354
Guinea	* 80 000	* 85 000	* 38 000	* 38 000	* 33 000
Ivory Coast	45 000	48 000	—	—	—
Lesotho	48 977	52 421	53 714	52 921	42 119
Liberia (a)	307 377	301 808	298 446	336 019	433 000
Namibia	1 898 211	1 652 536	1 559 885	1 247 960	1 014 464
Sierra Leone	797 043	855 164	592 018	305 356	290 000
South Africa	7 726 605	8 384 332	8 520 328	9 525 876	9 152 886
Tanzania	295 117	341 912	269 876	236 500	* 220 000
Zaire	11 245 000	8 734 000	10 334 000	* 9 000 000	* 9 000 000
Brazil	500 000	500 000	666 832	1 089 313	529 760
Guyana	17 226	15 824	10 236	9 533	11 492
Venezuela	755 869	802 646	665 721	490 426	435 272
India	15 942	15 229	14 432	14 542	13 631
Indonesia	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
World total	39 500 000	39 300 000	42 000 000	40 500 000	41 900 000

Notes:

1 This table does not show production of synthetic diamond

2 In addition to the countries listed, China is also believed to produce diamonds

(a) Exports

Exports of Diamond

carats

Country	1978	1979	1980	1981	1982
United Kingdom					
Industrial	12 840 110	11 229 202	9 178 933	5 443 695	6 875 321
Other	70 306 670	61 199 105	62 404 599	21 964 870	24 520 616
Belgium-Luxembourg					
Rough	24 577 800	22 807 126	24 868 056	31 256 619	38 557 375
Cut	3 076 942	2 875 324	2 602 506	2 864 711	3 051 028
Industrial	8 650 019	9 150 601	8 070 087	10 700 324	9 027 296
France					
Rough	29 758	2 406	2 176	2 071	—
Cut	35 874	34 760	52 773	41 020	93 426
Industrial	148 426	191 048	177 713	155 999	205 303
Dust	255 560	129 130	199 770	89 155	217 950
Germany, Federal Republic of					
Industrial	355 445	295 777	222 053	286 887	249 798
Other	149 643	113 376	118 523	124 313	134 503
Italy					
Industrial	297 988	75 059	95 854	44 102	28 740
Other	23 657	1 186	75 586	20 346	...
Netherlands					
Rough	1 334 296	316 662	147 508	259 946	220 574
Cut	599 552	122 300	107 228	98 310	202 932
Industrial	1 071 953	845 467	833 512	677 168	632 768
Austria					
Industrial	...	...	15 000	10 000	5 000
Other	5 000	10 000	25 000	25 000	20 000
Malta	£1 186 100	£1 604 000	£900 100	£1 141 000	£1 877 000
Portugal	57 568	35 683	44 630	35 000	...
Soviet Union					
Gem	* £198 201 000	* £148 350 000	* £561 284 000	...	...
Industrial	* £392 000	* £137 000	* £109 000	...	...
Sweden					
Industrial	£94 500	£17 900	£21 600	£36 000	£66 000
Other	£1 088 300	£1 585 950	£4 384 300	£5 750 000	£5 348 000
Central African Republic	£15 450 000	£16 510 000	£12 500 000	...	...
Congo	£4 597 000	£11 600 000	...	...	...
Ghana					
Industrial	1 475 521	1 007 000	897 000	944 000	...
Ivory Coast	—	2 007	...	70 000	...
Kenya	...	177 000	212 440	54 740	...
Lesotho	67 222	64 886	105 245	55 718	53 580
Liberia	307 377	301 808	298 446	336 019	433 000
Sierra Leone					
Industrial	...	343 581	202 425	...	...
Other	280 795	670 146	379 637	...	...
South Africa (c)					
Rough	£414 337 000	£492 385 000	£516 724 000	£357 567 000	£461 436 000
Cut	£156 020 000	£175 344 000	£168 687 000	£102 560 000	£65 205 000
Industrial	£14 309 000	£14 572 000	£11 780 000	£11 106 000	£8 634 000
Tanzania	293 310	255 525	311 215	291 090	...
Zaire	2 621 978	3 039 930	...	...	...
Canada					
Cut	36 805	34 571	28 929	60 140	62 578
of which: Re-exports	36 740	32 555	28 433	60 021	62 578
Industrial	140 541	174 752	240 817	265 459	344 780
of which: Re-exports	137 229	168 344	239 470	252 280	344 780
Dust	36 459	20 513	19 795	72 679	191 879
of which: Re-exports	36 459	19 156	19 650	72 479	191 850
USA					
Rough	1 291 864	922 298	983 546	2 782 060	2 675 960
of which: Re-exports	1 179 038	913 981	983 546	2 782 037	2 675 960
Cut	307 333	273 210	341 207	432 927	484 347
of which: Re-exports	87 960	68 046	130 564	235 840	299 476
Industrial	2 955 584	2 737 433	3 569 318	2 296 978	2 065 215
of which: Re-exports	2 666 434	2 054 707	3 268 170	1 847 016	1 650 510
Dust (b)	19 480 573	27 769 094	28 534 606	28 471 690	30 706 308
of which: Re-exports	624 028	472 309	372 150	584 451	1 118 829

Diamond

Exports of Diamond

carats

Country	1978	1979	1980	1981	1982
Brazil	34 810	7 840	8 580	12 120	18 360
of which: Re-exports	6 825	7 085	3 180	260	—
Guyana	10 999	5 274	...	252	1 749
Venezuela					
Rough	640 000	4 555 000	...	...	...
Industrial	205 000	165 000	...	...	...
Hong Kong	366 654	383 359	324 669	444 210	694 234
of which: Re-exports	359 595	372 714	311 603	438 425	685 572
India					
Gem (d)	4 568 101	2 743 676	3 228 106	...	...
Israel (a)					
Cut	2 884 000	2 451 000	2 649 000	2 662 000	2 459 000
Japan					
Industrial	1 185	1 286	11 562	2 098	6 123
Other	232	1 031	450 471	324	1 038
Malaysia					
Rough	£9 000	£3 000	—	...	...
Cut	£1 400 000	£2 200 000	£1 300 000	...	...
Singapore					
Rough	£1 300	£80 500	£152 000	£111 000	£114 000
of which: Re-exports	£1 300	£44 300	£144 000	£111 000	£108 000
Cut	£2 003 700	£2 899 500	£2 181 500	£3 745 000	£7 643 000
of which: Re-exports	£964 800	£2 297 500	£1 919 300	£3 231 000	£7 272 000
Industrial	£6 300	£162 700	£223 000	£493 000	£747 000
of which: Re-exports	£6 300	£127 000	£162 000	£401 000	£513 000
Thailand	8 199	5 637	8 447	22 453	65 487
Australia					
Gem (Re-exports)	17 032	13 185	11 163	...	...
Industrial	200 593	247 861	391 297	273 322	...

Note: Carats have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling. (See explanatory notes at the front of the volume)

- (a) Figures may be incomplete as value only given in Israeli trade return for exports to some countries
- (b) May include synthetic material
- (c) Values shown are for the common customs area
- (d) Years ended 31 March following that stated

Imports of Diamond

carats

Country	1978	1979	1980	1981	1982
United Kingdom	£2 403 269 635	£2 705 513 536	£3 035 607 473	£954 452 214	£969 891 705
Belgium-Luxembourg					
Rough	26 294 445	24 910 619	26 513 377	29 574 750	29 267 085
Cut	2 524 643	2 225 218	2 097 733	1 990 760	2 453 910
Industrial	10 183 231	11 309 001	9 388 064	13 402 937	18 312 529
France					
Rough	24 256	22 884	21 867	18 060	9 443
Cut	541 062	433 302	705 079	627 869	1 099 717
Industrial	675 580	496 826	689 793	1 170 808	694 744
Dust	3 470 425	3 976 970	4 469 740	4 453 265	4 125 495
Germany, Federal Republic of					
Rough	47 395	21 253	34 540	18 529	18 061
Cut	678 180	498 460	525 976	477 949	474 943
Industrial	1 175 419	1 056 672	1 105 324	961 711	864 233
Italy					
Industrial	180 324	184 340	221 140	183 034	169 727
Other	98 086	155 619	173 711	215 246	196 650
Netherlands					
Rough	2 574 353	621 446	216 867	209 968	332 238
Cut	1 264 874	141 479	150 071	138 497	160 376
Industrial	1 245 078	877 485	589 247	493 030	277 335
Czechoslovakia					
Gem	* £489 000	* £42 000	* £351 000	...	...
Industrial	* £2 088 000	* £1 550 000	* £1 464 000	...	...
Finland					
Industrial	11 650	10 000	10 000	10 000	10 000
Other	21 050	70 000	20 000	50 000	20 000
Malta					
Rough	£1 545 500	£3 166 000	£1 865 000	£3 066 000	£3 141 000
Cut	£22 100	£4 000	£1 000	£50	—
Industrial	—	£46 000	£230 100	£903 400	£286 000
Norway					
Industrial	10 000	25 000	25 000	...	...
Other	45 000	65 000	40 000	100 000	20 000
Portugal	90 452	137 797	111 210	...	...
Spain					
Rough	£1 159 400	£618 500	£108 200	£521 700	...
Industrial	£959 600	£1 181 400	£404 500	£347 400	...
Other	£24 753 000	£18 288 200	£9 697 700	£8 803 700	...
Dust	£1 514 300	£1 785 600	£1 619 000	£1 778 000	...
Sweden					
Industrial	£606 800	£643 500	£471 200	£451 000	£363 000
Other	£10 310 500	£6 758 500	£11 337 700	£9 463 700	£12 097 000
Yugoslavia					
Industrial	35 000	150 000	295 000	...	...
Other	100 000	120 000	5 000	...	...
Dust	130 000	150 000	* 200 000	...	...
Algeria					
Industrial	675 000	175 000	245 000	...	...
Kenya					
Rough & cut	7 645	42 010	5 050	280 000	...
South Africa					
Rough	28 000	69 000	121 500	142 000	232 500
Cut	45 000	38 000	37 500	23 500	8 500
Industrial	763 000	1 691 000	2 343 500	2 144 000	1 387 500
Zambia					
Industrial	18 950 000	...	...	...	...
Canada					
Cut	165 170	137 732	133 308	190 833	200 582
Industrial	1 023 583	1 332 418	1 343 395	1 503 758	1 090 627
Dust	750 417	1 134 411	1 287 451	1 799 297	886 241
Costa Rica					
Industrial	65 000	100 000	90 000	...	560 000
El Salvador					
Industrial	1 180 000	570 000	750 000	955 000	...
Honduras					
Industrial	48 550	...	10 000	...	...

Imports of Diamond

carats

Country	1978	1979	1980	1981	1982
Mexico					
Rough	785	10 000	10 000	...	...
Cut	319 350	...	...	...	...
Industrial	605 000	...	...	...	...
Dust	775 000	...	...	...	...
Nicaragua					
Industrial	300 000	—	...	...	...
Panama					
Industrial	240 000	40 000	200 000	370 000	910 000
USA					
Rough	2 478 830	2 119 523	1 577 059	933 285	885 735
Cut	3 209 183	2 352 646	2 574 168	3 469 567	3 744 083
Industrial	6 922 093	6 049 361	6 190 096	5 950 703	4 623 637
Bort	177 082	58 255	59 772	12 072	145 900
Dust	7 437 498	5 265 420	3 604 697	3 569 716	3 324 035
Argentina					
Industrial	2 805 000	285 000	55 000	...	...
Dust	337 370	100 545	480 000	...	...
Brazil					
Rough	3 695	1 465	5 990	2 000	715
Cut	7 400	10 575	8 335	2 085	4 210
Industrial	418 640	248 395	416 345	160 010	128 305
Dust	2 134 450	2 317 695	2 872 070	2 438 630	1 772 635
Venezuela					
Rough	2 175 000	...	...	...	...
Industrial	2 895 000	3 200 000	...	...	...
Abu Dhabi	10 000	5 000	40 000	...	...
China					
Industrial (a)	* 99 100	* 111 600	* 191 400	* 130 100	* 65 200
Other (a)	* 12 300	* 17 700	* 467 700	* 6 900	* 10 300
Dubai					
Industrial	39 495 000	7 400 000	8 740 000	...	...
Other	130 000	81 840	74 545	91 470	...
Hong Kong					
Rough	116 986	52 212	121 377	108 528	221 450
Cut	1 296 252	1 002 710	1 169 288	1 094 272	1 220 652
Industrial	69 932	57 083	145 309	9 260	127 489
India					
Rough (d)	20 170 025	19 525 797	20 006 377	...	...
Industrial & bort	970 000	480 000	965 000	...	...
Indonesia					
Industrial	55 000	1 790 000	1 620 000	200 000	—
Israel					
Rough (c)	8 490 000	55 625 000	5 884 000	4 259 000	4 662 000
Cut (c)	148 000	87 000	102 000	72 000	197 000
Industrial (c)	3 044 000	2 068 000	2 451 000	2 453 000	2 667 000
Japan					
Rough	27 423	38 598	29 763	13 363	19 292
Cut	742 070	683 836	683 055	766 890	823 757
Industrial	697 283	622 873	681 354	634 540	757 507
Dust	2 204 800	912 040	828 240	726 815	881 650
Korea, Republic of					
Cut	...	£567 000	£446 000	£236 000	£373 000
Industrial	£512 800	£616 100	£356 700	£407 500	£405 000
Other	...	£43 000	£301 000	£586 000	£207 000
Malaysia					
Rough	£540 000	£1 100 000	£439 000	...	...
Cut	£637 000	£822 000	£1 590 000	...	...
Industrial	£212 000	£63 000	£158 000	...	...
Philippines					
Industrial	76 733	84 110	57 088	73 950	22 900
Saudi Arabia					
Industrial	...	7 795 000	1 805 000	930 000	225 000
Other	...	4 135 000	1 210 000	1 635 000	165 000

Imports of Diamond

carats

Country	1978	1979	1980	1981	1982
Singapore					
Rough	—	£310 100	£364 000	£211 500	£164 000
Cut	£11 422 100	£16 678 500	£29 404 000	£22 385 500	£27 170 000
Industrial	£146 900	£949 600	£1 915 000	£1 730 000	£2 030 000
Taiwan					
Industrial	1 555 000	...	7 270 000	1 460 000	285 000
Other	1 135 000	165 000	—	5 645 000	1 990 000
Dust	1 290 000	32 620 000	4 245 000	1 865 000	1 735 000
Thailand					
Industrial	69 767	133 774	72 076	73 427	3 485
Other	18 232	5 845	25 762	191 319	959 217
Australia					
Gem	75 093	60 356	67 415	109 774	167 590
Industrial	892 006	1 139 174	1 259 233	1 267 582	1 026 476
New Zealand (b)					
Industrial	£46 300	£71 400	£25 200	£82 700	£65 000
Other	£1 884 800	£1 436 200	£1 026 800	£1 001 800	£1 701 000

Note: Carats have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling. (See explanatory notes at the front of the volume)

- (a) BGS estimates, based on known exports from certain countries
- (b) Years ended 30 June of that stated
- (c) Figures may be incomplete as value only given in Israeli trade return for imports from some countries
- (d) Years ended 31 March following that stated

Production of Diatomite

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	* 2 000	* 1 000	* 1 000	* 1 000	* 500
Denmark (a)					
Diatomite	5 980	6 158	4 443	3 192	3 903
Moler (d)	102 000	* 110 300	* 102 400	* 97 300	* 98 500
France (b)	217 407	332 916	* 218 000	223 281	244 349
Germany, Federal Republic of	47 600	49 401	52 824	* 42 000	* 42 000
Italy	* 19 000	* 19 000	18 000	* 25 000	* 20 000
Austria	536	—	—	—	—
Iceland	20 955	22 247	19 353	20 644	24 528
Portugal	2 700	3 200	2 710	2 690	1 770
Romania	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Soviet Union	* 220 000	* 225 000	* 230 000	* 230 000	* 235 000
Spain (b)	21 370	27 196	25 140	38 111	* 30 000
Turkey	* 9 000	* 9 000	* 9 500	* 10 000	...
Yugoslavia	4 483	...	...	...	...
Algeria	3 629	4 536	* 4 500	* 4 500	* 5 400
Egypt	99	33	—	—	—
Kenya	1 960	1 266	1 677	1 810	1 790
South Africa	930	1 059	623	615	712
Canada	2 000	2 000	* 2 000	* 2 000	* 2 000
Costa Rica	610	590	600	550	1 000
Mexico	40 862	43 606	56 352	56 600	* 57 000
USA (c)	591 000	650 000	625 000	623 000	556 000
Argentina	7 227	7 327	6 527	6 000	* 7 000
Brazil	12 030	16 547	14 828	8 973	* 25 000
Chile	5 008	763	1 147	358	387
Colombia	630	630	630	630	630
Peru	5 000	—	—	—	—
Korea, Republic of	18 845	23 915	25 101	42 176	55 249
Thailand	1 105	3 418	1 982	128	80
Australia	3 136	3 592	3 010	1 305	* 1 800
World total	1 400 000	1 600 000	1 500 000	1 500 000	1 500 000

Note: In addition to the countries listed, Czechoslovakia, Hungary and Japan are also believed to produce diatomite

(a) Sales

(b) Including tripoli

(c) Sold or used by producers

(d) Moler is an impure diatomite containing a large proportion of clay

Exports of Diatomite

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	853	1 098	985	567	377
Belgium-Luxembourg	3 567	1 350	7 806	924	65 126
Denmark					
Diatomite	6 546	6 323	4 679	3 515	4 511
Moler	46 569	52 052	52 385	56 526	59 917
Moler bricks	27 255	30 252	28 045	24 696	21 359
France	24 982	28 876	25 852	26 781	26 999
Germany, Federal Republic of	3 999	5 137	3 210	3 542	2 344
Italy	1 193	1 866	885	1 539	2 586
Netherlands	520	559	657	492	756
Austria	1 027	1 031	1 135	492	815
Czechoslovakia	* 710	* 1 030	(a)* 1 000	(a)* 1 250	(a)* 2 100
Finland	8	9	42	31	2
Hungary	* 3 000	* 2 660	* 3 380	...	...
Iceland	20 020	21 288	18 149	19 836	24 966
Norway	45	34	11	45	1
Portugal	1 213	16	44	38	...
Spain	1 658	1 453	1 673	2 504	...
Sweden	160	142	81	698	690
Algeria	2 445	1 850	400	...	...
Kenya	361	227	581	783	...
Mexico	2 762	3 797	3 056	...	...
USA	138 865	153 927	156 970	146 681	128 349
Japan	1 298	1 277	1 891	2 321	2 165
Korea, Republic of	60	60	120	—	—
Taiwan	123	50	184	112	49

(a) BGS estimates, based on known imports into certain countries.

Imports of Diatomite

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	9 090	11 902	13 602	12 296	14 352
Belgium-Luxembourg	9 607	11 349	9 039	8 368	6 535
Denmark	4 238	5 447	7 205	6 597	7 632
France	8 878	11 327	9 164	9 410	8 709
Germany, Federal Republic of	39 100	40 190	37 506	36 421	37 780
Greece	589	677	521	1 063	559
Irish Republic	946	1 217	712	472	469
Italy	5 391	5 912	5 597	5 019	4 743
Netherlands	16 241	17 460	16 489	16 796	15 275
Austria	7 206	7 856	8 691	8 007	7 958
Czechoslovakia	* 1 100	* 250	* 800	...	...
Finland	1 295	1 901	2 053	2 184	3 925
Iceland	34	44	3	30	29
Norway	1 960	1 968	1 939	1 807	1 609
Poland	* 200	* 700	* 3 500	...	...
Portugal	3 534	4 058	4 319	3 823	...
Romania	* 1 300	* 800	* 1 000	* 500	...
Spain	3 061	2 875	2 941	2 778	...
Sweden	4 097	5 544	3 824	3 363	3 039
Switzerland	8 098	9 102	9 381	11 169	12 067
Turkey	204	84	154	321	106
Yugoslavia	152	285	421	544	446
Cameroon	605	685	807	...	...
Canary Islands	66	123	150	159	...
Ivory Coast	384	238	278	258	...
Kenya	602	401	343	499	...
Morocco	405	176	255	331	36
South Africa	7 728	5 900	6 465	7 544	7 174
Tunisia	137	169	150	156	...
Zaire	570	321	73	* 100	...
Zambia	123	...	...	...	...
Canada	25 373	28 362	26 577	25 545	23 130
Costa Rica	421	407	255	431	361
Dominican Republic	1 100	760	702	...	...
El Salvador	1 381	359	310	386	...
Guatemala	832	718	1 101	919	515
Honduras	262	...	302	327	...
Mexico	271	228	801	...	...
Nicaragua	543	344	427	...	...
Panama	597	399	380	439	443
USA	182	479	267	354	229
Argentina	2 636	3 391	2 229	...	...
Brazil	1 365	1 451	1 535	2 126	1 829
Colombia	1 404	796	488	1 153	1 232
Ecuador	527	658	1 488	...	...
Peru	1 624	1 019	1 773	2 401	1 353
Uruguay	108	125	147	109	49
Venezuela	4 857	7 489	7 080	3 864	...
Cyprus	137	117	174	123	...
Hong Kong	264	242	364	481	427
India (d)	247	387	156	...	...
Indonesia	508	2 388	723	435	179
Iran (c)	1 527	999	384	742	...
Israel (b)	89	191	304	292	...
Japan	5 871	5 962	7 464	9 429	8 984
Malaysia	804	910	853	...	...

Imports of Diatomite

tonnes

Country	1978	1979	1980	1981	1982
Philippines	1 715	1 451	1 609	1 113	1 259
Saudi Arabia	2 461	5 327	15 760	37 297	49 756
Singapore	320	657	619	555	1 061
Sri Lanka	3 834	3 271	3 037	15	13
Taiwan	2 284	3 076	2 909	3 733	2 743
Thailand	37	220	35	25	30
Australia	11 983	10 657	12 278	12 312	...
Fiji	49	91	81	62	42
New Zealand (a)	555	700	1 224	920	1 384

(a) Years ended 30 June of that stated

(b) Figures may be incomplete as value only given in Israeli trade return for imports from some countries

(c) Years ended 20 March following that stated

(d) Years ended 31 March following that stated

Production of Feldspar

tonnes

Country	1978	1979	1980	1981	1982
France	211 000	195 000	210 000	205 400	200 600
Germany, Federal Republic of	385 590	372 754	380 880	342 000	* 340 000
Italy	251 083	294 648	344 301	428 490	783 411
Austria	2 886	6 594	10 946	10 357	2 960
Finland	61 893	71 297	68 000	63 066	69 609
Norway (d)	59 522	87 888	67 559	58 311	* 70 000
Poland	106 977	88 367	85 955	82 027	78 176
Portugal	21 582	38 315	48 561	44 007	41 223
Romania	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Soviet Union	* 300 000	* 310 000	* 310 000	* 320 000	* 330 000
Spain (c)	116 283	115 685	103 365	129 593	* 120 000
Sweden (e)	53 845	58 655	57 999	40 341	* 50 000
Turkey	2 691	6 669	5 708	5 060	* 5 000
Yugoslavia	48 013	56 160	57 710	53 240	* 54 000
Egypt	1 433	3 271	3 309	3 480	* 3 000
Kenya	949	868	387	757	—
Mozambique	* 900	—	—	—	—
Nigeria	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
South Africa	52 545	47 416	52 247	57 052	47 854
Zambia	789	91	475	452	362
Zimbabwe	726	1 085	1 263	2 393	866
Mexico	109 808	110 869	117 214	123 801	* 118 000
USA (e)	666 800	671 000	644 000	603 000	558 000
Argentina	41 824	33 550	32 529	33 000	* 32 000
Brazil (b)	103 597	141 940	123 263	118 407	137 400
Chile	903	133	2 150	2 506	469
Colombia	26 455	29 200	27 150	27 500	30 091
Peru	2 461	2 176	15 600	21 600	* 27 000
Uruguay	2 572	3 886	2 820	2 543	* 3 000
Venezuela	6 000	37 000	28 000	21 684	* 7 000
Burma (a)	1 438	3 007	2 026	4 267	* 2 700
Hong Kong	3 157	742	2 974	194	1 742
India	51 675	54 264	60 190	61 081	* 63 500
Japan	415 950	441 285	470 394	425 007	* 376 000
Korea, Republic of	69 200	36 238	71 972	103 263	85 040
Pakistan	4 833	14 703	10 898	10 494	* 10 900
Philippines	18 073	19 064	15 925	15 736	* 18 000
Sri Lanka	3 160	3 790	3 955	* 4 000	* 5 000
Taiwan	15 757	24 403	25 149	17 215	10 305
Thailand	32 583	26 428	24 158	24 243	19 326
Australia	3 185	3 869	3 648	4 008	* 4 500
World total	3 300 000	3 500 000	3 600 000	3 500 000	3 800 000

Note: In addition to the countries listed, China, Czechoslovakia, Namibia and the United Kingdom are also believed to produce feldspar

- (a) Years ended 31 March following that stated
- (b) Includes beneficiated and direct shipping ore
- (c) Including pegmatite
- (d) Unground: production of ground withheld
- (e) Sold or used by producers

Exports of Feldspar

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	1 956	2 118	1 067	200	618
Belgium-Luxembourg	8 544	7 462	6 494	2	26
France	52 453	51 726	56 949	58 571	54 613
Germany, Federal Republic of	17 696	16 810	18 124	15 309	15 176
Italy	28 482	35 578	37 033	34 500	32 930
Netherlands	2 524	3 929	3 501	2 791	1 251
Finland (a)	54 082	50 810	46 998	46 725	41 891
Norway	78 736	94 502	84 729	77 634	61 032
Portugal (a)	2 148	9 099	11 278	11 300	...
Spain (a)	6 989	1 901	1 582	1 833	...
Sweden (a)	37 832	34 713	29 976	28 995	24 516
Switzerland (a)	397	255	282	183	129
Yugoslavia	7 904	9 695	11 498	3 109	1 010
South Africa	2 712	3 266	2 407	2 018	1 389
Guatemala (c)	2 903	2 898	3 535	2 758	2 144
USA (a)	9 372	11 227	11 792	12 723	9 793
Brazil	2 500	...	4 051	3 001	5
China (a)(b)(c)	* 19 800	* 27 100	* 31 000	* 26 700	* 28 100
Hong Kong (c)	6 385	13 249	18 106	11 318	11 665
of which: Re-exports	4 175	11 799	300	11 318	11 665
India	14 697	16 006	...	...	...
Japan	15 157	23 630	22 889	18 766	24 246
Korea, Republic of	22 080	13 380	19 672	18 409	23 551
Singapore (a)	4 008	4 941	5 850	4 083	2 915
of which: Re-exports	4 008	4 941	5 850	4 068	2 901
Thailand	413	2 304	2 874	2 793	3 707

(a) May include some leucite and nepheline

(b) BGS estimates, based on known imports into certain countries

(c) Including some fluorspar

Imports of Feldspar

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	125 735	118 993	91 087	71 212	83 681
Belgium-Luxembourg	64 403	67 186	35 564	28 294	21 355
Denmark	8 847	11 773	15 535	11 448	5 896
France	17 024	17 839	17 947	16 808	18 844
Germany, Federal Republic of	54 364	52 808	63 213	60 031	54 006
Greece (a)	11 850	10 341	13 908	13 299	8 824
Italy	7 983	8 192	17 655	13 866	9 747
Netherlands	25 630	19 115	21 632	14 860	13 038
Austria (a)	5 948	4 564	6 111	5 893	5 095
Finland (a)	1 917	61	701	49	67
Poland	15 599	16 725	13 786	10 151	...
Portugal (a)	2 691	2 209	2 022	2 423	...
Spain (a)	15 203	16 256	21 408	19 605	...
Sweden (a)	7 166	7 657	12 845	6 709	9 791
Switzerland (a)	10 065	8 605	12 097	9 754	7 883
Yugoslavia	1 001	1 150	1 154	1 904	...
Algeria (a)	3 091	4 405	6 255	...	...
Morocco (a)	20	84	441	336	565
South Africa (a)(c)	40	89	80	117	33
Tunisia (c)	1 686	3 149	1 871	12 560	...
Costa Rica (c)	2 532	3 180	3 341	2 055	1 814
Mexico	725	3 434	3 184	...	...
Trinidad & Tobago (c)	66	262	27	2 493	...
USA	36	256	367	187	44
Venezuela	621	683	(c) 3 141	(c) 4 058	...
Hong Kong (c)	6 327	13 838	16 373	14 777	14 440
Indonesia (a)	6 766	10 768	13 611	13 133	10 653
Iran (a)(c)(e)	427	569	* 100	150	...
Israel (a)(b)	227	365	688	459	...
Japan (a)	9 064	5 269	5 568	4 981	6 114
Jordan (a)(c)	289	415	294	485	405
Malaysia	5 691	6 403	8 427	...	...
Philippines (a)(c)	2 940	3 354	3 022	5 176	1 855
Singapore (a)	5 503	5 829	8 312	5 550	6 035
Taiwan (a)(c)	48 285	44 221	54 262	49 606	69 312
Thailand (a)	1 195	569	1 872	2 630	2 179
Australia (a)	13 713	15 394	22 999	...	...
New Zealand (a)(c)(d)	1 747	997	1 020	800	1 446

(a) May include some leucite and nepheline

(b) Figures may be incomplete as value only given in Israeli trade return for imports from some countries

(c) Including some fluorspar

(d) Years ended 30 June of that stated

(e) Years ended 20 March following that stated

Production of Fluorspar

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom (a)	189 269	154 000	186 300	* 185 000	201 000
France	273 862	259 203	258 500	256 200	* 250 000
Germany, Federal Republic of	75 722	63 172	78 152	71 808	* 72 000
Greece	610	360	440	370	345
Italy	171 216	182 791	151 965	164 235	166 949
Czechoslovakia	* 96 000	* 96 000	* 96 000	* 96 000	* 96 000
German Democratic Republic	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Romania	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Soviet Union	* 510 000	* 520 000	* 520 000	* 530 000	* 530 000
Spain	301 295	192 898	244 749	302 760	246 972
Turkey	1 337	2 024	1 945	1 986	7 857
Egypt	631	682	1 752	535	* 750
Kenya	106 564	77 104	93 378	90 099	88 726
Morocco	59 200	63 200	64 400	66 700	50 200
South Africa	393 276	451 112	522 718	496 521	330 835
Tunisia	33 100	36 800	39 451	34 800	36 900
Mexico	959 784	875 216	916 455	924 854	631 000
USA	117 415	99 154	84 037	104 693	69 869
Argentina	26 746	38 076	15 468	20 755	* 18 000
Brazil (b)	61 800	74 897	95 894	56 539	* 60 000
China	* 440 000	* 460 000	* 480 000	* 480 000	* 480 000
India	17 546	21 495	21 337	22 905	* 27 850
Korea, Dem. P.R. of	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Korea, Republic of	11 368	8 450	6 912	6 464	3 667
Mongolia	* 455 000	* 570 000	* 600 000	* 600 000	* 660 000
Pakistan	335	418	1 184	200	* 200
Thailand	230 531	234 304	232 892	212 492	257 108
World total	4 700 000	4 600 000	4 900 000	4 900 000	4 400 000

Note: In addition to the countries listed, Bulgaria is also believed to produce fluorspar

(a) Including fluorspar recovered from old lead and zinc mine dumps

(b) Includes beneficiated and direct shipping ore

Exports of Fluorspar

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	7 935	26 337	57 230	30 250	18 044
Belgium-Luxembourg	4 541	4 984	4 926	4 697	3 431
France	95 284	98 742	107 392	84 181	71 096
Germany, Federal Republic of	14 789	16 610	14 099	16 210	13 219
Italy	60 952	55 080	83 755	63 934	65 284
Netherlands	3 917	755	765	1 176	1 101
Spain	193 485	101 546	107 518	152 826	...
Sweden	538	824	361	1 155	1 013
Kenya (a)	102 900	59 352	56 870	59 297	...
Morocco	69 823	62 997	64 070	54 180	62 024
South Africa	384 387	471 498	469 071	405 807	232 635
Tunisia	—	—	6 025	...	...
Mexico	712 270	708 739	722 905	604 928	...
USA	7 518	13 132	16 207	10 216	9 592
Argentina	239	189	312	...	...
China (a)(b)(c)	* 265 000	* 331 000	* 423 000	* 437 000	* 476 000
Korea, Dem. P.R. of (b)	* 6 800	* 3 600	* 7 900	* 300	...
Korea, Republic of	1 152	470	500	—	—
Thailand	205 697	219 390	226 305	221 838	182 388

(a) Including some feldspar

(b) BGS estimates, based on known imports into certain countries

(c) May include some leucite and nepheline

Imports of Fluorspar

Country	1978	1979	1980	1981	1982
United Kingdom	3 782	27 119	9 573	4 229	1 400
Belgium-Luxembourg	9 953	14 550	16 876	12 128	11 988
Denmark	4 462	3 970	1 069	557	502
France	1 796	1 228	27 766	12 308	1 571
Germany, Federal Republic of	246 516	255 868	279 058	203 110	205 698
Greece	1 553	10 302	2 135	4 599	2 427
Italy	46 973	78 717	105 531	84 322	57 048
Netherlands	13 863	10 988	14 251	20 361	24 168
Albania (b)	* 2 300	* 2 300	* 1 800	* 1 000	* 1 600
Austria	16 077	18 369	17 298	13 001	10 617
Bulgaria (b)	* 150	* 300	* 250	* 200	* 300
Finland	2 204	5 486	4 429	4 104	5 763
Norway	44 972	46 941	48 843	43 319	35 846
Poland	86 640	62 553	55 328	24 005	...
Soviet Union	* 550 000	* 550 000	* 550 000	* 600 000	* 600 000
Sweden	13 651	15 858	15 052	12 822	12 837
Turkey	149	20	56	130	...
Yugoslavia	3 140	5 121	5 716	6 374	...
Algeria	37	486	380	...	...
South Africa (a)(c)	40	89	80	117	33
Tunisia (c)	1 686	3 149	1 871	12 560	...
Canada	170 236	167 904	223 940	173 599	126 594
Costa Rica (c)	2 532	3 180	3 441	2 055	1 814
Trinidad & Tobago (c)	66	262	27	2 493	...
USA	821 496	894 929	822 283	767 231	500 667
Brazil	24 635	...	10 929	13 537	...
Chile	3 861	...	...	...	...
Venezuela	3 345	243	(c) 3 141	(c) 4 058	...
Hong Kong (c)	6 327	13 838	16 373	14 777	14 440
India	5 000	5 034	...	...	...
Iran (a)(c)(e)	427	569	* 100	150	...
Japan	371 387	467 135	487 455	428 314	413 535
Jordan (a)(c)	289	415	294	485	405
Korea, Republic of	1 431	11 338	21 718	23 110	18 352
Malaysia (a)(c)	6 686	9 399	5 273	...	...
Philippines (a)(c)	2 940	3 354	3 022	5 176	1 855
Taiwan (a)(c)	48 285	44 221	54 262	49 606	69 312
Australia	32 711	27 012	38 369	26 275	...
New Zealand (a)(c)(d)	1 747	997	1 020	800	1 446

(a) May include some leucite and nepheline

(b) BGS estimates, based on known exports from certain countries

(c) Including some feldspar

(d) Years ended 30 June of that stated

(e) Years ended 20 March following that stated

Gold

Mine Production of Gold

kilograms (metal content)

Country	1978	1979	1980	1981	1982
France	1 855	1 263	1 163	1 131	2 180
Germany, Federal Republic of	66	73	92	95	* 95
Finland	905	881	1 303	992	1 144
Portugal	284	320	244	244	* 300
Romania	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
Soviet Union	* 250 000	* 255 000	* 260 000	* 265 000	* 266 000
Spain	344	352	535	1 141	...
Sweden	2 373	2 308	2 027	2 039	* 2 200
Yugoslavia (d)	4 434	4 323	3 304	3 582	* 3 800
Burundi	10	4	2	* 3	* 3
Cameroon	6	5	2	* 10	* 5
Central African Republic	* 30	68	62	* 50	* 50
Congo	6	3	2	4	* 3
Ethiopia (b)	240	248	373	370	* 400
Gabon	30	30	* 20	* 20	* 20
Ghana	12 505	11 094	10 981	10 595	10 249
Kenya	6	8	4	1	1
Liberia (a)	0	34	225	* 500	* 100
Madagascar	4	1	4	1	3
Mali	* 30	* 31	* 45	* 45	* 45
Mauritania	250	—	—	—	—
Rwanda	35	15	29	37	* 40
Sierra Leone	...	...	13	123	271
South Africa	704 449	703 473	672 875	655 755	662 626
Tanzania	4	9	3	9	* 9
Uganda	...	...	...	304	215
Zaire	2 286	2 270	1 243	* 2 200	* 2 000
Zambia (c)	259	247	257	328	418
Zimbabwe	12 414	12 063	11 443	11 691	13 367
Canada	53 967	51 142	50 620	52 034	63 221
Costa Rica	* 500	* 520	* 500	* 500	* 510
Dominican Republic	10 663	10 979	11 496	12 685	11 988
El Salvador	113	85	78	* 60	* 60
Honduras	71	62	63	55	53
Mexico	6 283	5 911	6 096	6 319	6 104
Nicaragua	2 300	1 900	* 1 870	1 926	* 2 000
USA	31 068	29 997	30 164	42 898	45 005
Argentina	174	315	341	459	* 470
Bolivia	770	948	1 620	2 064	1 249
Brazil (e)	9 359	4 460	13 752	17 276	* 27 000
Chile	3 182	3 465	6 836	12 456	16 786
Colombia	7 666	8 379	15 877	16 461	14 702
Ecuador	80	70	67	73	8
French Guiana	90	62	92	167	163
Guyana	479	329	342	599	269
Peru	3 504	4 155	3 870	4 821	* 5 000
Suriname	9	6	5	25	20
Venezuela	416	466	510	877	901
China	* 34 000	* 40 000	* 45 000	* 50 000	* 55 000
India	2 774	2 637	2 452	2 495	2 091
Indonesia	254	170	248	183	222
Japan	4 516	4 033	3 183	3 087	3 267
Korea, Dem. P.R. of	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Korea, Republic of	852	749	1 282	1 342	1 734
Malaysia	210	197	156	180	181
Philippines	18 243	16 646	20 025	23 435	* 24 200
Taiwan	417	443	413	1 763	2 232

Mine Production of Gold

kilograms (metal content)

Country	1978	1979	1980	1981	1982
Australia	20 142	18 566	17 035	18 374	26 961
Fiji	872	907	774	956	1 471
New Zealand	219	218	200	189	242
Papua New Guinea	23 885	20 172	14 730	16 805	17 527
Solomon Islands	18	22	34	* 30	* 35
World total	1 240 000	1 230 000	1 220 000	1 250 000	1 300 000

Notes:

- 1 In several countries, for example Brazil, Colombia and Indonesia, a certain amount of gold produced in very small operations is not recorded in the official statistics used in compiling this table; in the case of Brazil this amount is thought to be substantial
 - 2 In addition to the countries listed, Bulgaria, Burma, Czechoslovakia, German Democratic Republic, Hungary, Norway, Sudan and Thailand are also believed to produce gold
- (a) Years ended 31 August of that stated
 (b) Years ended 6 July of that stated
 (c) Contained in blister copper, refinery muds and electrolytic copper
 (d) Metal production
 (e) Excludes some production from small mines

Gold

Exports of Gold

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal—					
Refined	640 466	492 165	335 322	681 050	588 913
Other	13 946	5 219	3 095	9 905	5 807
Waste & scrap	15 766	31 170	7 198	32 003	12 493
Belgium-Luxembourg					
Metal	13 902	18 143	27 234	30 158	50 979
Denmark					
Waste & scrap	9 028	6 537	17 874	12 856	9 786
France					
Metal	23 350	33 806	23 625	23 070	24 972
Waste & scrap	10 566	28 311	13 028	58 624	8 454
Germany, Federal Republic of					
Metal	50 335	27 251	27 438	32 129	65 669
Waste & scrap	651	84	13 497	2 392	1 819
Italy					
Metal	1 986	1 643	5 333	2 191	1 555
Netherlands					
Metal	26 450	29 491	28 690	30 506	27 807
Waste & scrap	5 000	17 000	74 000	53 000	61 000
Austria					
Metal	367	640	662	349	559
Finland					
Metal	130	116	603	569	419
Norway					
Metal	159	137	257	461	392
Spain					
Metal	15 002	6 010	531	18 462	...
Sweden					
Metal	2 000	2 000	5 000	4 000	3 000
Waste & scrap	50 000	40 000	44 000	38 000	43 000
Switzerland					
Metal	(c) 5 809	(c) 7 039	556 687	772 691	799 867
Ghana					
Metal	9 747	11 848	10 820	10 765	...
South Africa					
Metal (a)	£3 800 000	£9 400 000	£11 500 000	£6 700 000	£7 200 000
Canada					
Ores & concentrates (b)	7 948	6 219	6 299	5 512	5 074
Metal	50 988	55 701	59 865	83 305	88 415
Dominican Republic					
Metal (d)	69 787	83 794	63 421	75 938	80 373
Nicaragua					
Metal	2 095	1 056	1 000	...	...
USA					
Ore (b)	715	529	719	121	96
Metal—					
Unrefined	1 279	2 174	2 283	7 297	5 634
Refined	156 890	491 884	150 450	164 112	68 763
Other	2 052	2 789	3 688	2 555	2 163
Waste & scrap	13 104	25 818	41 229	31 880	36 970
Chile					
Ore	776 210	...	...	...	...
Metal	898	...	...	3 669	...
Colombia					
Ore	208 781	437 555	96 000	499 184	80 000
Peru					
Metal	2 595	33 399	102 465	...	...
Hong Kong					
Metal (Re-exports)	2 611	9 319	29 849	2 288	25 783
Japan					
Metal	6 378	7 151	12 996	7 445	17 999
Philippines					
Ores & concentrates (b)	12 789	11 422	13 051	14 800	14 706
Metal	38	—	—	—	—

Exports of Gold

kilograms

Country	1978	1979	1980	1981	1982
Australia					
Ores, concentrates & unrefined metal (b)	2 415	3 149	1 214	3 474	3 273
Refined metal	5 154	7 273	5 516	3 912	9 482
Fiji					
Metal	805	923	781	875	1 426
Papua New Guinea					
Metal	23 885	20 172	14 730	16 805	17 527

Note: In this table the term 'metal' as used here includes both unwrought and partly worked gold and alloys but excludes gold coin

(a) Values shown are for the common customs area

(b) Au content

(c) Partly worked only

(d) Officially described as 'dore' (Au/Ag alloy), but contains a higher proportion of silver

Gold

Imports of Gold

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates	2 781	15 348	2 139	14 013	30 945
Metal—					
Unrefined	3 561	13 495	60 822	5 407	6 400
Refined	511 150	785 599	550 862	624 751	525 004
Other	4 672	10 370	5 489	11 942	8 609
Waste & scrap	10 390	85 697	19 564	28 206	156 360
Belgium-Luxembourg					
Metal	25 768	24 287	57 725	237 233	263 610
Denmark					
Metal	2 487	1 647	622	613	599
France					
Metal	71 401	77 565	58 246	60 254	32 290
Waste & scrap	9 074	11 041	8 629	9 652	4 584
Germany, Federal Republic of					
Metal	113 863	107 152	126 569	82 714	120 639
Waste & scrap	80 699	115 022	156 827	125 474	126 366
Italy					
Metal	214 314	189 519	69 785	140 193	202 063
Netherlands					
Metal	35 720	33 765	23 690	29 775	28 018
Waste & scrap	2 000	3 000	...	1 000	2 000
Austria					
Metal	8 292	3 575	1 559	2 949	3 623
Finland					
Metal	1 312	1 493	953	895	1 048
Malta					
Metal	876	643	123	221	495
Norway					
Metal	1 194	1 215	1 096	741	854
Waste & scrap	1 983	244	805	539	16
Portugal					
Metal	194	279	256	...	...
Spain					
Metal	8 509	352	1 143	652	...
Sweden					
Metal	1 000	1 000	...	...	...
Waste & scrap	2 000	...	6 000	2 000	...
Switzerland					
Metal	(b) 1 294	(b) 2 431	632 534	820 894	1 017 543
Ivory Coast					
Metal	301	143	6	1	...
Kenya					
Metal	8	74	1 221	442	...
Morocco					
Metal	2 762	184	36	—	—
South Africa					
Metal	64	199	191	274	106
Waste & scrap	10	882	33 799	774	86
Tunisia					
Metal	1 173	677	768	...	...
Bermuda					
Metal	304	9 408	4 723	448	432
Canada					
Ores & concentrates (c)	347	826	1 894	2 308	445
Metal	39 470	89 621	69 949	69 074	51 691
USA					
Ore	7 930	5 231	4 524	5 907	10 578
Metal—					
Unrefined (a)	6 135	5 708	12 015	13 126	14 938
Refined	138 320	136 044	127 232	129 533	131 809
Argentina					
Metal	813	38	838	...	...
Brazil					
Metal	3 156	3 298	868	333	606

Imports of Gold

kilograms

Country	1978	1979	1980	1981	1982
Chile					
Ore	20 900	...	...	...	...
Ecuador					
Metal	1 147	1 140	312	...	...
Venezuela					
Metal	8 051	794	...	...	...
Brunei					
Metal	140	282	—	115	...
Cyprus					
Metal	782	813	382	563	704
Hong Kong					
Metal	54 372	105 587	35 872	101 325	122 370
Indonesia					
Metal	5 720	2 200	—	22 278	29 650
Iran (d)					
Metal	12 360	413	595	14	...
Japan					
Metal	98 514	62 896	31 837	167 325	139 778
Waste & scrap	4	25	712	1 451	1 071
Korea, Republic of					
Metal	3 459	4 835	3 994	797	1 221
Malaysia					
Metal	1 216	1 347	2 304	...	...
Saudi Arabia					
Metal	...	16 431	14 873	13 274	15 055
Syria					
Metal	388	360	332	—	...
Taiwan					
Metal	8 143	8 240	10 579	22 456	36 667
Thailand					
Metal	7 171	3 307	395	374	13 228
Australia					
Metal	628	585	1 798	397	823
New Zealand (e)					
Metal	241	168	190	223	358

Note: In this table the term 'metal' as used here includes both unwrought and partly worked gold and alloys but excludes gold coin

(a) Including waste and scrap

(b) Partly worked only

(c) Au content

(d) Years ended 20 March following that stated

(e) Years ended 30 June of that stated

Production of Graphite

tonnes

Country	1978	1979	1980	1981	1982
Germany, Federal Republic of (b)	11 927	10 282	11 255	10 400	10 600
Italy	4 108	4 102	3 957	3 535	3 210
Austria (a)	40 501	40 519	36 699	23 807	24 451
Czechoslovakia	13 630	14 600	15 700	20 317	21 977
Norway	11 151	11 892	10 406	6 864	10 218
Romania	* 11 000	12 400	12 500	* 12 500	* 12 500
Soviet Union	* 95 000	* 100 000	* 100 000	* 105 000	* 105 000
Turkey	1 295	1 673	1 820	3 298	3 360
Madagascar	16 624	13 378	9 906	16 045	15 089
South Africa	583	394	—	—	—
Zimbabwe	5 655	5 737	7 385	11 218	8 225
Mexico	52 264	50 880	44 854	42 294	* 34 500
Brazil	10 357	10 867	21 294	17 499	15 413
Burma (c)	150	137	44	1 422	* 230
China	* 80 000	* 180 000	* 160 000	* 160 000	* 160 000
India	63 784	52 821	54 960	56 249	52 376
Korea, Dem. P.R. of	* 20 000	* 25 000	* 25 000	* 25 000	* 25 000
Korea, Republic of	56 319	56 693	60 586	34 891	26 965
Sri Lanka	10 708	9 432	7 794	7 543	* 5 000
Thailand	23	—	2 074	1 800	630
World total	505 000	601 000	586 000	560 000	535 000

Notes:

- 1 This table includes all forms of amorphous and crystalline graphite but excludes synthetic material
- 2 In addition to the countries listed, Egypt, Namibia, Spain and the USA are also believed to produce graphite

(a) Crude

(b) Including production from imported crude graphite

(c) Years ended 31 March following that stated

Exports of Graphite

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	2 649	3 158	2 081	2 923	2 956
Belgium-Luxembourg	67	50	24	298	31
France	1 051	1 518	889	759	791
Germany, Federal Republic of	7 927	7 352	8 038	8 577	10 030
Italy	2 823	3 854	3 472	1 431	1 814
Netherlands	594	644	515	663	596
Austria	17 787	17 870	16 576	14 640	13 384
Czechoslovakia	* 500	3 000	3 000	...	...
Norway	10 870	11 178	10 675	8 274	8 244
Soviet Union (a)	* 12 200	* 11 700	* 11 500	* 2 600	...
Sweden	28	47	47	2 223	135
Madagascar	16 861	14 588	11 479	...	...
South Africa	311	—	—	—	—
Mexico	47 136	45 810	36 773	...	...
USA	8 776	8 683	8 083	10 562	9 528
Brazil	1 026	3 437	7 741	7 439	5 395
China (a)	* 12 700	* 26 300	* 38 100	* 44 000	* 56 400
Hong Kong (Re-exports)	622	817	161	278	188
India	352	1 416	...	...	...
Japan	1 406	1 554	1 745	1 620	2 084
Korea, Dem. P.R. of (a)	* 13 200	* 23 700	* 10 700	* 6 100	* 7 000
Korea, Republic of	50 807	46 520	45 416	34 348	21 757
Sri Lanka	11 416	11 154	6 604	4 350	2 903
Taiwan	675	615	505	502	352

Note: This table excludes synthetic graphite

(a) BGS estimates, based on known imports into certain countries

Imports of Graphite

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	17 166	14 584	18 115	15 529	17 862
Belgium-Luxembourg	3 959	1 842	5 832	6 494	811
Denmark	753	653	990	853	1 254
France	6 781	7 744	9 058	4 672	4 677
Germany, Federal Republic of	28 583	26 063	25 124	29 763	32 432
Greece	233	153	194	378	252
Italy	5 535	4 691	5 410	4 046	5 118
Netherlands	892	1 169	782	900	863
Austria	1 614	1 710	2 301	1 056	2 653
Finland	104	173	172	2 268	480
German Democratic Republic	6 214	6 884	5 632	6 759	7 945
Hungary	1 974	2 054	1 673	1 410	...
Norway	664	784	757	861	693
Poland	11 906	13 828	11 386	7 972	...
Portugal	294	184	388	174	...
Spain	1 484	1 778	2 218	1 404	...
Sweden	549	855	914	504	534
Switzerland	190	202	232	149	167
Turkey	415	169	527	273	326
Yugoslavia	1 812	1 824	1 843	1 601	1 854
Algeria	178	248	312	...	...
Egypt	689	529	101	812	...
South Africa	520	938	1 132	1 261	1 633
Mexico	114	310	380	...	...
USA	87 711	75 085	52 284	59 566	48 216
Argentina	387	505	725	...	...
Brazil	96	112	69	57	42
Venezuela	425	931	776	903	...
Hong Kong	1 201	1 325	214	640	549
India	607	787	248	...	...
Indonesia	107	90	135	191	231
Iran (a)	317	97	196	596	...
Japan	48 895	70 955	69 605	52 697	53 138
Malaysia	171	465	716	...	...
Pakistan (b)	957	607	1 060	3 944	986
Philippines	160	291	184	177	206
Singapore	151	519	572	554	583
Taiwan	9 402	13 722	15 696	10 440	7 942
Thailand	1 494	1 519	913	864	369
Australia	2 274	1 858	1 812	1 460	...
New Zealand (b)	84	68	133	190	79

Note: This table excludes synthetic graphite

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

Production of Gypsum

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Gypsum	3 230 000	* 3 500 000	3 371 000	2 896 647	2 674 000
Anhydrite	92 000	...	76 000	48 861	67 261
Belgium (a)(d)	183 487	192 938	174 088	154 425	131 030
France	(a) 6 071 000	(a) 6 127 000	6 491 000	6 146 900	6 000 000
Germany, Federal Republic of					
Gypsum	1 749 136	1 718 921	1 625 366	1 780 000	1 770 000
Anhydrite	489 219	531 693	624 398	600 000	595 000
Greece	507 062	312 291	485 053	* 499 000	* 499 000
Irish Republic	385 790	411 000	382 000	359 000	371 000
Italy	1 585 000	1 479 000	1 651 000	1 544 000	* 1 600 000
Luxembourg	4 476	1 682	—	702	* 900
Austria					
Gypsum	626 475	670 930	698 652	664 112	585 988
Anhydrite	139 490	127 178	134 765	136 403	141 532
Bulgaria	* 340 000	* 309 000	311 164	350 173	* 354 000
Czechoslovakia (a)	697 000	734 000	757 000	767 000	794 000
German Democratic Republic (d)	309 348	319 254	313 181	303 138	309 682
Poland (d)	329 000	319 000	312 000	290 000	224 000
Portugal	208 701	240 777	236 378	243 537	* 250 000
Romania	1 775 000	1 870 000	1 611 000	1 633 000	* 1 630 000
Soviet Union	* 5 300 000	* 5 400 000	* 5 400 000	* 5 500 000	* 5 500 000
Spain	5 368 600	5 275 236	5 222 718	5 288 295	* 5 260 000
Switzerland	* 70 000	* 70 000	* 64 000	* 85 000	* 80 000
Turkey	58 766	78 255	72 234	90 470	70 227
Yugoslavia	602 626	686 587	619 000	669 000	* 635 000
Algeria	* 175 000	* 190 000	* 200 000	* 200 000	* 200 000
Angola	* 25 000	* 25 000	* 25 000	* 20 000	* 18 000
Egypt	798 000	795 600	939 844	* 950 000	* 930 000
Ethiopia	932	925	900	* 4 500	* 4 500
Kenya	4 080	15 752	—	—	300
Libya	2 803	1 389	...	...	...
Mauritania	13 438	16 051	12 025	* 1 700	* 5 000
South Africa	388 734	377 467	452 490	544 827	534 991
Sudan	26 000	30 000	10 000	6 000	6 000
Tanzania	23 300	9 952	8 119	11 500	* 11 500
Tunisia	116 806	145 325	46 000	47 000	24 700
Zambia	1 734	1 180	—	—	—
Canada (a)	8 074 441	8 098 166	7 336 218	7 025 418	5 726 000
Cuba	* 95 000	* 90 000	* 122 000	* 132 000	* 127 000
Dominican Republic	238 311	226 586	217 584	237 647	278 304
Guatemala	37 771	25 409	33 249	28 722	* 27 000
Honduras	* 23 000	* 23 000	* 23 000	* 18 000	* 18 000
Jamaica	134 528	66 075	94 529	146 044	* 150 000
Mexico	1 757 870	2 021 006	2 170 669	2 390 431	* 2 000 000
Nicaragua	* 36 000	* 36 000	* 40 000	* 30 000	* 20 000
USA	13 509 000	13 272 000	11 227 000	10 430 000	9 560 000
Argentina	611 158	587 482	932 149	670 000	611 000
Brazil	474 732	464 730	605 824	695 290	680 829
Chile	174 143	162 482	198 115	237 853	* 220 000
Colombia	255 000	257 300	247 000	298 000	301 000
Ecuador	34 209	6 000	6 000	2 000	* 2 000
Paraguay	* 9 000	* 11 000	* 12 000	* 10 000	* 6 500
Peru	168 936	217 490	280 000	350 000	* 360 000
Uruguay	9 000	9 926	16 953	18 400	...
Venezuela	187 023	260 142	117 477	218 234	* 300 000

Gypsum

Production of Gypsum

tonnes

Country	1978	1979	1980	1981	1982
Burma (b)	22 047	31 700	16 949	31 095	* 27 200
China	* 1 500 000	* 3 600 000	* 3 400 000	* 3 450 000	* 3 550 000
Cyprus	60 700	46 100	43 550	26 300	28 900
India	884 000	877 000	866 000	948 000	* 931 000
Iran (c)	* 8 000 000	* 7 000 000	* 7 000 000	* 6 000 000	* 5 000 000
Iraq	* 160 000	* 160 000	* 170 000	* 170 000	* 170 000
Israel	* 200 000	* 72 500	* 80 000	* 42 000	* 50 000
Jordan	36 918	6 414	67 056	53 905	40 600
Lebanon	11 800	* 10 000	* 10 000	* 9 000	* 9 000
Mongolia	* 28 000	* 28 000	* 27 000	* 27 000	* 32 000
Pakistan (a)	290 000	337 000	568 000	317 870	* 400 000
Saudi Arabia	53 212	76 311	81 429	96 278	* 100 000
Syria	86 182	63 500	78 925	79 830	* 82 000
Taiwan	3 385	2 535	8 070	6 039	2 045
Thailand	280 904	352 398	411 977	540 383	753 433
Vietnam	* 14 000	* 14 000	* 15 000	* 15 000	* 18 000
Australia	939 884	1 230 204	1 309 321	1 721 001	* 1 730 000
World total	70 100 000	71 800 000	70 200 000	68 300 000	64 600 000

(a) Including anhydrite

(b) Years ended 31 March following that stated

(c) Years ended 20 March following that stated

(d) Calcined

Exports of Gypsum

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Crude	4 069	2 751	3 647	3 819	3 250
Calcined	12 401	14 838	14 241	14 593	13 273
Belgium-Luxembourg					
Crude	10 136	56 832	45 929	79 490	56 227
Calcined	43 980	39 755	54 678	60 532	57 916
Denmark					
Crude & calcined	130	123	172	973	371
France					
Crude	798 698	949 162	901 505	901 883	874 307
Calcined	209 855	189 839	240 915	231 380	271 717
Germany, Federal Republic of					
Crude	199 063	184 016	210 579	191 088	165 578
Calcined	156 920	174 448	179 872	183 637	161 833
Greece	5 622	5	19	160	15 150
Irish Republic					
Crude	33 726	29 607	32 608	19 140	27 143
Calcined	32 397	27 577	25 208	20 852	27 101
Italy					
Crude	247	20	21	48	174
Calcined	10 914	11 919	12 984	13 723	11 094
Netherlands					
Crude	928	1 532	133	72	970
Calcined	1 438	1 943	2 037	1 429	1 786
Austria					
Crude	99 276	121 598	134 911	92 545	72 968
Calcined	90 468	128 117	119 217	98 341	93 552
German Democratic Republic					
Calcined	68 681	80 353	78 604	103 009	101 758
Norway					
Crude	—	—	4 362	—	2 537
Poland	26 470	* 200	* 100	...	...
Romania					
Calcined (a)	* 28 200	* 28 100	* 28 700	* 19 700	* 20 000
Soviet Union (a)	* 112 600	* 59 900	* 35 200	* 44 500	* 24 300
Spain					
Crude & calcined	775 745	1 110 653	1 119 664	1 075 833	...
Switzerland					
Ground & calcined	620	667	4 100	5 647	13 992
Turkey					
Crude & calcined	5 000	—	...	...	254
Egypt	18 693	9 100	1 500	—	...
Kenya	1 559	270	600	0	...
Morocco					
Crude	218 073	228 871	203 140	218 780	221 792
Calcined	4 160	8 010	2 882	2 818	2 932
South Africa	3 654	3 237	1 092	2 604	2 769
Canada					
Crude	5 178 632	5 474 765	4 960 241	5 094 874	4 775 780
Dominican Republic	195 998	190 794	185 849	116 293	58 248
Guatemala	20 522	21 056	15 400	14 270	12 663
Jamaica	152 816	21 062	78 525	162 293	87 634
Mexico	1 535 304	1 838 278	1 607 674	...	...
Nicaragua	17 490	13 341	13 424	...	...
USA					
Crude	17 867	4 019	6 378	7 082	5 123
Calcined	696 720	78 657	73 770	135 665	106 626
Argentina	9 749	10 021	1 665	...	...
Bolivia	1 000	—	1 200	748	...
Brazil	15	48	3 544	3 118	113
Colombia	6 529	500	11 226	660	463
Venezuela	11 050	6 175	7 650	10 154	...

Gypsum

Exports of Gypsum

tonnes

Country	1978	1979	1980	1981	1982
Cyprus					
Crude	5 007	5 634	2 540	506	...
Calcined	2 688	4 465	5 608	5 185	7 629
Hong Kong (Re-exports)	528	31 433	1 430	1 172	2 185
Japan					
Crude	1 394	895	647	394	2 636
Calcined	4 778	5 262	5 723	7 234	6 537
Korea, Republic of					
Crude	)	10 085	26 336	9 068	3 368
Calcined	) 109 095	59 319	55 484	151 817	351 928
Saudi Arabia					
Crude & calcined	2 912	7 566	6 127	20 806	38 361
Singapore					
Crude & calcined	881	1 405	1 251	1 076	1 483
of which: Re-exports	880	1 116	1 082	1 013	1 417
Syria	42 003	116 132	44 790	31 509	...
Taiwan	1 564	2 045	1 582	1 049	350
Thailand					
Crude	82 212	88 513	145 415	213 876	370 695
Calcined	1 321	1 447	1 754	2 749	6 454
Australia					
Crude & calcined	181 040	424 678	391 272	620 802	...

Note: In this table the term 'crude' as used here may include some anhydrite

(a) BGS estimates, based on known imports into certain countries

Imports of Gypsum

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Crude	55 725	72 474	34 768	13 769	26 492
Calcined	40 240	38 940	39 138	34 814	51 623
Belgium-Luxembourg					
Crude	341 702	250 882	236 820	215 297	209 920
Calcined	104 978	123 296	184 806	161 157	161 263
Denmark					
Crude	293 907	311 551	303 737	220 123	165 100
Calcined	4 129	4 812	4 257	4 937	53 890
France					
Crude	12 544	8 657	15 639	16 026	24 916
Calcined	4 356	4 640	5 747	7 258	8 382
Germany, Federal Republic of					
Crude	285 079	455 211	548 553	640 316	596 588
Calcined	108 989	140 438	140 930	133 199	116 301
Greece					
Crude	34	50	51	106	109
Calcined	1 165	1 289	1 123	1 138	879
Irish Republic					
Crude	735	780	722	9 017	1 526
Calcined	3 246	4 405	3 989	5 147	3 948
Italy					
Crude	65	62	147	258	242
Calcined	17 895	16 115	20 814	21 606	14 682
Netherlands					
Crude	268 012	246 404	290 445	255 123	213 734
Calcined	122 327	124 161	134 778	206 281	114 643
Austria					
Crude	3 238	4 558	4 715	5 426	3 134
Calcined	8 187	9 623	6 668	6 542	6 493
Czechoslovakia	24 000	25 000	25 000	22 000	21 000
Finland					
Crude	81 492	157 468	148 039	135 283	130 437
Calcined	2 066	3 204	3 162	4 379	3 753
Hungary					
Calcined	74 382	85 931	86 584	85 653	89 583
Iceland	7 481	3 522	9 501	8 311	3 747
Norway					
Crude	141 858	175 631	136 210	104 702	130 707
Calcined	2 504	2 331	32 255	20 012	14 755
Portugal					
Crude	31 633	35 354	34 943	46 733	...
Calcined	139	148	210	225	...
Spain					
Crude & calcined	4 902	5 863	4 662	2 092	...
Sweden					
Crude	256 304	368 434	344 877	267 111	299 097
Calcined	5 970	5 899	5 568	5 231	4 960
Switzerland					
Crude	27 182	32 739	41 238	37 781	32 013
Ground & calcined	25 272	30 399	34 106	35 121	34 229
Algeria					
Crude & calcined	3 642	5 038	1 716	...	...
Cameroon					
Crude & calcined	20 867	12 284	15 648	...	...
Egypt	509	668	727	625	...
Ghana					
Crude & calcined	11 369	...	...	...	...
Ivory Coast					
Crude	68 066	46 820	47 792	39 357	...
Calcined	5 098	6 727	6 695	5 881	...
Kenya	182	14 198	38 479	40 137	...
Liberia					
Crude & calcined	344	2 524	1 073	...	...
Libya					
Crude & calcined	658	303	332	...	...
Madagascar	3 121	4 679	2 358	...	...

Imports of Gypsum

tonnes

Country	1978	1979	1980	1981	1982
Melilla	1 845	543	785	823	...
Mozambique					
Crude	...	...	14 500	...	...
Calcined	...	...	14 559	...	...
Senegal					
Crude	3 308	5 616	4 657	7 266	...
Calcined	983	810	168	219	...
South Africa					
Crude & calcined	5 216	5 939	7 283	8 049	7 028
Togo					
Crude	18 420	3 940	7	22 440	...
Calcined	439	588	907	537	...
Tunisia					
Crude & calcined	169	215	474	141	...
Zaire					
Crude & calcined	144	5	2 508	...	...
Zimbabwe	2 695	3 364	2 872	4 126	...
Canada					
Crude	70 995	152 463	154 717	143 500	93 844
Calcined	21 377	18 230	18 902	18 850	18 926
Costa Rica					
Crude	17 486	16 427	27 511	19 055	6 859
Calcined	802	696	569	635	769
El Salvador					
Crude	19 584	20 286	14 377	15 813	...
Calcined	241	142	174	151	...
Guadeloupe	12 910	8 304	6 122	...	...
Martinique	6 612	4 473	4 412	...	...
Mexico					
Crude	18 071	17 223	18 833	...	...
Calcined	6 969	9 102	9 036	...	...
Nicaragua	213	171	223	...	...
Panama	16 179	16 204	18 196	9 284	9 531
Trinidad & Tobago					
Crude & calcined	10 462	7 717	6 132	8 497	...
USA					
Crude	7 216 068	7 051 386	6 681 812	6 887 972	6 094 500
Ground & calcined	2 716	1 407	2 003	1 875	1 800
Brazil	960	628	1 706	1 001	801
Colombia	6 722	28 772	68 731	66 830	63 860
Ecuador	1 814	10 191	6 903	...	...
Uruguay					
Crude & ground	2 514	30 736	5 582	11 146	2 074
Venezuela	8 996	34 112	28 094	29 893	...
Hong Kong	62 120	132 726	86 119	71 441	104 289
Indonesia	157 757	287 554	318 607	316 158	294 349
Iran (a)	761	1 676	823	1 290	...
Israel (c)	186	331	507	110	...
Japan					
Crude	15 148	29 733	32 793	202 829	222 286
Calcined	187	381	442	309	524
Jordan	1 992	1 337	2 456	1 984	2 178
Korea, Republic of	4 395	5 077	8 424	741	17 337
Kuwait	81 603	60 453	25 380	25 127	...
Malaysia					
Crude & calcined	75 041	94 931	125 316	...	...
Philippines					
Crude	82 935	57 255	60 376	68 525	60 075
Calcined	5 279	6 019	5 295	7 071	3 890
Saudi Arabia					
Crude	)	2 988	6 148	2 952	17 945
Calcined	) 20 704	20 788	19 938	27 882	41 195
Singapore					
Crude & calcined	71 003	75 268	76 910	83 527	117 305
Sri Lanka	988	4 909	198 965	16 043	2 623

Imports of Gypsum

tonnes

Country	1978	1979	1980	1981	1982
Taiwan					
Crude	24 522	39 673	23 421	69 222	123 611
Calcined	210 376	363 158	203 856	291 744	189 282
Thailand					
Crude & calcined	294	555	562	250	1 830
Australia	2 043	957	1 713	1 559	...
Fiji	909	537	122	1 335	3 566
New Zealand (b)					
Crude	140 037	98 485	92 672	106 477	135 138
Calcined	573	484	484	234	516

Note: In this table the term 'crude' as used here may include some anhydrite

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

(c) Figures may be incomplete as value only given in Israeli trade return for imports from some countries

Iodine

Production of Iodine

kilograms

Country	1978	1979	1980	1981	1982
Soviet Union	* 2 000 000	* 2 000 000	* 2 000 000	* 2 000 000	* 2 000 000
USA	* 1 000 000	* 1 000 000	* 700 000	* 800 000	* 800 000
Chile	1 922 000	2 409 600	2 601 000	2 688 000	2 600 000
China	* 450 000	* 450 000	* 450 000	* 450 000	* 450 000
Indonesia	7 000	25 000	25 000	23 811	* 25 000
Japan	6 000 000	6 300 000	6 500 000	6 900 000	* 6 800 000
World total	11 400 000	12 200 000	12 300 000	12 900 000	12 700 000

Exports of Iodine

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom	123 089	118 729	224 309	105 773	132 869
Belgium-Luxembourg	7 700	4 100	47 100	112 100	154 700
Denmark	0	200	2 700	3 500	400
France	97 000	131 000	138 000	140 000	72 000
Germany, Federal Republic of	31 300	46 100	75 600	73 200	44 600
Italy	28 235	23 825	9 160	23 799	100
Netherlands	4 000	18 000	11 000	35 000	15 000
Poland	* 3 450	* 11 000	* 2 000	...	...
Portugal	100	0	500	...	...
Spain	1 601	1 000	1 000	7	...
Chile	1 268 700	(a)* 2 000 000	(a)* 2 300 000	(a)* 1 900 000	(a)* 1 900 000
Indonesia	—	14 700	28 850	9 500	17 900
Japan (b)	6 020 166	5 524 215	5 707 255	5 442 205	5 198 774

(a) BGS estimates, based on known imports into certain countries

(b) Includes fluorine and bromine but is thought to be mainly iodine

Imports of Iodine

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom	1 310 066	1 359 074	1 593 742	1 358 447	1 470 589
Belgium-Luxembourg	132 400	102 200	96 600	95 700	139 900
Denmark	700	1 300	2 400	2 700	2 100
France	998 000	1 156 000	1 100 000	899 000	1 032 000
Germany, Federal Republic of	791 400	870 700	1 139 900	1 290 300	1 133 800
Greece	2 625	2 000	1 000	1 000	2 000
Italy	241 924	252 087	301 156	172 765	315 200
Netherlands	113 000	126 000	216 000	258 000	206 000
Hungary	79 500	40 400	33 900	53 900	88 800
Portugal	46 100	10 900	10 800	...	...
Spain	105 111	146 034	152 000	175 000	...
Turkey	51 510	1 031 655	3 200	6 322	...
Yugoslavia	27 923	70 773	60 121	86 000	...
Algeria	1 442	1 318	4 139	...	...
Ethiopia	50 500	...	...	...	...
Morocco	974	372	419	444	697
Sudan	38 964	10 350	...	...	...
Canada	174 588	259 999	270 659	180 892	111 811
Mexico	198 367	...	...	...	...
USA	3 138 988	2 822 400	2 848 630	2 782 193	2 144 976
Argentina	19 197	9 523	16 433	...	...
Brazil	165 571	130 409	176 261	129 620	201 677
Colombia	5 430	4 272	4 188	8 102	6 530
Ecuador	676	655	783	...	...
Peru	1 827	2 589	2 425	1 671	965
Uruguay	700	1 400	—	—	400
Venezuela	11 469	10 502	...	...	...
India (a)	288 986	140 429	166 231	...	...
Indonesia	9 282	7 617	34 420	25 552	39 692
Korea, Republic of	...	5 207	3 120	3 884	6 632
Saudi Arabia	...	39 100	30 117	...	—
Taiwan	6 191	7 169	7 663	5 621	4 504
Thailand	1 488	1 324	1 917	2 002	1 824

(a) Years ended 31 March following that stated

Production of Iron Ore

thousand tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	4 239	4 269	916	731	470
France	33 454	31 627	28 981	21 598	19 390
Germany, Federal Republic of (f)	1 612	1 668	1 945	1 594	1 305
Italy	353	219	185	123	3
Luxembourg	835	630	560	429	—
Albania (b)	* 510	* 530	* 550	* 600	* 600
Austria	2 788	3 200	3 200	3 050	3 330
Bulgaria	2 453	2 103	1 886	1 754	1 552
Czechoslovakia	2 023	2 012	1 927	1 935	1 861
Finland	1 093	925	810	864	885
German Democratic Republic	70	56	51	41	41
Hungary	534	532	426	422	467
Norway	3 773	4 066	3 884	4 138	3 266
Poland	529	249	104	105	49
Portugal (f)	55	60	57	37	* 40
Romania	2 511	2 523	2 333	2 304	2 146
Soviet Union	246 398	241 738	244 713	242 417	244 410
Spain	8 580	8 827	9 227	8 483	7 622
Sweden	21 063	26 189	26 922	23 147	16 138
Turkey	4 198	1 955	2 579	2 935	2 855
Yugoslavia	4 564	4 617	4 530	4 794	5 106
Algeria	2 750	2 864	* 3 500	* 3 700	* 3 800
Egypt	1 456	1 435	1 776	1 944	2 037
Liberia	17 989	18 345	17 900	19 704	18 165
Mauritania	6 934	9 373	8 936	8 704	* 7 000
Morocco	63	62	78	73	224
South Africa (c)	24 206	31 565	26 312	28 319	24 554
Swaziland	(a) 1 266	(a) 494	—	—	—
Tunisia	339	394	389	396	274
Zimbabwe	1 123	1 201	1 622	1 098	837
Canada (g)	42 931	59 617	49 068	49 551	34 496
Mexico	5 334	6 061	7 631	7 899	* 8 150
USA	82 892	87 091	70 730	74 348	36 002
Argentina	909	611	437	398	625
Brazil	84 985	104 083	114 732	97 860	99 457
Chile	7 813	8 225	8 835	8 514	6 470
Colombia	497	397	506	419	445
Peru	4 923	5 444	5 704	6 069	5 774
Venezuela	13 041	14 776	16 221	15 722	11 680
China	* 70 000	* 75 000	* 75 000	* 70 000	* 70 000
India	38 838	38 859	41 936	41 354	40 902
Indonesia (d)	191	80	75	87	137
Iran (e)	* 1 500	* 600	* 600	* 600	* 750
Japan (d)	594	458	478	442	360
Korea, Dem. P.R. of	* 7 100	* 7 400	* 8 000	* 8 000	* 8 000
Korea, Republic of	693	639	619	594	620
Malaysia	320	351	371	532	341
Philippines	2	6	0	6	6
Thailand	88	103	85	62	27
Australia	83 134	91 717	95 534	84 661	87 694
New Zealand	3 946	3 527	3 638	3 253	3 002
World total	847 000	909 000	896 000	856 000	783 000

Note: In addition to the countries listed, Cuba and Vietnam are also believed to produce iron ore

(a) Production from stockpiles

(b) Nickeliferous iron ore

(c) Including by-product magnetite

(d) Including iron sand

(e) Years ended 20 March following that stated

(f) Including manganiferous iron ore

(g) Including shipments of by-product iron ore

Exports of Iron Ore

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	384	898	1 156	20	685
Belgium-Luxembourg					
Iron ore	83 852	3 367	60 237	18 692	401
Burnt pyrites	11 128	9 270	10 291	10 173	21 597
Denmark					
Iron ore	10 323	6 751	8 638	8 867	14 551
Burnt pyrites	608	—	—	—	15
France					
Iron ore	11 370 828	10 219 867	8 647 431	6 378 303	5 836 355
Germany, Federal Republic of					
Iron ore	7 796	3 996	4 467	6 538	6 424
Burnt pyrites	184 046	226 063	155 875	76 826	51 219
Greece					
Burnt pyrites	24 754	50	22 603	14 500	14 300
Irish Republic					
Iron ore	37 352	31 160	27 092	17 296	1 980
Italy					
Iron ore	10 703	288	1 424	22	150
Burnt pyrites	65 916	65 648	46 559	45 750	39 217
Netherlands (b)	11 825	119 566	273 706	239 761	148 920
Austria	85	2	118	0	0
Finland	13 302	10	14 628	22 965	—
Norway					
Iron ore	3 074 126	3 408 646	2 721 777	3 482 274	2 166 227
Burnt pyrites	48 047	27 684	53 609	177 740	168 208
Portugal					
Burnt pyrites	10 500	27 514	20 531	14 000	...
Soviet Union	40 605 000	39 012 000	38 108 000	34 917 000	33 201 000
Spain					
Iron ore	2 024 815	1 994 544	2 087 589	1 141 192	...
Burnt pyrites	261 987	272 339	313 193	360 765	...
Sweden					
Iron ore	22 204 000	26 246 000	20 998 000	17 709 000	12 597 000
Burnt pyrites	355 000	316 000	271 000	317 000	57 000
Switzerland (b)	41	54	88	222	2 772
Yugoslavia					
Burnt pyrites	33 833	48 302	74 168	109 597	58 000
Algeria					
Iron ore	1 527 968	2 352 099	1 475 012	1 507 000	...
Burnt pyrites	20 000	—	—	...	...
Canary Islands					
Burnt pyrites	57 970	57 180	58 460	28 700	...
Liberia	20 804 586	19 865 581	17 199 068	20 694 290	...
Mauritania	6 500 000	9 000 000	* 9 000 000	* 7 000 000	* 7 650 000
Morocco					
Burnt pyrites	39 935	99 686	143 503	64 383	237 400
South Africa (d)	* 13 844 000	* 16 513 000	* 13 943 000	* 13 021 000	* 12 643 000
Swaziland	1 046 383	956 726	553 494	—	—
Canada	31 929 098	48 849 277	39 020 983	41 452 050	27 281 400
Mexico	893	413	982	...	...
USA (b)	4 281 635	5 347 856	5 780 534	5 635 191	3 228 954
Bolivia (c)	35 313	2 629	—	4	...
Brazil	66 371 318	75 587 907	78 957 860	85 797 917	84 408 515
Chile	5 215 322	6 980 000	7 600 000	6 639 843	* 5 700 000
Peru	4 694 000	5 529 934	5 500 329	5 803 000	...
Venezuela	12 822 000	12 988 000	11 723 000	12 427 000	6 723 000

Exports of Iron Ore

tonnes

Country	1978	1979	1980	1981	1982
India	19 836 000	24 387 000	...	...	...
Malaysia	17 205	17 825	10 042	...	...
Philippines					
Iron ore	3 279 988	4 100 155	4 263 809	3 550 826	3 751 608
Burnt pyrites	54 992	33 079	59 535	35 408	18 423
Australia	75 264 000	78 447 000	79 754 000	71 147 000	72 584 000
New Zealand (a)	3 079 107	3 001 620	3 499 168	2 819 828	2 705 667

(a) Years ended 30 June of that stated

(b) Including burnt pyrites

(c) Fe content of concentrates

(d) BGS estimates, based on known imports into certain countries

Imports of Iron Ore

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Iron ore	15 451 080	17 841 304	8 557 148	14 581 627	10 572 403
Burnt pyrites	226 543	221 166	218 230	265 906	210 265
Belgium-Luxembourg					
Iron ore	24 242 568	26 144 207	22 181 965	21 148 340	18 613 043
Burnt pyrites	201 813	175 705	103 415	94 312	59 996
Denmark (a)	41 168	26 961	19 734	146 154	198 418
France					
Iron ore	14 603 972	17 345 338	18 642 578	16 510 764	14 942 736
Burnt pyrites	92 272	87 452	70 041	57 248	51 978
Germany, Federal Republic of					
Iron ore	42 133 179	51 703 352	49 833 550	44 288 124	38 909 559
Burnt pyrites	21 924	14 668	14 930	29 293	20 224
Greece	235 127	390 590	288 442	...	...
Italy (a)	16 296 692	17 320 601	16 912 643	15 210 597	14 723 082
Netherlands (a)	5 577 835	7 431 455	7 585 635	6 659 598	6 160 403
Austria					
Iron ore	2 618 559	3 963 480	3 336 303	3 423 021	3 241 201
Burnt pyrites	54 424	44 854	48 448	45 515	33 962
Bulgaria	1 642 000	2 107 000	2 235 000	2 280 000	2 360 000
Czechoslovakia	15 600 000	12 459 000	12 819 000	12 166 000	11 640 000
Finland	1 530 234	1 790 979	1 736 929	1 495 401	1 493 211
German Democratic Republic (b)	2 046 000	2 033 000	2 088 000	2 335 000	1 932 000
Hungary	4 200 053	4 044 624	3 285 591	3 765 125	3 756 651
Norway	121 106	312 434	87 101	11 196	47 293
Poland	17 198 000	18 872 000	20 150 000	15 870 000	13 494 000
Portugal	389 350	619 651	494 937	524 112	...
Romania	13 843 000	15 065 000	15 984 000	15 016 000	14 398 000
Spain	4 627 766	5 194 919	4 757 201	4 687 152	...
Sweden	121 000	33 000	...	1 000	5 000
Switzerland (a)	59 552	58 723	49 431	49 487	21 050
Turkey	172 816	732 756	810 541	1 049 888	1 171 000
Yugoslavia	547 006	1 059 699	1 639 947	1 359 660	1 477 000
Kenya	35 602	—	22 603	12 748	...
Libya	—	—	3 412	...	...
Nigeria (a)	1 329	1 342	...	...	...
Tanzania	817	414	1 061	—	...
Canada	4 685 868	5 912 582	5 875 293	5 794 635	3 359 304
Mexico	148 773	571 916	381 418	...	...
USA (a)	34 155 921	34 318 178	25 460 384	28 788 679	14 951 482
Argentina	2 395 419	2 987 674	2 390 698	...	...
Venezuela (a)	110 593	5 891	...	...	...
Abu Dhabi	88 959	122 552	173 897	51 120	...
China (d)	* 3 431 000	* 8 259 000	* 4 789 000	* 3 925 000	...
Dubai	11 000	12 661	12 400	47 800	...
India	464	179	1 169	...	...
Indonesia					
Iron ore	55 020	53 159	285 047	701 574	121 039
Burnt pyrites	5	0	0	112 650	178 786
Japan					
Iron ore (c)	114 688 039	130 274 295	133 721 259	123 379 351	121 827 155
Burnt pyrites	2 891	1 495	—	—	—
Korea, Republic of	3 623 000	7 514 298	9 129 893	10 687 712	11 464 397
Philippines	3 405 249	3 363 322	4 650 570	3 286 333	3 825 051
Qatar	160 300	496 154	220 281	—	...
Saudi Arabia	—	—	49 127	42 565	95 695
Singapore	16 459	6 781	9 605	30 576	25 256
Taiwan					
Iron ore	2 488 737	2 648 963	2 843 526	2 413 058	4 048 764
Burnt pyrites	74 209	50 980	49 142	55 079	21 014
Australia	30 731	26 400	47 175	46 912	65 678

(a) Including burnt pyrites

(b) Fe content of concentrates

(c) Including manganiferous iron ore

(d) BGS estimates, based on known exports from certain countries

Production of Pig-Iron and Blast-Furnace Ferro-alloys

thousand tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	11 434	12 898	6 316	9 554	8 389
Belgium (a)	10 128	10 776	9 846	9 786	7 836
France	18 497	19 415	19 159	17 274	15 060
Germany, Federal Republic of	30 218	35 166	33 873	31 876	27 278
Italy	11 434	11 397	12 273	12 342	11 532
Luxembourg (a)	3 721	3 801	3 568	2 889	2 587
Netherlands (a)	4 613	4 814	4 328	4 600	3 617
Austria (a)	3 077	3 702	3 485	3 477	3 115
Bulgaria (a)	1 493	1 452	1 529	1 514	1 564
Czechoslovakia (a)	9 944	9 529	9 819	9 903	9 525
Finland (a)	1 858	2 038	2 019	1 965	1 944
German Democratic Republic	2 560	2 386	2 458	2 441	2 149
Hungary (a)	2 330	2 369	2 214	2 193	2 183
Norway (a)	554	650	612	587	483
Poland	11 668	11 527	11 953	9 351	8 524
Portugal (a)	353	380	308	314	* 215
Romania (a)	8 155	8 879	9 012	8 857	8 637
Soviet Union	110 702	108 998	107 283	107 766	106 723
Spain (a)	6 249	6 464	6 364	6 251	5 843
Sweden (b)	2 567	3 132	2 638	1 988	* 1 900
Switzerland (a)	35	30	29	30	10
Turkey	1 569	2 228	2 040	1 954	2 377
Yugoslavia (a)	2 081	2 360	2 425	2 817	2 703
Algeria (a)	480	396	* 400	* 430	* 400
Egypt (a)	600	600	650	* 650	113
South Africa (a)	5 928	7 031	7 210	7 337	6 762
Tunisia (a)	135	150	146	150	93
Zimbabwe (a)	16	24	93	45	* 40
Canada (a)	10 338	10 906	10 893	9 743	8 000
Mexico (b)	5 136	5 027	5 275	5 435	5 103
USA (a)	79 551	78 902	62 323	66 909	39 319
Argentina (b)	1 819	1 942	1 806	1 736	1 940
Brazil (b)	10 331	12 038	12 960	11 022	11 054
Chile (a)	539	611	648	582	453
Colombia (a)	297	240	279	233	213
Peru (a)	244	257	261	177	205
Venezuela (b)	693	1 331	2 367	2 230	2 357
China (a)	34 790	36 730	38 020	34 170	35 470
India (a)	9 432	8 748	8 492	9 360	* 9 600
Japan (a)	78 588	83 825	87 041	80 048	77 658
Korea, Dem. P.R. of (a)	* 2 800	* 2 900	* 3 000	* 3 000	* 3 000
Korea, Republic of (a)	2 741	5 063	5 577	7 928	8 445
Taiwan (a)	293	302	236	185	148
Thailand (a)	17	30	18	10	6
Australia (a)	7 337	7 811	6 959	6 830	5 956
World total	507 000	529 000	508 000	498 000	451 000

(a) Pig-iron only

(b) Pig-iron, including sponge iron, only

Production of Steel Ingots and Castings

thousand tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	20 311	21 464	11 277	15 573	13 704
Belgium	12 604	13 553	12 324	12 286	9 900
Denmark	863	804	734	610	564
France	22 841	23 360	23 176	21 258	18 440
Germany, Federal Republic of	41 253	46 040	43 838	41 616	35 580
Greece	936	1 000	* 1 000	* 1 000	910
Irish Republic	66	80	* 40	* 40	60
Italy	24 283	24 250	26 501	24 777	24 009
Luxembourg	4 790	4 950	4 619	3 791	3 510
Netherlands	5 590	5 806	5 272	5 472	4 349
Austria	4 335	4 917	4 624	4 656	4 258
Bulgaria	2 469	2 482	2 565	2 484	2 586
Czechoslovakia	15 294	14 817	15 225	15 270	14 992
Finland	2 333	2 463	2 509	2 427	2 414
German Democratic Republic	6 976	7 023	7 308	7 467	7 169
Hungary	3 877	3 908	3 764	3 643	3 703
Norway	813	921	866	847	768
Poland	19 251	19 218	19 485	15 719	14 795
Portugal	611	656	583	555	504
Romania	11 779	12 909	13 175	13 025	13 055
Soviet Union	151 436	149 099	147 941	148 445	147 153
Spain	11 269	12 304	12 586	13 168	12 743
Sweden	4 325	4 733	4 237	3 770	3 900
Switzerland	784	886	898	889	835
Turkey	1 628	1 789	1 700	1 531	1 646
Yugoslavia	3 452	3 536	3 634	3 976	3 850
Algeria	417	416	534	* 550	* 600
Egypt	600	800	800	900	* 600
South Africa	7 902	8 868	9 068	9 004	8 271
Tunisia	168	176	178	173	105
Zimbabwe	778	740	800	691	528
Canada	14 898	16 078	15 901	14 811	11 871
Cuba	324	328	304	330	301
Mexico	6 775	7 117	7 156	7 605	7 060
USA	124 312	123 686	101 455	109 613	67 655
Argentina	2 788	3 199	2 687	2 517	2 897
Brazil	12 106	13 893	15 337	13 226	12 996
Chile	574	642	695	626	478
Colombia	265	234	263	217	215
Peru	374	436	471	360	* 270
Uruguay	7	16	17	13	20
Venezuela	680	1 292	1 784	2 030	2 216
Bangladesh (b)	117	126	138	139	109
China	31 780	34 430	37 120	35 600	37 160
India	9 917	9 936	9 358	10 269	10 628
Indonesia	225	305	360	500	* 600
Iran	* 780	* 700	* 700	* 500	* 550
Israel	* 90	* 100	* 110	* 120	* 120
Japan	102 103	111 748	111 395	101 676	99 548
Jordan	* 60	* 100	306	123	159
Korea, Dem. P.R. of	* 3 200	* 3 300	* 3 500	* 3 500	* 3 500
Korea, Republic of	3 138	5 200	5 790	5 891	5 636
Malaysia	240	244	236	233	246
Philippines	276	397	330	350	* 355
Singapore	280	297	340	350	* 350
Syria	* 120	* 90	* 100	* 100	* 100
Taiwan	1 269	1 570	1 765	1 600	1 712
Thailand	346	440	450	300	* 300
Australia (a)	7 589	8 125	7 594	7 635	6 371
New Zealand	215	221	217	231	252
World total	709 000	738 000	707 000	696 000	629 000

Note: The figures in this table refer to crude steel and cast semi-manufactures are not included

(a) Includes recovery from scrap

(b) Years ended 30 June of that stated

Production of Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ferro-manganese	69 000	137 000	52 000	84 000	61 000
Belgium					
Ferro-manganese	87 000	90 000	85 000	90 000	* 90 000
France					
Blast furnace ferro-alloys—					
Spiegeleisen & ferro-					
manganese	397 072	449 321	480 126	312 537	336 000
Electric furnace & alumino-					
thermic ferro-alloys—					
Ferro-chrome & ferro-silico-					
chrome	96 980	97 319	88 703	32 038	15 000
Ferro-silicon (50% Si)	192 829	285 487	245 957	189 062	144 588
Silico-spiegeleisen & ferro-					
silico-manganese	18 863	12 890	20 683	10 189	* 10 000
Ferro-titanium, ferro-					
tungsten, ferro-					
molybdenum, ferro-					
vanadium (a)	4 216	7 786	4 246	2 860	) * 104 000
Other ferro-alloys	123 781	138 245	119 996	111 858)
Silicon metal	42 000	54 089	59 930	57 500	57 200
Germany, Federal Republic of					
Blast furnace ferro-alloys—					
Spiegeleisen & ferro-					
manganese	209 000	233 000	200 000	214 000	200 000
Ferro-silicon	78 000	79 000	64 000	50 000	50 000
Electric furnace ferro-alloys—					
Ferro-chrome	* 50 000	* 60 000	* 60 000	* 50 000	* 50 000
Ferro-manganese & ferro-					
silico-manganese	* 15 000	* 30 000	* 25 000	* 19 000	* 19 000
Ferro-silicon	* 30 000	* 50 000	* 50 000	* 42 000	* 43 000
Other ferro-alloys	* 45 000	* 51 000	* 50 000	* 43 000	* 44 000
Greece					
Electric furnace ferro-alloys—					
Ferro-nickel	55 137	54 192	51 407	51 000	* 51 000
Italy					
Blast furnace ferro-alloys—					
Spiegeleisen	2 592	3 019	4 990	832	957
Ferro-manganese	61 822	67 384	64 298	59 302	57 366
Silicon pig-iron(10—12% Si)	1 026	796	1 896	1 694	1 024
Electric furnace ferro-alloys—					
Ferro-chrome	36 877	42 531	41 150	10 333	36 541
Ferro-silico-chrome	230	1 408	—	800	—
Ferro-silico-magnesium	2 381	—	400	100	...
Ferro-manganese	28 107	21 886	18 794	12 468	15 987
Ferro-silico-manganese	42 615	54 513	44 914	54 563	58 118
Ferro-molybdenum	1 756	2 017	2 096	807	235
Ferro-phosphorus	631	466	53	60	...
Ferro-silicon	67 700	80 521	71 857	55 144	63 947
Ferro-titanium & ferro-					
silico-titanium	2 188	1 808	1 020	1 456	1 243
Ferro-vanadium	526	559	354	148	68
Calcium-silicide	3 177	7 392	9 260	8 147	8 982
Silicon metal	18 141	* 15 400	18 852	19 595	14 012
Austria					
Electric furnace ferro-					
alloys	6 000	6 000	6 000	12 000	14 000
Bulgaria					
Electric furnace ferro-alloys—					
Ferro-manganese & ferro-					
silico-manganese	* 28 000	* 28 000	* 28 000	* 34 000	* 34 000
Ferro-silicon	* 17 000	* 16 000	* 16 000	* 20 000	* 20 000
Other ferro-alloys	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000

Production of Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Czechoslovakia					
Electric furnace ferro-alloys—					
Ferro-chrome	* 30 000	* 28 000	28 155	28 025	29 751
Ferro-manganese	) * 100 000	* 100 000	58 800	58 113	53 708
Ferro-silico-manganese	) * 100 000	* 100 000	* 39 000	* 40 000	* 40 000
Ferro-silicon	* 35 000	* 33 000	28 582	31 012	25 876
Other ferro-alloys	* 12 000	* 9 000	* 9 000	* 9 000	* 9 000
Silicon metal	* 5 400	* 5 400	* 5 400	* 5 400	* 5 400
Finland					
Electric furnace ferro-alloys—					
Ferro-chrome	44 801	49 116	52 722	51 623	54 532
Other ferro-alloys	45 269	29 429	21 439	52 000	50 000
German Democratic Republic					
Electric furnace ferro-alloys—					
Ferro-chrome	* 25 000	* 21 000	* 20 000	* 20 000	* 20 000
Ferro-manganese & ferro-silico-manganese	* 80 000	* 80 000	* 78 000	* 78 000	* 78 000
Ferro-silicon	* 31 000	* 30 000	* 29 000	* 29 000	* 29 000
Other ferro-alloys	* 21 000	* 20 000	* 19 000	* 19 000	* 19 000
Silicon metal	* 4 000	* 4 000	* 4 000	* 4 000	* 4 000
Hungary					
Electric furnace ferro-alloys—					
Ferro-silicon	7 636	7 726	10 390	11 077	* 11 000
Silicon metal	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
Iceland					
Electric furnace ferro-alloys—					
Ferro-silicon	—	* 15 000	28 299	33 411	41 077
Norway					
Electric furnace ferro-alloys—					
Ferro-chrome & ferro-silico-chrome	15 763	12 229	11 729	12 700	* 12 700
Ferro-manganese	310 293	379 818	295 706	233 390	* 230 000
Ferro-silico-manganese	133 647	184 415	167 490	214 534	* 200 000
Ferro-silicon	266 190	337 008	319 983	313 736	261 800
Other ferro-alloys	30 264	29 674	19 795	11 800	* 11 800
Silicon metal	57 869	59 202	63 287	59 202	53 683
Poland					
Blast furnace ferro-alloys—					
Spiegeleisen	6 800	8 300	8 900	6 410	4 370
Ferro-manganese	118 800	130 200	122 700	103 692	87 372
Electric furnace ferro-alloys—					
Ferro-chrome	* 47 000	* 49 000	* 47 000	* 47 000	* 47 000
Ferro-manganese & ferro-silico-manganese	* 47 000	* 49 000	* 47 000	* 47 000	* 47 000
Ferro-silicon	* 50 000	* 54 000	* 50 000	* 50 000	* 50 000
Other ferro-alloys	* 15 000	* 14 000	* 15 000	* 15 000	* 15 000
Silicon metal	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Portugal					
Electric furnace ferro-alloys—					
alloys	57 129	137 125	170 390	60 865	...
Silicon metal	* 20 000	* 32 000	* 33 000	* 32 000	* 30 000
Soviet Union					
Blast furnace ferro-alloys—					
Spiegeleisen	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Ferro-manganese	* 549 000	* 549 000	* 549 000	* 549 000	* 549 000
Other ferro-alloys	* 100 000	* 100 000	* 100 000	—	—
Electric furnace ferro-alloys—					
Ferro-chrome	* 553 000	* 553 000	* 600 000	* 600 000	* 600 000
Ferro-silico-chrome	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Ferro-manganese	* 735 000	* 910 000	* 910 000	* 910 000	* 910 000
Ferro-silico-manganese	* 30 000	* 30 000	* 32 000	* 32 000	* 32 000
Ferro-silicon	* 620 000	* 630 000	* 630 000	* 650 000	* 680 000
Other ferro-alloys	* 185 000	* 194 000	* 200 000	* 209 000	* 225 000
Silicon metal	* 47 000	* 57 000	* 59 000	* 59 000	* 59 000

Production of Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Spain					
Electric furnace ferro-alloys—					
Ferro-chrome	13 795	20 340	16 510	17 604	17 064
Ferro-manganese	134 475	148 350	120 160	95 736	81 996
Ferro-silico-manganese	108 685	119 570	92 470	70 010	69 936
Ferro-silicon	97 647	124 870	123 430	85 560	62 844
Silicon metal	* 20 000	* 20 000	* 20 000	* 18 000	* 18 000
Sweden					
Electric furnace ferro-alloys—					
Ferro-chrome	166 238	189 299	144 089	145 716	* 145 000
Ferro-silico-chrome	25 255	28 825	26 329	22 516	* 20 000
Ferro-molybdenum	1 131	1 365	805	726	...
Ferro-silicon	652	—	7 741	18 619	...
Ferro-tungsten	440	500	423	377	...
Ferro-vanadium	616	500	348	129	...
Silicon metal	8 753	12 929	18 457	14 340	* 16 000
Turkey					
Electric furnace ferro-alloys—					
Ferro-chrome	9 688	9 545	8 650	7 586	* 9 000
Yugoslavia					
Electric furnace ferro-alloys—					
Ferro-chrome	51 213	65 622	68 564	69 194	* 60 000
Ferro-silico-chrome	7 998	6 785	10 326	5 873	* 6 000
Ferro-manganese	37 470	45 591	33 738	51 126	* 42 000
Ferro-silico-manganese	27 857	28 786	33 097	28 600	* 19 000
Ferro-silicon	60 189	67 884	66 171	80 201	* 70 000
Other ferro-alloys	3 132	3 521	630	1 072	* 1 000
Silicon metal	30 670	31 598	30 094	28 358	* 24 000
Egypt					
Electric furnace ferro-alloys—					
Ferro-silicon	* 4 600	* 6 000	...	...	...
South Africa					
Electric furnace ferro-alloys—					
Ferro-chrome	548 743	728 429	754 874	* 750 000	* 600 000
Ferro-silico-chrome	* 22 700	* 28 000	* 38 000	* 20 000	* 20 000
Ferro-manganese	* 330 000	* 560 000	* 500 000	* 450 000	* 440 000
Ferro-silico-manganese	* 22 000	* 45 000	* 60 000	* 50 000	* 40 000
Ferro-silicon	* 75 000	* 149 000	* 142 000	* 110 000	* 100 000
Other ferro-alloys	* 300	* 300	* 300	...	...
Silicon metal	* 33 000	* 35 000	* 30 000	* 30 000	* 30 000
Zimbabwe					
Electric furnace ferro-alloys—					
Ferro-chrome	139 046	175 306	194 630	192 110	* 160 000
Ferro-silico-chrome	—	25 116	25 116	32 692	...
Ferro-manganese	2 211	2 164	2 164	2 200	* 1 000
Canada					
Electric furnace ferro-alloys—					
Ferro-manganese	* 70 000	* 41 000	* 86 000	* 109 000)
Ferro-silicon	130 000	95 000	139 000	110 000)
Other ferro-alloys	* 23 000	* 13 000	* 25 000	* 34 000	) 184 503
Silicon metal	28 000	26 000	39 000	28 000)
Dominican Republic					
Electric furnace ferro-alloys—					
Ferro-nickel	37 629	66 072	43 019	49 971	13 817
Mexico					
Electric furnace ferro-alloys—					
Ferro-chrome	3 995	4 790	—	3 018	—
Ferro-silico-magnesium	598	400	1 436	(d)	(d)
Ferro-manganese	107 276	123 640	125 751	131 324	135 374
Ferro-silico-manganese	33 735	31 037	30 544	25 694	31 850
Ferro-silicon	24 606	24 286	27 634	22 682	24 111
Other ferro-alloys	173	125	102	2 113	* 2 000

Production of Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
USA					
Ferro-chrome	159 393	224 047	167 292	148 815	83 375
Ferro-silico-chrome (e)	38 965	43 221	49 176	56 659	24 839
Ferro-manganese	247 235	287 670	171 886	174 805	108 136
Ferro-silico-manganese	128 756	149 730	170 838	157 182	62 475
Ferro-niobium	1 093	679	1 413	805	(d)
Ferro-phosphorus	81 714	79 217	105 671	73 071	55 835
Ferro-silicon	638 000	646 000	507 000	526 245	271 200
Other ferro-alloys (b)	110 612	138 912	114 509	124 873	67 788
Silicon metal	105 000	132 000	115 000	117 764	69 493
Argentina					
Electric furnace ferro-alloys—					
Ferro-manganese	26 291	33 951	20 479	21 705	23 600
Ferro-silico-manganese	10 392	* 13 000	11 875	12 780	15 400
Ferro-silicon	12 038	16 731	11 953	13 678	9 100
Other ferro-alloys	14	* 4 500	2 084	1 523	10 000
Brazil					
Electric furnace ferro-alloys—					
Ferro-calcium-silicon	5 790	6 639	8 025	7 481	(d)
Ferro-chrome	62 170	84 514	93 443	118 781	97 069
Ferro-silico-chrome	4 698	7 239	8 086	8 654	2 722
Ferro-manganese	117 843	133 563	140 496	107 872	120 656
Ferro-silico-manganese	106 249	127 503	134 243	142 743	172 365
Ferro-molybdenum	1 690	1 469	802	797	(d)
Ferro-nickel	10 976	11 355	11 280	10 744	10 597
Ferro-niobium	10 251	13 913	17 530	14 632	11 506
Ferro-silicon	72 842	66 992	109 140	120 662	121 600
Ferro-silico-magnesium	9 968	14 432	13 734	11 001)
Ferro-titanium	436	795	698	499	) 24 000
Ferro-vanadium	456	851	807	296)
Other ferro-alloys	347	570	1 059	944)
Silicon metal	5 831	5 654	12 379	18 023	18 100
Chile					
Electric furnace ferro-alloys—					
Ferro-manganese	5 853	5 221	5 684	5 254	) * 5 300
Ferro-silico-manganese	132	256	219	104)
Ferro-molybdenum	66	892	515	656	...
Ferro-silicon	2 173	5 063	5 385	2 477	* 4 500
Venezuela					
Ferro-manganese	—	1 250	1 500	1 518	* 1 500
Ferro-silico-manganese	—	1 020	600	9 002	* 1 800
Ferro-silicon	* 3 200	6 300	59 200	43 986	* 50 000
China					
Ferro-chrome	* 90 000	* 90 000	* 100 000	* 110 000	* 120 000
Ferro-manganese	* 310 000	* 340 000	* 350 000	* 375 000	* 390 000
Ferro-silicon	* 150 000	* 160 000	* 170 000	* 185 000	* 195 000
Other ferro-alloys	* 40 000	* 50 000	* 60 000	* 65 000	* 70 000
Silicon metal	* 8 000	* 9 000	* 13 500	* 15 000	* 23 000
India					
Electric furnace ferro-alloys—					
Ferro-chrome	21 545	22 249	16 494	31 066	40 244
Ferro-silico-chrome	3 892	3 851	4 050	4 408	4 468
Ferro-manganese	219 993	186 803	158 308	208 836	150 707
Ferro-silico-manganese	2 891	5 282	12 531	8 621	* 9 000
Ferro-silicon	52 274	53 087	54 319	60 253	36 060
Other ferro-alloys	743	752	613	453	292
Silicon metal	2 824	2 342	2 498	3 600	* 3 600

Production of Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Japan					
Electric furnace ferro-alloys—					
Ferro-calcium-silicon	1 896	3 349	3 859	2 590	(d)
Ferro-chrome	274 421	365 490	402 997	306 104	328 401
Ferro-silico-chrome	9 208	12 623	20 531	10 469	9 980
Ferro-manganese	455 729	603 019	569 147	567 746	537 960
Ferro-silico-manganese	303 249	299 680	310 714	282 852	269 434
Ferro-molybdenum	3 904	3 406	4 367	3 056	(d)
Ferro-nickel	198 482	303 716	276 829	244 135	214 096
Ferro-niobium	1 193	1 207	1 159	825	(d)
Ferro-silicon	270 052	319 553	303 754	234 524	192 323
Ferro-tungsten	243	251	242	362)
Ferro-vanadium	3 193	4 628	3 526	4 063	) 15 400
Other ferro-alloys	9 637	9 298	10 360	3 167)
Silicon metal	14 515	15 422	15 400	11 800	11 800
Korea, Dem. P.R. of					
Ferro-manganese	* 65 000	* 65 000	* 70 000	* 70 000	* 70 000
Ferro-silicon	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Other ferro-alloys	* 14 000	* 14 000	* 20 000	* 20 000	* 20 000
Korea, Republic of					
Electric furnace ferro-alloys—					
Ferro-manganese	47 500	53 000	54 279	64 000	* 64 000
Ferro-silicon	30 800	38 000	29 712	35 000	* 35 000
Other ferro-alloys	584	21 151	24 761	28 485	* 26 000
Taiwan					
Electric furnace ferro-alloys—					
Ferro-manganese	16 225	24 820	21 010	17 843	17 094
Ferro-silico-manganese	8 879	15 263	22 607	14 376	21 311
Ferro-silicon	25 419	31 245	28 390	14 869	13 757
Thailand					
Electric furnace ferro-alloys—					
Ferro-manganese	747	2 187	112	369	—
Ferro-silicon	1 635	3 041	60	280	—
Australia (c)					
Electric furnace ferro-alloys—					
Ferro-manganese	95 393	86 875	94 146	67 600	52 000
Ferro-silico-manganese (60% Mn)	—	19 596	18 376	32 000	40 000
Ferro-silicon	18 943	18 990	18 435	18 300	* 18 000
New Caledonia					
Electric furnace ferro-alloys—					
Ferro-nickel	77 908	123 306	132 500	113 800	* 105 000

(a) Ti, W, Mo, V content

(b) Includes ferro-boron and other complex boron additive alloys, ferro-nickel, ferro-molybdenum, ferro-tungsten, ferro-vanadium, spiegeleisen, ferro-zirconium and other miscellaneous alloys

(c) Years ended 30 November of that stated

(d) Included with 'other ferro-alloys'

(e) Includes other chromium alloys

Exports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Pig-iron	33 753	22 535	30 266	14 892	8 011
Sponge & powder	515	896	534	248	430
Ferro-aluminium, ferro-silico- aluminium & ferro-silico- mangano-aluminium	4 357	4 805	3 587	2 216	2 490
Ferro-chrome	1 593	1 305	626	1 927	678
Ferro-silico-chrome	52	705	—	—	64
Ferro-manganese	1 959	6 964	971	21 589	23 902
Ferro-silico-manganese	169	763	615	—	54
Ferro-molybdenum	1 507	1 958	2 179	1 206	1 214
Ferro-nickel	—	—	—	315	—
Ferro-niobium & ferro- niobium-tantalum	395	416	416	95	51
Ferro-silicon	1 948	1 782	1 352	2 889	1 173
Ferro-titanium	3 844	3 661	3 790	4 355	4 084
Ferro-tungsten	3 732	3 306	78	—	19
Ferro-vanadium	137	190	75	94	69
Other ferro-alloys	1 497	1 548	4 228	2 566	2 760
Ingots, blooms, billets	332 569	321 509	186 558	193 183	282 113
Scrap (a)	1 557 902	1 334 852	2 784 953	3 367 085	3 072 594
Belgium-Luxembourg					
Pig-iron	35 675	22 555	7 593	8 574	4 176
Spiegeleisen	235	61	85	482	106
Sponge & powder	258	585	410	632	372
Ferro-aluminium, ferro-silico- aluminium & ferro-silico- mangano-aluminium	72	130	91	335	64
Ferro-chrome	9 559	1 572	1 544	3 858	1 960
Ferro-manganese	30 450	44 152	37 282	12 128	13 230
Ferro-silicon	4 223	4 187	3 283	4 633	4 270
Ferro-titanium & ferro- silico-titanium	1 894	1 637	925	1 861	1 774
Ferro-tungsten & ferro- silico-tungsten	176	18	0	16	—
Ferro-silico-manganese, ferro- molybdenum & ferro-vanadium	24 451	35 494	29 659	31 093	18 546
Other ferro-alloys	1 286	2 569	1 169	1 251	1 024
Ingots, blooms, billets	642 768	850 298	708 304	595 099	510 538
Scrap	537 558	550 135	536 641	578 482	497 550
Denmark					
Ingots, blooms, billets	2 736	26 675	4 057	158	5 659
Scrap	81 429	90 641	100 358	185 200	117 748
France					
Pig-iron	127 570	360 260	284 909	195 674	178 644
Spiegeleisen	689	1 311	850	633	565
Ferro-aluminium, ferro-silico- aluminium & ferro-silico- mangano-aluminium	1 600	2 323	1 761	1 126	1 040
Ferro-chrome	9 834	7 812	1 300	4 742	605
Ferro-silico-chrome	2 564	2 594	2 217	2 095	1 884
Ferro-manganese	321 088	347 504	321 477	383 596	177 151
Ferro-silico-manganese	10 778	11 523	9 361	11 507	5 657
Ferro-molybdenum	372	498	486	1 115	829
Ferro-nickel	34 569	98 023	61 560	48 611	45 034
Ferro-silicon	78 704	92 671	80 342	70 137	68 003
Ferro-silico-magnesium	7 744	7 331	6 916	4 914	5 045
Ferro-silico-zirconium	3 592	4 137	3 144	2 914	2 369
Ferro-titanium & ferro- silico-titanium	1 608	2 019	1 412	1 400	858
Ferro-tungsten & ferro- silico-tungsten	1 046	330	339	167	201
Ferro-vanadium	513	497	184	254	418
Other ferro-alloys	26 991	25 120	23 299	25 664	20 533
Ingots, blooms, billets	265 339	292 670	365 400	265 725	305 786
Scrap	3 662 495	3 526 074	3 312 235	3 183 184	3 081 840

Exports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Germany, Federal Republic of					
Pig-iron	736 119	959 750	1 032 770	838 279	609 071
Spiegeleisen	2 716	1 752	4 763	1 834	1 346
Sponge & powder	52 144	31 993	30 671	80 765	204 114
Ferro-chrome	31 419	27 725	33 482	55 675	53 989
Ferro-silico-chrome	1 623	3 583	1 417	1 179	2 920
Ferro-manganese	49 391	95 818	36 762	48 876	32 975
Ferro-silico-manganese	742	3 590	5 598	7 832	5 729
Ferro-molybdenum	375	496	1 227	912	1 010
Ferro-nickel	9	422	86	555	50
Ferro-niobium	880	970	1 146	980	837
Ferro-silicon	25 818	31 553	55 714	60 956	59 192
Ferro-titanium & ferro-silico-titanium	277	702	541	881	507
Ferro-tungsten & ferro-silico-tungsten	216	201	140	187	184
Ferro-vanadium	1 511	1 551	887	2 470	1 973
Other ferro-alloys	10 177	12 509	10 372	11 302	5 759
Ingots, blooms, billets	1 174 858	1 334 317	1 487 341	1 289 142	1 078 932
Scrap	2 880 189	3 069 157	3 169 547	3 513 775	3 047 940
Greece					
Ferro-nickel	67 458	65 526	49 468	49 349	19 852
Irish Republic					
Scrap	54 100	40 991	84 458	73 308	58 753
Italy					
Pig-iron	5 457	6 947	1 915	244	2 634
Sponge & powder	2 035	4 460	3 453	1 607	1 871
Ferro-chrome & ferro-silico-chrome	8 455	27 038	10 331	8 805	9 195
Ferro-manganese	10 450	7 982	1 897	672	2 805
Ferro-silico-manganese	1 001	905	862	8 382	3 027
Ferro-molybdenum	760	732	1 273	430	221
Ferro-silicon	7 345	11 001	5 579	6 626	4 361
Ferro-silico-magnesium	1 162	1 633	1 093	1 056	1 360
Ferro-titanium	1 751	1 556	931	1 241	969
Ferro-vanadium	265	435	190	65	58
Other ferro-alloys	572	756	1 098	2 041	2 496
Ingots, blooms, billets	154 897	152 109	188 443	243 745	345 612
Scrap	6 683	13 514	8 584	22 628	17 150
Netherlands					
Pig-iron	1 876	22 962	9 694	4 828	4 648
Sponge & powder	41	107	55	26	46
Ferro-chrome	10 402	1 916	6 641	18 243	13 990
Ferro-manganese	1 326	449	351	1 059	141
Ferro-silico-manganese	102	—	2 022	377	2 064
Ferro-molybdenum	60	172	143	103	14
Ferro-nickel	4	129	0	139	—
Ferro-silicon	1 000	4 400	2 616	2 391	1 234
Ferro-vanadium	700	804	49	19	—
Other ferro-alloys	340	537	172	256	223
Ingots, blooms, billets	589 780	727 913	880 096	986 573	615 084
Scrap	1 190 000	1 241 281	1 194 467	1 251 711	1 180 248
Austria					
Pig-iron	—	—	236	—	100
Ferro-alloys	9 280	10 088	8 904	10 904	12 085
Ingots & blooms	5 181	7 009	8 272	11 200	11 304
Scrap	7 344	13 904	12 721	12 315	8 840
Bulgaria					
Pig-iron	48 000	12 000	34 000	34 000	16 000
Ferro-alloys	24 000	22 000	23 000	31 000	28 000
Ingots, blooms, billets (f)	* 307 500	* 412 700	* 175 200	* 121 200	* 88 100
Scrap	167 000	130 000	155 000	79 000	57 000

Exports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Finland					
Pig-iron	...	32 513	14 845	275	114
Ferro-chrome & ferro-silico-chrome	39 332	31 409	16 637	25 459	22 705
Other ferro-alloys	3 469	326	345	1	2
Blooms & billets	190 809	163 265	129 462	206 019	139 922
Scrap	973	3 661	194	206	126
German Democratic Republic					
Pig-iron	58 100	* 84 650	* 29 930	* 33 800	* 15 000
Ingots, blooms, billets	374 000	296 000	344 000	688 000	324 000
Scrap	13 700	* 51 700	* 48 900	...	...
Hungary					
Pig-iron	47 262	15 477	2 149	—	—
Scrap	42 414	36 766	30 955	32 283	53 000
Iceland					
Scrap	8 842	3 343	2 906	3 125	4 518
Malta					
Scrap	9 351	3 441	5 828	3 727	6 366
Norway					
Pig-iron	106 518	140 198	140 260	70 568	64 524
Ferro-chrome	17 952	12 950	8 009	10 540	9 515
Ferro-silico-chrome	433	7 441	13 332	948	1 173
Ferro-manganese	266 733	293 874	245 525	209 631	196 746
Ferro-silico-manganese	162 498	171 920	164 019	183 737	172 105
Ferro-silicon	314 673	304 519	268 894	271 438	287 766
Ferro-vanadium	821	1 107	788	420	288
Other ferro-alloys	16 909	16 601	8 554	8 324	6 822
Ingots, blooms, billets	217 526	239 469	211 615	227 655	192 602
Scrap	36 146	38 025	38 691	32 536	32 569
Portugal					
Pig-iron	0	116	9	41	...
Ferro-manganese	63 778	66 581	56 456	26 615	...
Ferro-silico-manganese	26 804	14 723	21 038	(c)	...
Ferro-silicon	12 994	11 131	7 455	5 577	...
Ferro-tungsten	140	193	222)	...
Other ferro-alloys	—	30	—	) 13 805	...
Scrap	9 716	4 796	4 477	4 680	...
Romania					
Pig-iron	* 117 600	* 71 000	* 15 600	...	...
Ingots, blooms, billets	* 641 000	* 541 000	* 293 700	* 66 000	—
Scrap	* 3 400	* 1 140	* 300	...	...
Soviet Union					
Pig-iron	* 4 500 000	* 4 000 000	* 4 225 000	* 4 250 000	* 4 250 000
Ferro-alloys	* 420 000	* 420 000	* 420 000	* 420 000	* 400 000
Scrap	1 678 578	1 987 827	2 505 260	2 681 421	2 859 053
Spain					
Pig-iron	64 411	81 973	31 290	18 950	...
Ferro-silico-aluminium, ferro-silico-manganese-aluminium & ferro-silico-alumino-calcium	—	—	—	1 733	...
Ferro-chrome	3 882	9 230	8 035	8 927	...
Ferro-manganese	47 242	53 481	31 333	32 031	...
Ferro-silico-manganese	28 770	40 613	24 666	6 583	...
Ferro-molybdenum	588	461	520	291	...
Ferro-silicon	39 760	67 632	54 703	42 834	...
Ferro-titanium & ferro-silico-titanium	16	14	—	—	...
Other ferro-alloys	1 387	2 396	2 142	88	...
Ingots, blooms, billets	36 155	221 472	488 915	475 400	...

Exports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Sweden					
Pig-iron	510 538	150 319	179 571	45 103	29 580
Sponge & powder	95 035	116 524	97 749	97 493	96 683
Ferro-chrome	152 742	137 982	92 305	105 641	80 351
Ferro-silico-chrome	10 503	3 603	1 125	182	1 037
Ferro-manganese	463	1 000	1 025	770	674
Ferro-silico-manganese	209	385	—	80	16
Ferro-molybdenum	872	1 239	760	794	413
Ferro-nickel	1 006	5	17	—	—
Ferro-silicon	663	258	3 683	15 160	6 533
Ferro-titanium	892	686	552	911	371
Ferro-tungsten	176	163	184	247	120
Ferro-vanadium	446	405	231	156	44
Other ferro-alloys	100	107	628	841	104
Ingots, blooms, billets	520 743	520 329	408 431	258 842	332 938
Scrap	78 832	17 366	16 231	13 829	18 315
Switzerland					
Pig-iron	338	229	670	789	701
Sponge & powder	300	478	551	463	493
Ferro-silicon	128	114	126	112	157
Other ferro-alloys	1 582	340	596	896	674
Ingots, blooms, billets	22 394	18 808	8 465	2 106	3 281
Scrap	88 080	100 690	63 738	128 334	105 915
Turkey					
Pig-iron	19 963	17 744	8 000	6 254	254
Ferro-chrome	25 921	32 075	27 500	27 850	...
Yugoslavia					
Pig-iron	22 330	62 155	47 362	22 674	7 440
Ferro-chrome	59 980	57 170	50 130	63 087	(c)
Ferro-manganese	29 585	20 767	8 049	21 304	12 165
Ferro-silico-manganese	19 970	20 685	23 240	17 847)
Ferro-silicon	46 878	46 210	37 705	61 583	) 85 942
Other ferro-alloys	231	3 625	2 435	1 157)
Ingots, blooms, billets	16 551	22 494	21 405	23 750	19 348
Scrap	76 407	48 302	44 833	59 229	63 342
Algeria					
Pig-iron	102 300	84 070	128 699	...	...
Scrap	82 474	60 333	65 513	...	...
Cameroon					
Scrap	800	2 552	9 630	...	...
Egypt					
Pig-iron & spiegeleisen	1 439	—	—	—	...
Ivory Coast					
Scrap	19 031	21 714	23 925	18 434	...
Kenya					
Scrap	3 949	68	294	25	...
Morocco					
Scrap	44 774	88 559	34 667	50 945	51 942
Senegal					
Scrap	11 562	14 430	9 632	14 291	...
South Africa					
Pig-iron (f)	* 15 500	* 88 000	* 90 000	* 103 000	* 83 000
Ferro-chrome	519 458	706 744	596 847	(f) * 493 000	(f) * 436 500
Ferro-manganese (f)	* 368 100	* 469 600	* 362 000	* 360 000	* 409 000
Ferro-silicon (f)	* 26 500	* 34 200	* 34 200	* 17 600	* 28 300
Other ferro-alloys (f)	* 13 400	* 14 500	* 15 100	* 22 600	* 5 000
Ingots, blooms, billets (f)	* 85 600	* 70 900	* 76 900	* 32 200	* 152 000
Scrap (f)	* 23 500	* 4 300	* 5 700	* 1 600	* 3 600
Sudan					
Scrap	—	4 547	3 929	230	...

Exports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Tunisia					
Ingots, blooms, billets	20 400	5 797	—	...	...
Scrap	1 280	14	791	1 717	...
Zimbabwe					
Pig-iron	—	7 594	36 041	10 195	5 001
Ferro-chrome	100 172	143 861	231 143	188 329	...
Ferro-silico-chrome	1 376	27 088	26 163	22 051	...
Blooms & billets	324 466	237 891	305 545	207 827	252 525
Scrap	15 927	4 685	2 190	2 424	...
Canada					
Pig-iron	544 716	255 523	562 351	466 424	485 665
Sponge	57 400	138 334	178 352	123 282	29 066
Ferro-manganese	20 194	12 043	11 298	57 182	11 738
Ferro-silicon	60 197	40 732	52 377	52 455	40 861
Other ferro-alloys	13 029	9 964	8 418	6 333	5 128
of which: Re-exports	3 133	2 887	2 184	1 017	71
Ingots, blooms, billets	280 963	120 787	327 140	894 638	258 328
Scrap	874 329	1 032 714	784 798	573 213	569 305
Dominican Republic					
Ferro-nickel	50 007	64 500	46 614	49 073	14 161
Mexico					
Ferro-alloys	34 509	39 240	39 464	...	...
Trinidad & Tobago					
Scrap	1 822	1 001	18	428	...
USA					
Pig-iron	69 610	149 751	79 807	19 186	50 268
Sponge & powder	14 593	18 824	23 780	16 581	12 818
Ferro-chrome & ferro-silico-chrome	18 717	14 516	29 807	13 906	4 899
Ferro-manganese	8 966	23 480	11 419	14 026	9 177
Ferro-silico-manganese	4 360	4 756	6 094	1 726	3 204
Ferro-molybdenum	665	762	799	257	123
Ferro-phosphorus	3 781	33 831	40 544	6 771	3 663
Ferro-silicon	11 549	20 430	25 039	14 379	13 281
Ferro-vanadium	1 187	818	728	394	308
Other ferro-alloys	12 912	6 019	4 297	5 890	5 996
Ingots, blooms, billets	219 757	328 566	829 493	505 588	331 774
Scrap (a)	8 452 531	10 133 680	10 174 603	5 927 684	6 215 378
Argentina					
Ingots, blooms, billets	180 769	233 272	121 873	...	...
Brazil					
Pig-iron	1 026 479	989 343	841 331	714 446	692 529
Ferro-chrome	42 393	48 205	45 921	67 330	51 770
Ferro-manganese	40 115	40 256	37 832	36 490	31 435
Ferro-nickel	—	—	—	1 800	1 529
Ferro-niobium	10 852	12 787	14 566	14 542	11 036
Ferro-silicon	12 038	19 642	29 664	68 800	64 518
Ferro-silico-spiegeleisen & silico-manganese	33 573	42 915	35 580	62 976	64 501
Ferro-silico-mangano-aluminium	6 700	300	400	—	—
Other ferro-alloys	1 573	5 204	5 839	8 130	7 878
Ingots, blooms, billets	332 920	479 585	285 072	130 955	160 243
Chile					
Ferro-molybdenum	357	...	...	...	...
Ferro-silicon	358	...	...	...	...
Venezuela					
Sponge & powder	23 764	65 377	188 462	301 781	...
Ferro-silicon	11 999	21 346	21 879	2 484	...
Brunei					
Scrap	4 021	6 533	177	5 131	...
Cyprus					
Scrap (Re-exports)	6 215	9 312	5 877	8 444	...
Hong Kong					
Ingots, blooms, billets (Re-exports)	5 352	9 692	13 975	9 800	3 896
Scrap	286 379	304 230	329 649	364 360	296 651
of which: Re-exports	19 978	39 955	55 173	27 487	24 198

Exports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
India					
Pig-iron	298 743	104 470	...	...	...
Ferro-chrome	9 093	9 001	...	...	...
Ferro-manganese	76 200	52 681	...	...	...
Ferro-silicon	7 379	14 014	...	...	...
Ingots, blooms, billets (d)	121 443	27 130	3 296	...	...
Scrap	75 828	11 772	...	...	...
Israel (b)					
Scrap	3 969	11 054	13 942	...	...
Japan					
Pig-iron	32 678	50 225	5 852	1 510	49 333
Powder	2 582	2 951	2 578	3 847	3 208
Ferro-chrome	6 365	19 852	8 896	3 470	3 137
Ferro-manganese	37 147	92 886	40 271	34 866	26 683
Ferro-silico-manganese	342	2 377	420	1 158	583
Ferro-nickel	21 773	13 193	17 125	20 742	21 405
Ferro-silicon	2 336	2 003	2 695	2 199	1 042
Ferro-vanadium	71	13	97	84	132
Other ferro-alloys	2 266	2 121	1 035	1 318	975
Ingots, blooms, billets	107 256	118 295	188 933	117 990	132 527
Scrap	164 395	150 562	159 366	186 783	174 787
Korea, Dem. P.R. of					
Pig-iron	* 67 200	* 51 500	* 82 200	* 66 000	...
Korea, Republic of					
Pig-iron	)	32 461	150 674	1 169 188	41 324
Ferro-manganese	)	—	35	—	—
Ferro-silico-manganese	) 30 000	1 100	220	—	—
Ferro-silicon	)	6 855	348	165	335
Other ferro-alloys	)	3 294	1 897	3	9
Ingots, blooms, billets	166 000	717 655	942 779	339 834	364 193
Scrap	8 000	12 565	9 675	25 109	140 608
Kuwait					
Scrap	6 019	21 460	62 200	24 691	...
Malaysia					
Scrap	13 393	13 758	10 811	...	...
Philippines					
Ferro-silicon	11 399	10 117	14 691	25 582	28 364
Other ferro-alloys	756	1 021	3 310	5 686	4 219
Saudi Arabia					
Scrap	110	730	15 931	52 193	28 680
Singapore					
Pig-iron	5 784	11 095	9 164	7 502	9 242
of which: Re-exports	5 783	11 078	9 114	7 490	9 229
Ingots & blooms	7 872	6 521	6 641	10 463	3 519
of which: Re-exports	4 284	4 739	4 345	1 997	2 528
Scrap	3 745	1 710	5 475	1 602	7 876
Syria					
Scrap	5 217	2 190	897	—	...
Taiwan					
Pig-iron	527	331	761	713	246
Ferro-chrome	582	1 925	691	—	—
Ferro-manganese	3 516	7 343	9 107	2 028	3 175
Ferro-silicon	12 481	10 415	7 910	764	508
Other ferro-alloys	2 827	1 245	5 574	5 790	3 088
Ingots, blooms, billets	183 208	408 464	120 237	204 568	294 275
Scrap	156 390	73 465	12 863	128 251	402 215

Exports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Australia					
Pig-iron	710 514	642 510	514 898	158 262	...
Ferro-alloys	33 743	49 804	30 225	39 707	...
Ingots, blooms, billets	1 007 746	610 803	309 356	378 418	...
Scrap	515 804	610 351	749 203	665 067	...
Fiji					
Scrap	1 389	1 192	1 772	1 883	1 132
of which: Re-exports	1 303	415	858	1 164	—
New Caledonia					
Ferro-nickel	98 984	180 793	128 796	109 300	139 000
New Zealand (e)					
Scrap	1 391	1 519	2 159	2 152	2 759

Note: In this table the term 'ingots, blooms, billets' corresponds to items 672.4 and 5 of the Standard International Trade Classification (Revision 2) which includes those of alloy and high carbon steel

- (a) Excluding ships intended for breaking up
- (b) Figures may be incomplete as value only given in Israeli trade return for exports to some countries
- (c) Included with 'other ferro-alloys'
- (d) Years ended 31 March following that stated
- (e) Years ended 30 June of that stated
- (f) BGS estimates, based on known imports into certain countries

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Pig-iron	131 270	132 248	168 631	110 682	125 066
Sponge & powder	34 635	37 688	21 694	16 137	39 062
Ferro-chrome	48 460	75 400	42 927	62 901	72 198
Ferro-silico-chrome	2 529	2 004	435	104	102
Ferro-manganese	83 695	80 766	52 003	56 443	58 031
Ferro-silico-manganese	22 023	25 730	24 651	22 307	31 107
Ferro-molybdenum	779	766	597	825	608
Ferro-nickel	15 406	18 854	2 449	6 128	9 564
Ferro-niobium	724	830	744	756	719
Ferro-silicon	95 458	115 257	68 997	75 454	75 484
Ferro-titanium	349	355	174	58	173
Ferro-tungsten	249	282	124	83	103
Ferro-vanadium	445	544	483	868	593
Other ferro-alloys	13 866	14 772	10 630	9 800	9 575
Ingots, blooms, billets	254 811	337 206	350 357	332 649	290 665
Scrap (a)	43 104	35 247	26 452	20 760	37 317
Belgium-Luxembourg					
Pig-iron	119 227	104 925	97 605	91 522	90 715
Spiegeleisen	407	173	892	166	259
Sponge & powder	1 329	2 967	14 035	1 595	2 618
Ferro-aluminium, ferro-silico- aluminium & ferro-silico- mangano-aluminium	1 546	2 508	1 555	1 239	949
Ferro-chrome	24 205	31 031	27 588	25 474	26 231
Ferro-silico-chrome	965	3 927	1 340	1 527	1 229
Ferro-manganese	77 262	84 315	71 291	91 262	54 012
Ferro-silico-manganese	18 854	22 336	23 454	19 956	19 609
Ferro-molybdenum	269	359	260	446	254
Ferro-nickel	2 566	7 602	2 660	3 226	3 316
Ferro-silicon	35 587	38 237	32 584	38 202	33 831
Ferro-titanium & ferro- silico-titanium	314	264	219	225	257
Ferro-tungsten & ferro- silico-tungsten	149	33	15	21	7
Ferro-vanadium	100	190	121	125	60
Other ferro-alloys	1 877	1 895	1 655	1 679	1 127
Ingots, blooms, billets	683 683	685 017	665 631	443 721	333 886
Scrap	979 683	970 474	859 319	955 710	887 417
Denmark					
Pig-iron	19 184	21 647	36 649	48 574	62 751
Sponge & powder	940	537	1 677	484	503
Ferro-aluminium, ferro-silico- aluminium & ferro-silico- mangano-aluminium	2 828	2 908	2 844	1 473	1 618
Ferro-chrome & ferro- silico-chrome	1 152	1 431	1 198	380	370
Ferro-manganese	9 995	7 254	6 258	3 708	3 091
Ferro-silico-manganese	2 952	3 984	2 534	1 891	2 892
Ferro-molybdenum	18	16	16	20	13
Ferro-silicon	5 142	5 334	4 673	3 114	3 500
Other ferro-alloys	1 109	143	63	112	98
Ingots, blooms, billets	10 397	9 702	82 652	65 271	6 347
Scrap	262 825	284 249	216 791	180 402	87 494

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
France					
Pig-iron	407 362	446 367	450 491	405 921	370 359
Spiegeleisen	76	90	1 137	56	1 080
Sponge & powder	12 781	23 656	47 475	21 208	16 913
Ferro-aluminium, ferro-silico- aluminium & ferro-silico- mangano-aluminium	44	127	134	62	123
Ferro-chrome	47 484	64 959	113 914	113 284	119 203
Ferro-silico-chrome	5	193	334	157	1 635
Ferro-manganese	30 114	48 592	48 575	33 820	29 374
Ferro-silico-manganese	12 779	29 489	33 778	34 275	30 942
Ferro-molybdenum	1 145	1 272	1 471	1 630	1 269
Ferro-nickel	72 364	159 817	115 864	83 279	73 555
Ferro-silicon	12 308	11 132	20 647	28 720	29 075
Ferro-silico-magnesium	63	298	332	191	164
Ferro-titanium & ferro- silico-titanium	425	356	265	436	817
Ferro-tungsten & ferro- silico-tungsten	95	116	116	90	166
Ferro-vanadium	340	316	449	683	636
Other ferro-alloys	1 451	1 450	1 397	1 710	1 340
Ingots, blooms, billets	1 013 801	1 252 259	999 268	628 525	831 521
Scrap	393 803	422 289	455 082	346 541	273 020
Germany, Federal Republic of					
Pig-iron	304 860	283 062	257 772	221 784	223 125
Spiegeleisen	37	17	99	—	—
Sponge & powder	16 581	39 104	39 341	17 345	19 107
Ferro-aluminium, ferro-silico- aluminium & ferro-silico- mangano-aluminium	141	323	266	210	268
Ferro-chrome	194 540	230 591	301 020	148 161	221 879
Ferro-silico-chrome	5 491	11 472	12 844	12 870	7 570
Ferro-manganese	160 026	153 788	136 651	103 111	96 809
Ferro-silico-manganese	101 215	120 570	129 854	121 177	110 704
Ferro-molybdenum	3 140	3 393	4 863	5 111	4 317
Ferro-nickel	60 668	71 060	71 714	64 805	33 358
Ferro-niobium	2 082	3 346	2 363	3 172	2 836
Ferro-silicon	159 410	190 882	221 465	146 695	198 505
Ferro-titanium & ferro- silico-titanium	3 952	3 573	2 947	3 199	3 359
Ferro-tungsten & ferro- silico-tungsten	499	253	553	411	228
Ferro-vanadium	1 961	2 206	1 199	1 698	1 577
Other ferro-alloys	4 932	4 982	4 042	6 714	4 299
Ingots, blooms, billets	1 384 230	1 251 752	913 601	1 048 650	793 435
Scrap	1 546 633	1 618 396	1 517 824	1 343 331	1 296 305
Greece					
Pig-iron	15 275	15 014	9 511	16 163	13 952
Ferro-manganese	2 054	2 843	2 673	2 628	4 552
Ferro-silico-manganese	5 634	7 850	8 693	...	(d)
Ferro-silicon	2 534	4 263	2 488	3 892	2 425
Other ferro-alloys	361	275	118	186	8 497
Ingots, blooms, billets	298 630	128 907	260 064	32 939	119 678
Scrap	198 132	231 285	239 004	288 145	433 779
Irish Republic					
Pig-iron	1 345	1 352	907	809	768
Ferro-alloys	1 594	1 051	651	1 038	827
Ingots, blooms, billets	1 389	4 730	10 352	1 521	861
Scrap	9 051	5 428	7 926	3 845	2 424

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Italy					
Pig-iron	386 800	513 962	665 678	282 477	345 175
Spiegeleisen	413	3 237	4 190	2 101	860
Sponge & powder	57 947	97 080	53 169	52 025	53 991
Ferro-aluminium, ferro-silico- aluminium & ferro-silico- mangano-aluminium	1 297	2 140	2 389	1 284	1 847
Ferro-chrome	84 085	94 329	86 905	73 434	85 215
Ferro-silico-chrome	4 243	5 242	4 491	1 960	2 497
Ferro-silico-magnesium	2 008	1 796	1 630	1 591	933
Ferro-manganese	106 151	121 808	120 184	99 488	114 113
Ferro-silico-manganese	28 553	30 807	35 837	28 784	34 701
Ferro-molybdenum	1 175	1 045	694	798	1 355
Ferro-nickel	14 562	21 905	18 259	11 671	15 331
Ferro-niobium	1 125	1 882	2 783	2 101	2 483
Ferro-silicon	47 099	57 019	52 901	55 103	54 864
Ferro-titanium & ferro- silico-titanium	1 254	1 290	776	591	630
Ferro-tungsten & ferro- silico-tungsten	53	117	233	80	48
Ferro-vanadium	661	930	822	622	691
Other ferro-alloys	989	1 601	2 093	762	1 961
Ingots, blooms, billets	499 713	871 468	1 063 357	590 751	612 089
Scrap	6 566 082	6 891 233	7 413 441	5 539 587	5 571 298
Netherlands					
Pig-iron	41 252	64 769	54 797	32 322	34 620
Sponge & powder	2 803	3 755	3 273	3 066	3 270
Ferro-aluminium, ferro-silico- aluminium & ferro-silico- mangano-aluminium	27	12	19	22	92
Ferro-chrome	10 709	2 983	9 028	19 889	16 206
Ferro-silico-chrome	76	450	433	99	43
Ferro-manganese	25 576	26 526	19 031	16 902	18 916
Ferro-silico-manganese	4 163	4 094	6 536	3 606	7 463
Ferro-molybdenum	91	122	127	126	47
Ferro-silicon	7 731	8 898	9 877	7 884	6 609
Ferro-titanium & ferro- silico-titanium	83	62	137	159	74
Ferro-tungsten & ferro- silico-tungsten	0	25	3	12	1
Ferro-vanadium	9	96	30	43	84
Other ferro-alloys	316	406	853	523	981
Ingots, blooms, billets	229 725	254 712	169 594	117 001	286 994
Scrap	166 358	125 018	153 115	236 806	221 641
Albania					
Ferro-alloys (g)	* 500	* 4 500	* 4 600	* 4 600	* 2 000
Austria					
Pig-iron	136 317	87 402	91 133	77 097	69 481
Spiegeleisen	85	108	92	—	—
Sponge & powder	6 153	5 566	10 373	3 447	6 607
Ferro-chrome	26 085	28 520	24 578	16 827	23 625
Ferro-manganese	20 525	26 275	23 070	21 804	24 467
Ferro-molybdenum	145	255	109	31	59
Ferro-niobium & ferro- niobio-tantalum	245	396	202	336	346
Ferro-silicon	15 411	16 046	14 020	13 368	14 413
Ferro-titanium	385	523	414	506	502
Ferro-tungsten	424	88	64	98	8
Ferro-vanadium	284	245	207	170	157
Other ferro-alloys	12 817	15 715	11 810	10 220	8 075
Ingots & blooms	305 990	141 548	141 810	108 583	81 100
Scrap	115 474	134 169	143 216	169 751	380 562
Bulgaria					
Pig-iron	409 762	356 444	413 478	434 601	400 000
Ingots, blooms, billets	* 401 000	* 386 000	* 595 000	* 708 000	* 675 000
Czechoslovakia					
Pig-iron	919 000	732 000	809 000	843 000	901 000
Ingots, blooms, billets	* 98 000	* 152 000	* 36 000	* 20 000	* 16 000
Scrap (g)	* 146 000	* 150 000	* 228 000	* 252 000	* 74 000

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Finland					
Pig-iron	2 212	14 364	36 881	19 727	17 823
Sponge & powder	1 878	1 877	4 285	1 737	1 336
Ferro-chrome & ferro-silico-chrome	2 556	1 889	4 698	2 592	1 233
Ferro-manganese	2 955	4 272	3 881	3 606	5 465
Ferro-silico-manganese	12 924	16 049	17 148	13 873	17 999
Ferro-molybdenum	170	294	375	287	186
Ferro-silicon	8 728	10 492	10 125	9 195	8 838
Ferro-titanium	201	201	239	272	178
Ferro-vanadium	83	104	78	104	76
Other ferro-alloys	5 416	14 134	1 171	7 210	8 999
Blooms & billets	13 639	1 814	5 914	5 241	4 970
Scrap	22 832	88 213	104 581	62 095	50 594
German Democratic Republic					
Pig-iron	773 900	654 000	675 900	646 500	821 400
Ferro-alloys	22 000	44 000	66 000	74 000	78 000
Ingots, blooms, billets	1 911 000	2 057 000	2 142 000	2 312 000	2 320 000
Scrap	546 000	708 000	908 000	693 000	455 000
Hungary					
Pig-iron	251 068	223 978	255 823	289 546	234 024
Ferro-chrome	6 602	8 861	7 662	6 547	7 540
Ferro-manganese	40 136	46 084	62 023	44 431	45 008
Ferro-molybdenum	198	322	397	548	(d)
Ferro-silicon	6 530	6 525	6 556	6 863	7 783
Other ferro-alloys	17 732	13 682	10 818	15 237	12 347
Ingots, blooms, billets	13 351	7 101	7 083	2 956	...
Malta					
Ingots, blooms, billets	4 194	4 531	5 552	3 734	5 852
Norway					
Pig-iron	6 362	8 916	10 835	11 712	7 611
Ferro-silicon	14	51	1 157	2 460	2 961
Other ferro-alloys	1 251	2 588	768	646	237
Ingots, blooms, billets	2 135	18 079	36 975	3 392	9 800
Scrap	10 064	6 418	52 925	23 571	4 950
Poland					
Pig-iron & ferro-alloys	1 817 877	1 483 909	1 584 372	1 545 215	1 305 000
Scrap	9 000	32 000	20 000	51 339	4 497
Portugal					
Pig-iron	1 941	8 289	10 116	11 260	...
Ferro-manganese	2 210	122	154	111	...
Ferro-silico-manganese	1	88	35	(d)	...
Ferro-silicon	435	276	518	677	...
Other ferro-alloys	404	413	699	582	...
Ingots, blooms, billets	755	348	17 510	58 048	...
Scrap	663 603	145 809	150 265	84 536	...
Romania					
Pig-iron	526 600	573 300	634 000	286 000	280 000
Ferro-alloys	169 300	190 400	145 100	145 000	151 000
Ingots, blooms, billets	* 556 000	* 596 000	* 201 000	* 169 000	* 171 000
Soviet Union					
Pig-iron	* 200 000	* 200 000	* 200 000	* 200 000	* 200 000
Ferro-alloys	* 35 000	* 35 000	* 40 000	* 40 000	* 40 000

Imports of Iron, Steel and Ferro-alloys

Country	1978	1979	1980	1981	1982
Spain					
Pig-iron	33 783	44 312	53 163	41 502	...
Sponge & powder	4 026	133 854	116 714	117 548	...
Ferro-aluminium & ferro-silico-aluminium	0	22	—	1	...
Ferro-chrome	26 836	33 694	31 364	21 442	...
Ferro-silico-chrome	590	1 548	1 125	1 271	...
Ferro-manganese	188	192	4 326	508	...
Ferro-silico-manganese	44	55	267	104	...
Ferro-molybdenum	156	110	178	78	...
Ferro-nickel	2 392	6 114	3 085	3 563	...
Ferro-silicon	2 115	2 109	2 156	3 259	...
Ferro-titanium & ferro-silico-titanium	497	676	319	138	...
Ferro-tungsten & ferro-silico-tungsten	2	33	35	93	...
Ferro-vanadium	449	298	250	253	...
Other ferro-alloys	1 311	1 702	1 944	1 887	...
Ingots, blooms, billets	51 175	215 168	93 513	158 971	...
Scrap	1 949 810	2 927 406	3 907 449	3 894 493	...
Sweden					
Pig-iron	40 489	51 817	45 921	36 902	58 159
Sponge & powder	827	1 632	2 152	1 441	1 250
Ferro-chrome	29 482	39 070	27 798	23 246	39 820
Ferro-silico-chrome	2 937	4 224	3 638	634	2 396
Ferro-manganese	37 427	42 053	32 686	33 071	29 139
Ferro-silico-manganese	7 894	9 189	10 296	9 956	11 097
Ferro-molybdenum	1 953	1 810	1 691	1 199	1 243
Ferro-nickel	21 425	36 320	17 530	12 210	9 619
Ferro-niobium	226	286	184	214	255
Ferro-silicon	32 805	37 585	32 538	25 234	21 782
Ferro-titanium	2 044	1 880	1 909	1 130	1 735
Ferro-tungsten	217	504	453	398	134
Ferro-vanadium	940	808	920	781	846
Other ferro-alloys	554	1 388	1 252	529	687
Ingots, blooms, billets	87 501	83 718	108 268	105 402	115 784
Scrap	117 642	129 833	75 431	246 431	529 074
Switzerland					
Pig-iron	69 493	89 331	85 383	64 686	73 690
Sponge & powder	11 276	5 716	10 276	15 447	4 617
Ferro-aluminium	227	167	213	204	206
Ferro-silicon	3 962	6 717	6 715	5 538	4 726
Other ferro-alloys	14 583	17 411	14 825	11 271	11 744
Ingots, blooms, billets	21 906	24 920	73 897	42 034	32 512
Scrap	87 236	179 051	136 853	113 138	106 433
Turkey					
Pig-iron	5 416	16 316	8 315	22 663	50 889
Ferro-manganese	21 197	9 360	22 851	18 846	29 640
Ferro-silicon	7 124	6 267	6 422	9 530	) 9 538
Other ferro-alloys	272	177	384	835)
Ingots, blooms, billets	616 372	349 717	112 607	199 562	209 459
Scrap	323 024	362 300	346 455	525 054	748 280
Yugoslavia					
Pig-iron	71 612	99 495	46 554	70 917	82 387
Ferro-chrome	167	125	130	118	(d)
Ferro-manganese	815	902	903	539	425
Ferro-molybdenum	503	506	740	522)
Ferro-phosphorus	1 478	1 816	376	625)
Ferro-silicon	1 219	790	1 519	1 556	) 4 846
Ferro-tungsten	90	126	57	120)
Ferro-vanadium	329	184	224	287)
Other ferro-alloys	2 798	3 537	2 934	2 208)
Ingots, blooms, billets	607 575	551 816	456 789	439 896	318 341
Scrap	402 594	264 800	395 759	479 327	507 770

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Algeria					
Pig-iron	15 511	6 986	9 943	...	...
Ferro-manganese	501	1 960	2 528	...	...
Ferro-silico-manganese	87	343	410	...	...
Ferro-silicon	1 694	1 779	2 774	...	...
Other ferro-alloys	100	239	998	...	...
Ingots, blooms, billets	142 964	240 150	313 446	...	...
Cameroon					
Ingots & blooms	14 001	18 836	25 005	...	...
Egypt					
Pig-iron & spiegeleisen	28 518	11 406	5 660	30 706	...
Ferro-alloys	3 681	1 665	310	1 894	...
Ingots & billets	47 139	33 545	58 233	12 699	...
Scrap	41 679	15 829	37 095	13 804	...
Ethiopia					
Ingots, blooms, billets	7 164	6 795	3 697	7 844	...
Scrap	429	353	673	...	...
Ghana					
Pig-iron	123	...	...	...	...
Ferro-manganese	960	...	...	...	...
Other ferro-alloys	22	...	...	...	...
Scrap	2 528	...	...	...	...
Ivory Coast					
Ingots, blooms, billets	11 231	9 482	3 028	4 503	...
Kenya					
Pig-iron & ferro-alloys	1 063	289	1 445	720	...
Ingots & blooms	30 690	17 808	31 868	10 966	...
Libya					
Pig-iron & ferro-alloys (c)	139	33	8 672	...	...
Ingots, blooms, billets	7 954	5 872	16 778	...	...
Mauritius					
Pig-iron & ingots	18 884	19 057	15 286	10 773	...
Morocco					
Pig-iron	1 964	625	1 423	1 281	2 291
Ferro-chrome	26	20	66	82	21
Ferro-manganese	178	155	180	177	189
Ferro-silico-manganese	50	—	—	20	26
Ferro-silicon	73	124	142	73	116
Ingots, blooms, billets	17 432	19 462	13 046	12 233	17 596
Scrap	1 090	1	174	1 703	2 683
Nigeria					
Ferro-manganese	837	735	...	...	...
Ingots & blooms	91 514	82 209	...	...	...
Somalia					
Ingots, blooms, billets	1 405	3 851	3 073	...	...
South Africa					
Pig-iron	217	20 663	28 066	18 901	7 233
Ferro-chrome	3 187	9 232	6 973	6 027	7 627
Ferro-silicon	316	4 385	1 824	2 601	1 697
Other ferro-alloys	1 310	986	2 251	1 268	1 195
Ingots & blooms	7 994	5 839	6 831	14 526	39 044
Scrap	16 345	7 910	27 922	12 462	26 846
Sudan					
Ingots, blooms, billets	7 472	9 361	6 150	3 965	...
Tanzania					
Pig-iron & ferro-alloys	920	1 958	1 244	1 307	...
Ingots & blooms	12 198	12 379	5 878	8 165	...
Tunisia					
Pig-iron	100	87	733	...	...
Ferro-alloys	1 455	2 117	785	...	...
Scrap	2 487	483	49	992	...
Zaire					
Ferro-alloys	404	450	209	* 100	...
Zambia					
Pig-iron	115	...	...	...	...
Ferro-alloys	8 568	...	...	...	...
Zimbabwe					
Ferro-chrome	1 108	1 234	1 833	2 249	...
Ferro-manganese	1 885	3 790	2 459	1 994	...

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Canada					
Pig-iron	2 556	9 913	2 075	6 964	2 262
Sponge & powder	8 031	9 876	8 676	9 770	6 257
Ferro-chrome	30 432	34 720	41 369	31 579	21 786
Ferro-manganese & spiegeleisen	26 812	83 699	26 704	36 657	25 087
Ferro-silico-manganese & silico-spiegeleisen	15 842	21 876	20 901	12 669	2 877
Ferro-silicon	10 487	19 855	18 508	18 630	9 860
Ferro-tungsten	74	27	7	5	5
Ferro-vanadium	151	349	520	562	241
Other ferro-alloys	17 364	6 707	10 506	17 804	4 806
Ingots, blooms, billets	54 305	177 450	104 647	167 066	16 323
Scrap	951 851	1 046 564	1 015 606	835 074	454 419
Costa Rica					
Ingots & blooms	36 368	25 515	25 051	17 433	21 134
Cuba					
Pig-iron	158 181	...	149 100	162 200	...
Dominican Republic					
Ferro-alloys	542	757	938	660	...
Ingots, blooms, billets	11 541	4 446	4 987	136	...
Scrap	17 026	13 566	29 566	27 048	...
El Salvador					
Ingots, blooms, billets	5 309	4 691	889	182	...
Scrap	12 122	28 091	4 611	7 660	...
Guatemala					
Ingots, blooms, billets	28 814	30 417	14 781	28 231	19 062
Haiti (i)					
Ingots, blooms, billets	8 293	10 716	10 215	19 553	5 915
Honduras					
Ingots & blooms	3 263	13 173	5 630	1 607	...
Jamaica					
Ingots & blooms	3 087	12 985	2 981	7 655	5 689
Mexico					
Pig-iron	46 472	49 995	98 335	...	...
Sponge & powder	7 503	21 651	38 259	...	...
Ferro-chrome	1 318)			
Ferro-manganese	1 749)			
Ferro-nickel	221)			
Ferro-silicon	4 576	) 12 964	11 296	...	...
Ferro-vanadium	118)			
Other ferro-alloys	1 357)			
Ingots, blooms, billets	38 660	86 363	381 637	684 152	...
Scrap	481 660	388 100	280 384	...	...
Panama					
Ingots, blooms, billets	9 092	15 437	22 938	21 337	14 657
Trinidad & Tobago					
Ingots, blooms, billets	10 135	7 852	16 139	8 094	...
USA					
Pig-iron	594 581	432 169	362 904	392 823	296 198
Sponge & powder	88 579	94 485	59 688	68 678	45 792
Ferro-chrome	282 461	219 504	269 634	406 547	128 740
Ferro-silico-chrome	500	38	4 610	15 712	2 688
Ferro-manganese	603 638	744 992	549 484	611 516	426 491
Ferro-silico-manganese	84 063	85 884	67 686	122 853	56 821
Ferro-molybdenum	165	73	21	533	778
Ferro-nickel	67 911	56 783	46 939	63 370	19 369
Ferro-niobium	2 902	3 849	4 130	4 234	2 183
Ferro-silicon	122 141	103 014	64 580	138 240	70 643
Ferro-titanium & ferro-silico-titanium	1 099	854	550	397	121
Ferro-tungsten & ferro-silico-tungsten	318	334	247	185	86
Ferro-vanadium	507	669	298	1 121	776
Ferro-zirconium	1 024	1 826	925	810	981
Ingots, blooms, billets	375 482	312 782	141 965	721 262	650 078
Scrap	720 263	689 720	506 353	507 770	429 207

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Argentina					
Pig-iron	39 580	185 483	152 609	...	...
Ferro-chrome	2 315	1 983	2 270	...	...
Ferro-manganese	396	508	2 193	...	...
Ferro-molybdenum	49	44	7	...	...
Ferro-silicon	46	109	156	...	...
Ferro-titanium	31	49	347	...	...
Other ferro-alloys	499	377	760	...	...
Blooms & billets	72 518	82 230	185 857	...	...
Scrap	16 391	6 399	1 574	...	...
Brazil					
Sponge & powder	6 997	7 237	11 676	80 672	57 931
Ferro-chrome	1 331	407	220	564	881
Ferro-silico-chrome	548	64	254	224	255
Ferro-silicon	1 087	647	1 214	862	8
Other ferro-alloys	138	438	815	4 516	83
Ingots, blooms, billets	10 329	49 321	20 069	291 728	190 184
Scrap	29	30	21 909	6 828	7 185
Chile					
Ferro-chrome	808	...	...	...	...
Ferro-silicon	284	...	...	...	...
Scrap	7 358	...	...	...	...
Colombia					
Ferro-chrome	86	435	156	466	189
Ferro-manganese	2 666	4 483	6 564	2 500	2 500
Ferro-silico-manganese	659	1 474	1 255	620	1 462
Ferro-silicon	1 587	1 993	2 310	1 676	1 506
Other ferro-alloys	213	169	232	163	434
Ingots, blooms, billets	17 241	38 112	25 993	37 279	26 507
Scrap	20 513	23 096	13 926	29 968	26 982
Ecuador					
Ingots, blooms, billets	90 004	97 652	148 861	...	...
Peru					
Ferro-chrome	288	503	206	144	146
Ferro-manganese	2 145	5 190	3 289	1 758	2 087
Ferro-silico-manganese	—	22	1 497	67	1 031
Ferro-silicon	306	581	1 037	733	354
Ingots, blooms, billets	16 867	34	25 618	26 130	6 662
Scrap	—	9 968	32 610	7 046	16 236
Uruguay					
Ferro-alloys	233	461	253	143	249
Ingots, blooms, billets	22 580	58 966	38 583	32 903	16 593
Venezuela					
Pig-iron	33 170	4 938	2 731	67	...
Ferro-manganese	3 918	17 133	35 333	16 497	...
Ferro-silico-manganese	973	12 203	)	...	...
Ferro-silicon	127	2 024	) 8 787	4 272	...
Other ferro-alloys	1 034	770	)	...	...
Ingots, blooms, billets	314 882	147 449	236 219	...	...
Scrap	4 629	45 307	32 473	50 328	...
China					
Pig-iron & ferro-alloys (g)	* 727 000	* 724 000	* 406 000	* 87 000	...
Scrap (g)	* 4 500	* 5 000	* 2 000	* 2 000	* 2 200
Cyprus					
Pig-iron	1 717	1 000	—	4 198	...
Hong Kong					
Pig-iron	15 411	18 120	18 711	22 509	12 425
Ferro-manganese	3	234	3	511	1 976
Other ferro-alloys	1 207	3 011	1 920	3 034	3 614
Ingots, blooms, billets	183 770	257 273	156 083	127 018	91 326
Scrap	126 132	105 260	87 326	94 411	64 112

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
India					
Ferro-chrome	56	35	1 210	...	...
Ferro-manganese	...	41	224	...	...
Ferro-molybdenum	107	409	960	...	...
Ferro-nickel	4 084	1 893	2 827	...	...
Ferro-phosphorus	93	40	94	...	...
Ferro-silicon	70	198	1 827	...	...
Other ferro-alloys	121	123	1 109	...	...
Ingots, blooms, billets (e)	3 005	153 947	50 929	...	...
Scrap	109 326	144 697	125 842	...	...
Indonesia					
Pig-iron	32 429	42 253	34 963	73 157	83 249
Ferro-manganese	2 594	4 238	3 142	2 744	5 680
Other ferro-alloys	1 578	2 828	12 303	3 486	7 836
Ingots, blooms, billets	198 557	276 216	468 238	496 556	220 468
Scrap	80 690	29 770	39 009	34 399	57 072
Iran (f)					
Pig-iron	* 14 100	* 400	* 600	...	...
Ferro-alloys	1 222	2 214	2 614	1 949	...
Ingots, blooms, billets	420 164	315 054	94 537	136 961	...
Israel (b)					
Pig-iron	260	611	352	594	...
Spiegeleisen	—	29	—	336	...
Ferro-manganese	236	630	667	469	...
Other ferro-alloys	1 156	1 032	690	1 333	...
Ingots, blooms, billets	62 063	64 403	6 199	23 713	67 631
Scrap	...	5 006	20 501	26 635	12 188
Japan					
Pig-iron	639 506	550 584	738 528	1 068 400	1 337 082
Sponge & powder	6 276	12 789	42 231	17 092	43 955
Ferro-chrome	168 597	250 317	257 157	189 928	214 313
Ferro-silico-chrome	5 951	23 046	23 210	9 764	6 662
Ferro-manganese	17 017	18 758	2 662	6 505	11 965
Ferro-molybdenum	651	547	448	266	374
Ferro-nickel	20 485	33 152	31 119	26 493	29 758
Ferro-niobium	1 177	1 989	1 419	1 586	2 326
Ferro-silicon	100 316	133 494	122 012	196 487	237 541
Ferro-tungsten	118	483	186	45	72
Ferro-vanadium	1 692	1 265	306	830	698
Other ferro-alloys	45 185	40 745	38 774	71 120	80 312
Ingots, blooms, billets	119 277	534 398	448 961	195 666	96 483
Scrap	3 229 156	3 345 998	2 986 171	1 790 950	2 025 440
Jordan					
Pig-iron	5 601	16 614	17 787	20 443	65 131
Ingots, blooms, billets	55 642	68 872	59 270	123 785	111 816
Korea, Republic of					
Pig-iron	...	79 917	16 971	63 914	72 399
Sponge & powder	...	1 851	6 000	1 922	2 056
Ferro-chrome	...	3 339	2 550	1 340	3 821
Ferro-manganese	...	2 583	857	4 625	5 812
Ferro-silicon	...	678	1 989	4 024	3 868
Other ferro-alloys	...	1 415	1 337	1 141	1 237
Ingots & blooms	...	273 342	74 693	116 980	126 024
Scrap	...	1 579 761	1 932 127	2 310 403	1 808 880
Kuwait					
Scrap	609	...	1 182	1 595	...
Malaysia					
Pig-iron	6 959	16 235	13 972	...	...
Ferro-manganese	2 661	4 073	3 794	...	...
Other ferro-alloys	829	757	1 885	...	...
Ingots, blooms, billets	91 624	150 773	233 020	...	...
Scrap	7 552	6 345	4 162	...	...
Pakistan (h)					
Scrap	210 623	113 570	213 243	572 661	219 419

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Philippines					
Pig-iron	35 133	44 560	19 939	1 241	3 014
Ferro-manganese	2 936	5 537	3 214	1 079	2 167
Ferro-silicon	262	177	697	496	718
Other ferro-alloys	694	1 279	969	629	586
Ingots, blooms, billets	276 083	440 452	292 534	293 801	488 516
Scrap	79 282	95 465	8 966	8 789	25 031
Qatar					
Scrap	96 427	130 827	129 875	244 760	...
Saudi Arabia					
Pig-iron	)	47 061	36 314	14 228	39 041
Sponge & powder	) 12 059	3 913	8 741	14 381	48 931
Ferro-alloys	)	1 178	11 680	346	356
Ingots, blooms, billets	17 086	288 807	82 618	79 765	132 218
Scrap	757	38 741	1 198	424	1 278
Singapore					
Pig-iron	55 807	79 861	31 490	61 245	101 222
Ferro-manganese	2 143	6 328	3 534	505	3 611
Ferro-silicon	—	858	1 298	2 113	1 662
Other ferro-alloys	3 920	551	3 580	6 957	5 612
Ingots & blooms	63 452	109 520	96 126	43 599	200 469
Scrap	92 940	109 055	172 028	78 214	93 028
Sri Lanka					
Ingots, blooms, billets	25 243	58 920	56 745	24 004	9 293
Syria					
Pig-iron	5 494	4 272	7 411	5 389	...
Ingots, blooms, billets	75 359	160 756	94 125	60 969	...
Scrap	3 020	5 436	8 603	17 313	...
Taiwan					
Pig-iron	68 686	65 416	152 464	173 185	142 036
Sponge & powder	2 726	7 569	9 962	10 921	3 753
Ferro-chrome	1 204	2 887	556	785	335
Ferro-manganese	633	859	799	591	2 615
Ferro-silicon	206	335	669	1 378	2 142
Other ferro-alloys	584	848	902	670	374
Ingots, blooms, billets	26 673	70 440	266 435	71 727	136 155
Scrap	622 219	760 688	1 232 365	880 789	650 988
Thailand					
Pig-iron	50	22 460	4 621	26 783	14 103
Ferro-manganese	2 356	2 468	3 933	2 874	2 973
Ferro-silicon	2 052	3 311	3 392	3 303	3 003
Other ferro-alloys	271	776	1 241	2 170	625
Ingots, blooms, billets	4 272	13 992	44 270	58 003	23 045
Scrap	801 963	614 808	337 670	417 183	389 928
Australia					
Ferro-chrome	18 730	13 826	16 044	7 189)
Ferro-manganese (c)	5 460	16 985	7 203	3 916)
Ferro-silico-manganese	414	489	532	(d))
Ferro-molybdenum	191	220	283	171)
Ferro-nickel	—	55	430	1 637	) 18 557
Ferro-silicon	3 244	7 149	14 598	9 736)
Other ferro-alloys	1 475	4 379	2 551	7 528)
Ingots & billets	469	15 801	36 157	1 255)
Scrap (h)	659	1 049	1 255	853	...

Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1978	1979	1980	1981	1982
Fiji					
Ingots, blooms, billets	12 966	9 022	11 213	8 413	9 109
New Zealand (h)					
Pig-iron	891	803	841	444	268
Spiegeleisen	183	108	—	—	—
Ferro-manganese	1 681	1 617	1 570	585	957
Other ferro-alloys	1 779	2 458	3 012	2 835	2 754
Ingots, blooms, billets	4 938	8 798	4 307	3 782	5 897
Scrap	16 962	1 475	938	1 937	6 599
Solomon Islands					
Billets & blooms	1 446	1 521	2 289	...	...

Note: In this table the term 'ingots, blooms, billets' corresponds to items 672.4 and 5 of the Standard International Trade Classification (Revision 2) which includes those of alloy and high carbon steel

- (a) Excluding ships intended for breaking up
- (b) Figures may be incomplete as value only given in Israeli trade return for imports from some countries
- (c) Including powder
- (d) Included with 'other ferro-alloys'
- (e) Years ended 31 March following that stated
- (f) Years ended 20 March following that stated
- (g) BGS estimates, based on known exports from certain countries
- (h) Years ended 30 June of that stated
- (i) Years ended 30 September of that stated

Production of Kaolin

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom (a)	2 859 000	3 102 000	2 839 000	2 629 000	2 421 000
Belgium	* 120 000	* 120 000	* 120 000	* 120 000	* 120 000
France	(b) 265 000	(b) 315 000	(b) 338 000	402 700	347 000
Germany, Federal Republic of (g)	413 000	432 000	367 000	371 000	377 000
Greece	64 933	40 437	50 259	45 467	55 539
Italy	69 075	67 194	66 711	74 084	53 495
Austria (a)	69 503	78 553	83 882	79 214	77 286
Bulgaria	199 000	202 000	208 000	221 000	225 000
Czechoslovakia (c)	499 000	513 000	518 000	508 000	527 000
Hungary (c)	75 000	71 000	59 000	60 000	52 240
Poland	38 600	42 900	51 026	43 207	52 128
Portugal	73 555	80 039	83 145	107 968	63 031
Romania	* 90 000	* 90 000	* 90 000	* 90 000	* 90 000
Soviet Union	* 2 400 000	* 2 500 000	* 2 500 000	* 2 500 000	* 2 500 000
Spain (h)	193 136	204 106	181 116	189 990	* 200 000
Sweden (h)(i)	344	327	357	289	...
Turkey	43 685	70 584	60 263	44 795	37 841
Yugoslavia	180 079	177 958	197 124	224 797	220 000
Algeria	17 423	18 100	* 18 000	* 19 000	* 15 000
Burundi	* 2 750	* 2 000	* 2 000	4 180	* 4 000
Egypt	55 577	46 544	41 227	32 113	82 410
Ethiopia	31 750	30 000	55 235	9 000	* 20 000
Kenya	2 676	530	1 487	301	1 077
Madagascar	2 596	1 899	2 858	1 746	* 1 500
Nigeria	1 819	620	940	765	560
South Africa	122 024	148 740	141 509	150 003	129 368
Tanzania	7 345	12 468	7 434	5 400	...
Zimbabwe	1 017	2 686	4 450	4 657	2 441
Mexico	179 500	76 944	271 041	207 824	186 000
USA (e)	6 326 085	7 040 299	7 147 703	6 949 472	5 771 694
Argentina	45 940	132 107	91 417	67 000	76 000
Brazil	294 457	349 446	410 197	469 757	418 222
Chile	48 117	59 222	59 452	56 778	* 55 000
Ecuador	4 613	5 000	4 000	3 000	4 104
Paraguay	* 35 000	* 40 000	* 50 000	* 70 000	* 55 000
Peru	3 752	4 052	5 500	* 6 000	* 6 000
Venezuela	36 000	30 000	11 000	* 65 000	* 65 000
Bangladesh (d)	5 778	7 305	7 046	5 005	5 443
Hong Kong	25 046	2 841	748	2 040	286
India (c)	418 000	495 000	460 000	505 745	558 000
Indonesia	37 400	58 539	75 558	80 000	* 80 000
Iran	* 180 000	* 160 000	* 150 000	* 100 000	* 110 000
Israel	6 350	22 317	9 495	37 299	* 35 000
Japan	227 895	161 739	169 748	153 544	* 150 000
Jordan	10 000	25 000	25 147	10 439	14 565
Korea, Republic of	366 370	374 423	272 944	223 424	174 918
Malaysia	31 174	32 934	46 324	44 084	44 363
Pakistan	1 992	14 522	27 162	40 934	* 40 000
Sri Lanka	5 512	5 870	6 614	7 292	* 7 000
Taiwan	66 180	85 041	79 802	90 836	87 532
Thailand	33 764	42 769	19 934	14 086	17 846

Production of Kaolin

tonnes

Country	1978	1979	1980	1981	1982
Australia (c)(f)	89 200	145 326	219 070	170 472	* 180 000
New Zealand	33 471	25 590	46 112	49 307	23 957
World total	16 400 000	17 800 000	17 800 000	17 400 000	15 850 000

Note: In addition to the countries listed, China, Colombia, German Democratic Republic, Lebanon and Vietnam are also believed to produce kaolin

- (a) Sales
- (b) Including kaolinitic clay
- (c) Partly beneficiated material
- (d) Years ended 30 June of that stated
- (e) Sold or used by producers
- (f) White clays; including kaolin and ball clay
- (g) Washed and dried
- (h) Beneficiated
- (i) By-product, total production not reported

Exports of Kaolin

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	2 303 513	2 628 237	2 402 400	2 196 529	2 105 753
Belgium-Luxembourg	3 176	20 346	12 605	8 362	16 324
Denmark	937	1 553	990	732	644
France	121 325	154 671	181 593	167 284	139 029
Germany, Federal Republic of	102 600	114 578	102 005	92 602	91 488
Greece	13 171	13 878	16 486	10 819	11 812
Italy	42 544	29 447	30 013	20 562	23 860
Netherlands	84 085	88 931	79 203	81 526	94 327
Austria	21 271	25 269	29 075	24 987	27 863
Bulgaria (a)	* 13 900	* 12 800	* 10 700	* 8 100	...
Czechoslovakia	382 000	382 000	367 000	347 000	369 000
German Democratic Republic	87 413	106 356	133 984	15 883	146 062
Hungary	7 025	6 791	6 496	6 615	5 995
Soviet Union (a)	* 22 200	* 26 900	* 32 800	* 28 700	...
Spain	59 802	71 794	79 407	51 809	...
Sweden	131	376	886	560	403
Turkey	55	3 090	7 631	18 287	...
Yugoslavia	9 812	5 618	6 587	—	...
South Africa	988	1 263	1 798	1 346	1 387
USA	1 065 860	1 438 676	1 263 341	1 281 771	1 178 866
Argentina	75	374	133	...	...
Brazil	21 445	46 543	183 025	133 779	143 358
Suriname	2 500	2 500	...	...	...
Hong Kong	2 336	5 554	10 250	9 983	9 936
of which: Re-exports	6	3 182	9 750	9 677	9 346
India	4 112	3 430	...	...	...
Indonesia	2 558	1 574	5 313	9 310	2 063
Japan	2 470	2 328	4 522	2 502	2 785
Korea, Republic of	88 112	82 416	76 920	88 127	51 423
Malaysia	12 951	15 339	17 361	...	...
Singapore	1 539	1 613	1 941	1 840	2 797
of which: Re-exports	1 532	1 588	1 858	1 732	2 722

(a) BGS estimates, based on known imports into certain countries

Imports of Kaolin

Country	1978	1979	1980	1981	1982
United Kingdom	6 560	5 853	4 535	3 396	3 462
Belgium-Luxembourg	289 598	290 085	259 510	237 297	267 577
Denmark	33 464	40 598	38 428	35 912	37 452
France	306 755	332 710	338 622	280 343	303 345
Germany, Federal Republic of	751 596	842 984	859 571	834 114	851 426
Greece	51 104	64 194	104 756	56 790	43 753
Italy	673 576	767 543	791 218	646 354	599 598
Netherlands	393 188	438 693	469 562	403 112	415 497
Austria	102 546	111 887	107 643	110 763	94 299
Bulgaria (c)	* 1 200	* 1 300	* 1 500	* 1 600	* 2 300
Finland	330 644	419 969	390 021	365 051	370 054
German Democratic Republic	47 400	15 000	15 200	11 200	6 700
Hungary	34 563	41 685	34 903	30 868	37 772
Norway	79 369	83 765	80 144	67 529	71 914
Poland	185 221	218 032	151 252	139 000	...
Portugal	10 357	12 413	9 943	...	...
Spain	165 311	172 379	167 245	166 780	...
Sweden	257 343	291 381	273 914	283 762	297 476
Turkey	693	1 899	962	5 327	...
Yugoslavia	73 464	75 805	86 363	76 214	...
Algeria (d)	11 686	18 891	12 699	...	...
Ivory Coast	167	138	198	114	...
Morocco	2 119	2 601	3 455	5 398	8 133
Tunisia	(d) 15 034	(d) 21 450	7 129	...	...
Canada	181 887	273 422	254 387	231 755	205 952
Mexico	56 147	71 450	82 749	...	...
USA	11 607	28 537	14 362	12 357	8 554
Argentina	18 934	19 458	16 116	...	...
Brazil	2 453	3 307	3 614	2 935	2 045
Chile	1 617	...	...	...	...
Colombia	5 236	828	3 246	5 566	4 260
Peru	3 204	2 444	5 968	3 451	3 511
Uruguay	2 110	3 313	3 205	2 461	394
Venezuela	21 539	19 510	...	...	...
Hong Kong	387	5 086	22 078	28 501	25 336
India	65	73	186	...	...
Indonesia	8 247	11 429	13 318	13 688	13 218
Iran (a)	14 088	17 071	7 352	9 941	...
Japan	467 410	578 548	565 404	521 681	560 071
Korea, Republic of	...	18 414	19 557	46 292	129 624
Malaysia	2 942	1 864	919	...	...
Pakistan (b)	3 824	10 603	5 592	4 811	5 262
Philippines	9 107	9 441	9 023	7 872	7 530
Saudi Arabia	...	6 472	885	1 579	3 582
Singapore	4 802	5 983	5 286	6 573	8 635
Taiwan	42 171	40 425	66 753	54 261	52 357
Thailand	2 296	3 452	3 800	4 173	4 016
Australia	10 202	6 193	3 083	11 294	...
New Zealand (b)	2 345	956	1 280	615	669

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

(c) BGS estimates, based on known exports from certain countries

(d) Including bentonite

Lead

Mine Production of Lead

tonnes (metal content)

Country	1978	1979	1980	1981	1982
United Kingdom	4 582	4 701	3 600	6 965	3 993
France	35 500	29 531	28 847	19 186	9 538
Germany, Federal Republic of (a)	22 374	25 200	23 000	21 600	23 500
Greece	20 300	21 638	22 097	22 400	19 470
Irish Republic	47 744	69 000	58 000	29 000	39 000
Italy	27 308	28 100	23 600	21 300	16 300
Austria	5 524	5 214	5 475	5 683	5 574
Bulgaria	110 000	108 000	100 000	90 000	95 000
Czechoslovakia	* 4 700	* 3 400	2 904	2 675	2 649
Finland	1 300	1 920	1 779	1 580	1 882
Greenland	30 700	31 600	29 800	27 000	26 500
Hungary	1 023	965	1 064	937	600
Norway	3 076	2 996	2 469	2 973	3 620
Poland	63 000	57 000	47 500	44 200	45 300
Romania	* 33 500	* 33 500	* 23 000	* 20 000	* 27 000
Soviet Union	* 600 000	* 590 000	* 580 000	* 570 000	* 575 000
Spain	71 341	72 262	87 105	83 909	71 988
Sweden	83 496	81 626	72 132	88 103	80 800
Turkey	9 992	7 334	7 800	8 385	9 112
Yugoslavia	124 389	129 776	121 465	118 556	113 100
Algeria	1 500	3 700	2 700	5 100	6 000
Congo	4 200	7 000	7 000	7 682	4 000
Morocco	109 420	108 264	115 454	116 200	105 400
Namibia	38 600	41 000	47 700	46 500	34 900
Nigeria	118	* 100	* 100	* 200	* 200
South Africa	—	—	86 059	98 901	90 288
Tunisia	8 349	10 000	8 800	6 000	5 300
Zambia	15 803	17 554	14 131	18 018	23 198
Canada	365 782	341 777	296 641	332 045	341 212
Guatemala	(b) 119	100	100	100	* 100
Honduras	21 155	15 755	13 763	13 654	12 417
Mexico	170 533	173 455	145 549	157 384	145 844
USA (a)	529 661	525 569	550 366	445 535	512 425
Argentina	30 253	31 775	32 606	34 800	29 700
Bolivia	18 042	15 359	17 225	16 757	12 400
Brazil	21 203	27 927	27 849	28 440	19 360
Chile	431	252	461	223	1 489
Colombia	120	226	187	154	391
Peru (a)	182 700	174 000	176 955	192 700	205 000
Burma	9 200	14 500	5 900	4 900	9 100
China	* 150 000	* 155 000	* 160 000	* 160 000	* 160 000
India	13 076	14 403	14 433	15 200	14 000
Iran (c)	30 000	15 000	12 000	16 000	25 000
Japan	51 770	46 259	43 209	45 882	45 900
Korea, Dem. P.R. of	* 110 000	* 120 000	* 125 000	* 110 000	* 95 000
Korea, Republic of	16 100	11 073	11 406	13 635	12 166
Philippines	1 448	1 949	1 812	1 066	—
Thailand	1 678	8 719	10 560	17 273	18 580
Australia	400 291	421 581	397 491	388 122	455 338
World total	3 600 000	3 600 000	3 600 000	3 500 000	3 600 000

(a) Recoverable

(b) Smelter

(c) Years ended 20 March following that stated

Production of Refined Lead

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	345 788	368 330	324 790	333 361	306 194
Belgium (a)	125 040	113 412	127 908	109 932	99 720
Denmark (b)	20 576	25 166	23 018	24 030	15 927
France	208 200	219 712	218 831	227 998	208 550
Germany, Federal Republic of	369 000	373 300	350 300	348 300	350 500
Greece	22 600	22 000	21 067	20 900	3 200
Irish Republic	2 100	5 000	7 000	13 000	10 000
Italy	116 210	126 218	133 657	132 956	133 660
Netherlands	31 900	30 100	27 700	19 700	23 622
Austria	17 600	19 900	18 100	16 359	18 700
Bulgaria	* 125 000	* 120 000	* 118 000	* 123 000	* 118 000
Czechoslovakia	19 042	19 020	20 014	20 663	21 071
Finland	5 580	6 594	5 751	4 500	4 400
German Democratic Republic	* 45 000	* 42 000	* 42 000	* 48 000	* 50 000
Norway	951	418	284	161	100
Poland	86 700	84 200	82 000	69 000	78 800
Portugal	300	4 500	5 600	3 000	4 000
Romania	42 815	40 900	40 991	40 700	40 000
Soviet Union	* 770 000	* 780 000	* 780 000	* 800 000	* 800 000
Spain	122 200	127 000	120 700	117 200	131 600
Sweden	45 300	49 287	47 123	21 795	49 500
Switzerland	—	5 000	5 000	3 500	3 000
Turkey	3 567	5 900	2 800	2 500	3 100
Yugoslavia	116 703	111 040	101 751	86 401	81 248
Morocco	30 000	36 800	42 400	52 300	58 600
Namibia	39 500	41 700	42 700	41 700	40 600
Nigeria	—	1 500	2 000	2 000	2 000
South Africa	23 600	23 300	35 400	26 900	30 400
Tunisia	16 570	17 441	19 195	17 530	15 320
Zambia	12 701	12 758	10 047	9 866	14 645
Canada	245 900	252 400	234 580	238 108	238 882
Jamaica	* 2 000	* 2 000	* 2 000	* 1 000	* 1 000
Mexico	208 600	224 900	184 300	188 600	179 300
Trinidad & Tobago	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
USA	1 188 353	1 225 684	1 150 469	1 067 579	1 032 230
Argentina	31 800	33 600	41 700	34 600	30 600
Brazil	80 456	98 052	84 950	65 757	48 242
Colombia	* 2 000	* 2 500	* 3 000	* 3 000	* 3 000
Peru	79 300	90 700	87 300	84 200	82 000
Venezuela	9 000	10 000	10 000	10 000	* 10 000
Burma	4 873	6 237	6 014	4 068	7 829
China	* 160 000	* 170 000	* 175 000	* 175 000	* 175 000
India	21 000	20 946	25 581	25 406	23 200
Japan	291 100	282 700	304 941	317 017	302 200
Korea, Dem. P.R. of	* 75 000	* 70 000	* 65 000	* 65 000	* 60 000
Korea, Republic of	7 218	13 400	15 000	21 200	15 000
Malaysia	2 000	2 100	5 200	3 500	3 000
Philippines	3 500	1 900	4 800	4 000	6 000
Taiwan	14 000	20 000	16 800	30 000	35 000
Thailand	1 100	1 500	5 000	5 000	5 000
Australia	239 122	257 584	233 654	239 169	247 112
New Zealand	8 000	9 000	7 000	7 000	6 000
World total	5 400 000	5 600 000	5 400 000	5 300 000	5 200 000

Note: Figures relate to both primary and secondary refined lead and include the lead content of antimonial lead. Metal recovered from secondary materials by remelting alone is excluded

(a) Including alloys

(b) Sales

Lead

Exports of Lead

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates	6 860	5 187	3 535	2 378	2 496
Unwrought	105 195	125 081	127 930	104 513	94 800
Unwrought alloys	16 914	11 467	14 108	25 608	33 235
Scrap	16 615	32 369	30 662	18 221	22 607
Belgium-Luxembourg					
Ore	25	1 197	8 058	—	75
Unwrought	76 206	63 437	72 012	59 904	63 230
Unwrought alloys	9 782	10 743	12 250	10 675	11 418
Scrap	15 653	22 531	16 718	13 417	13 811
Denmark					
Ore	580	515	—	—	—
Unwrought	9 834	5 887	4 375	5 986	2 655
Unwrought alloys	8 127	9 302	10 723	8 822	7 289
Scrap	801	1 322	1 707	1 889	5 974
France					
Ore	40	34	69	140	44
Unwrought	34 959	40 647	42 618	45 841	41 083
Unwrought alloys	18 466	17 880	15 007	16 348	14 734
Scrap	32 661	30 191	7 851	10 635	8 928
Germany, Federal Republic of					
Ore	10	2 577	2 000	300	55
Unwrought	82 124	74 381	65 952	63 278	62 711
Unwrought alloys	24 686	33 050	32 810	33 084	37 911
Scrap	16 801	19 964	20 041	18 550	13 588
Greece					
Ore	47 795	55 610	39 124	21 580	28 700
Irish Republic					
Ores & concentrates	69 175	115 276	110 238	63 779	49 383
Unwrought (a)	3 231	3 196	1 857	3 612	1 715
Scrap	1 976	954	1 881	2 226	3 858
Italy					
Ore	19 207	19 359	21 353	17 319	21 549
Unwrought (a)	8 313	20 504	4 199	4 434	4 573
Scrap	95	257	21	180	496
Netherlands					
Unwrought	5 663	3 768	6 023	1 676	2 448
Unwrought alloys	16 059	14 939	13 673	12 090	11 697
Scrap	32 825	35 362	36 153	33 604	26 835
Austria					
Unwrought	673	413	391	334	837
Scrap	12	79	3	4	111
Bulgaria					
Unwrought (a)(f)	* 11 800	* 10 200	* 7 900	* 4 600	* 5 900
Czechoslovakia					
Ores & concentrates	* 7 100	3 700	2 800	...	...
Finland					
Ore	2 022	2 035	2 047	3 135	17
Unwrought (a)	808	992	869	853	1 088
Greenland					
Ores & concentrates	43 205	39 057	43 199	31 399	...
Norway					
Ore	4 432	6 293	3 754	5 161	7 449
Unwrought (a)	36	254	126	31	29
Scrap	6 303	7 598	8 753	8 020	6 507
Poland					
Unwrought	500	7 098	...	...	...
Portugal					
Ore	740	1 635	1 420	956	...
Unwrought (a)	504	13	5	19	...
Soviet Union					
Unwrought	* 95 000	* 95 000	* 100 000	* 100 000	* 100 000
Spain					
Ore	59	—	9 394	32 182	14 411
Unwrought (a)	10 548	19 644	7 632	21 003	32 986

Exports of Lead

Lead

tonnes

Country	1978	1979	1980	1981	1982
Sweden					
Ore	58 385	59 190	56 788	91 349	49 246
Unwrought	52 779	43 185	39 856	24 273	51 149
Unwrought alloys	1 555	1 735	2 754	2 084	3 264
Scrap	86	36	65	—	69
Switzerland					
Unwrought	2 796	4 874	4 063	4 847	5 101
Scrap	8 530	11 608	8 174	7 311	6 725
Turkey					
Ore (e)	—	—	4 275	—	) 2 022
Concentrates	—	—	—	—)
Yugoslavia					
Concentrates	39 893	13 496	10 070	12 864	9 113
Unwrought	41 015	33 852	24 322	13 583	) 18 921
Unwrought alloys	3 401	3 121	3 243	2 114)
Algeria					
Ore	1 000	3 720	4 556	...	...
Congo					
Ore	1 546	4 018	6 000	...	...
Ivory Coast					
Scrap	547	776	522	844	...
Kenya					
Scrap	360	392	—	—	...
Morocco					
Ore	119 614	118 540	111 637	89 735	61 930
Unwrought	21 335	34 250	32 806	42 488	51 908
Senegal					
Scrap	198	302	36	153	...
South Africa					
Concentrates (b)	—	—	64 922	93 945	101 141
Unwrought	39 000	26 000	24 000	22 300	22 500
Sudan					
Scrap	297	661	718	...	...
Tanzania					
Scrap	145	68	70	...	...
Tunisia					
Unwrought	12 153	11 116	11 943	10 821	14 800
Scrap	—	554	338	513	...
Zambia					
Unwrought	6 649	8 465	8 749	8 300	11 200
Canada					
Ore (b)	142 693	151 495	147 008	146 090	106 744
Unwrought	131 950	117 992	126 539	119 815	146 164
Scrap	17 636	21 882	21 106	9 919	15 895
Honduras					
Ores & concentrates (b)	14 319	19 804	12 185	11 909	8 111
Mexico					
Ores & concentrates	11 108	2 565	1 343	...	...
Unwrought	76 864	76 558	61 770	66 300	58 400
Nicaragua					
Ores & concentrates	1 915	39	...	...	...
Panama					
Unwrought (a)	500	688	428	410	520
USA					
Ores & concentrates (b)	54 231	33 090	38 021	33 050	29 105
Unwrought	2 145	6 587	148 355	14 485	47 374
Unwrought alloys	1 024	800	9 216	2 334	3 846
Scrap	98 687	119 854	119 759	59 454	52 269
Argentina					
Ores & concentrates	10 056	6 233	15 180	...	...
Bolivia					
Ore (b)	16 482	15 633	15 936	15 613	12 000
Colombia					
Ore	201	312	361	92	331

Lead

Exports of Lead

tonnes

Country	1978	1979	1980	1981	1982
Peru					
Ores & concentrates	147 262	139 409	156 720	* 100 000	* 90 000
Unwrought (a)	91 506	86 037	74 227	87 000	66 000
Burma (d)					
Unwrought	5 852	3 353	5 509	6 101	...
Hong Kong					
Scrap	1 122	1 482	1 891	2 522	2 291
Iran (c)					
Ore	15 952	25 898	15 538	7 906	...
Japan					
Ores & concentrates	9 312	8 266	6 139	7 810	4 807
Unwrought (a)	7 815	9 152	6 296	2 900	7 530
Scrap	1 425	6 178	3 711	690	—
Korea, Republic of					
Ore	10 685	6 600	4 000	8 400	800
Philippines					
Concentrates	2 268	5 574	3 232	1 801	—
Singapore					
Scrap	2 642	3 311	2 256	3 524	2 812
Taiwan					
Unwrought	4 577	10 421	11 370	14 078	14 790
Thailand					
Ore	2 500	16 796	21 653	37 460	37 636
Australia					
Ores & concentrates	137 160	63 530	58 449	63 233	84 475
Unwrought—					
Base bullion (b)	147 101	162 235	163 598	136 593	165 433
Refined	149 816	) 164 978	168 495	176 664	201 277
Alloys	9 463)			
Scrap	9 757	7 614	9 563	5 299	1 904

Note: In this table the term 'unwrought' lead corresponds to item 685.1 of the Standard International Trade Classification (Revision 2) and comprises base bullion, pigs, unwrought bars, etc

(a) Including alloys

(b) Pb content

(c) Years ended 20 March following that stated

(d) Years ended 31 March following that stated

(e) Complex lead-zinc ore

(f) BGS estimates, based on known imports into certain countries

Imports of Lead

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates (b)	42 932	67 812	56 060	59 832	39 216
Unwrought	191 480	199 805	199 516	159 393	169 653
Unwrought alloys	6 766	5 398	4 701	3 031	3 997
Scrap	2 598	9 081	10 571	754	953
Belgium-Luxembourg					
Ore	74 541	82 218	75 709	83 142	106 078
Unwrought	50 557	50 242	47 458	35 147	37 319
Unwrought alloys	5 837	7 558	6 828	6 087	6 572
Scrap	14 593	12 632	11 944	7 520	11 238
Denmark					
Unwrought	6 932	6 355	3 231	2 270	4 225
Unwrought alloys	349	2 522	3 292	1 322	3 246
Scrap	21 869	19 012	16 546	18 161	7 706
France					
Ore	134 738	134 824	139 029	142 392	167 556
Unwrought	34 048	45 749	47 455	33 848	35 113
Unwrought alloys	4 190	6 068	7 633	6 767	8 308
Scrap	17 246	26 411	31 187	21 058	19 836
Germany, Federal Republic of					
Ore	170 055	191 179	181 679	214 800	192 371
Unwrought	107 567	105 236	135 259	100 570	140 184
Unwrought alloys	23 535	23 797	25 390	15 219	13 793
Scrap	45 621	64 538	43 309	34 594	35 606
Greece					
Ore	...	3 468	7 022	...	39
Unwrought (a)	5 616	4 965	7 806	6 057	18 719
Irish Republic					
Unwrought (a)	4 443	4 007	3 352	1 389	1 478
Scrap	2 974	3 906	4 203	7 455	7 689
Italy					
Ore	18 589	48 761	44 264	26 213	275
Unwrought (a)	138 268	151 411	173 137	132 783	128 363
Scrap	38 275	48 707	44 139	15 268	24 626
Netherlands					
Unwrought	45 884	44 069	49 325	30 280	40 392
Unwrought alloys	14 034	12 004	13 295	11 112	6 668
Scrap	10 882	10 022	9 752	11 483	11 614
Austria					
Ore	4 258	6 193	4 156	1 728	6 993
Unwrought	24 510	29 539	32 396	35 740	32 549
Scrap	1 203	1 920	2 628	3 605	2 367
Bulgaria					
Ore (h)	* 5 000	* 21 000	* 24 500	* 17 000	* 13 200
Czechoslovakia					
Unwrought (a)	39 000	40 000	40 000	38 000	30 000
Finland					
Unwrought (a)	12 332	16 306	20 498	21 422	20 282
Hungary					
Unwrought & semi-manufactures	15 005	13 240	12 891	11 033	13 647
Iceland					
Unwrought	66	34	115	16	—
Norway					
Unwrought	7 430	7 065	8 430	6 571	6 189
Unwrought alloys	5 748	5 037	5 179	5 208	6 107
Poland					
Unwrought	9 579	9 805	6 654	3 060	6 500
Portugal					
Unwrought (a)	16 623	14 896	16 638	17 808	...
Scrap	82	91	1 050	20	...
Soviet Union					
Ore	47 695	(h)* 40 000	(h)* 35 400	(h)* 35 900	(h)* 15 000
Unwrought	* 60 000	* 80 000	* 80 000	* 80 000	* 80 000

Imports of Lead

tonnes

Country	1978	1979	1980	1981	1982
Spain					
Ore	33 344	15 155	28 081	28 190	66 107
Unwrought (a)	3 653	1 165	4 324	7 172	6 485
Scrap	4 024	286	129	1 908	368
Sweden					
Unwrought	426	1 186	590	7 118	1 717
Unwrought alloys	1 263	1 749	1 165	1 278	2 444
Scrap	5 045	6 988	3 984	4 342	5 040
Switzerland					
Unwrought	15 048	11 592	17 981	10 155	12 867
Turkey					
Unwrought (a)	3 328	2 921	5 451	5 358	3 828
Scrap	—	—	1 059	101	50
Yugoslavia					
Concentrates	1 923	1 978	2 731	1 023	...
Unwrought	8 188	9 521	10 060	12 117	15 623
Scrap	...	1 124	—	—	—
Algeria					
Unwrought	7 866	4 225	8 529	...	...
Unwrought alloys	1 540	975	314	...	...
Egypt					
Unwrought & scrap	15 955	4 803	9 106	7 106	...
Ghana					
Unwrought (a)	143	...	...	...	...
Kenya					
Unwrought (a)	878	272	162	198	...
Libya					
Unwrought	812	1 587	725	...	...
Madagascar					
Unwrought (a)	381	268	189	...	...
Mozambique					
Unwrought	...	...	225	...	...
Nigeria					
Unwrought (a)	694	303	...	...	...
South Africa					
Ore	—	—	950	17	—
Unwrought	5 662	3 365	9 303	9 405	3 976
Scrap	29 699	31 517	6 212	7 752	12 714
Sudan					
Unwrought	56	—	302	90	...
Tunisia					
Ore	1 456	8 277	9 985	19 400	...
Canada					
Unwrought	1 715	2 133	2 602	9 220	5 661
Costa Rica					
Unwrought (a)	232	118	177	...	...
El Salvador					
Unwrought (a)	128	350	47	44	...
Mexico					
Unwrought & scrap	286	385	1 264	...	...
Nicaragua					
Unwrought (a)	231	198	196	...	...
Trinidad & Tobago					
Unwrought (a)	563	282	175	198	...

Imports of Lead

Country	1978	1979	1980	1981	1982
USA					
Ores & concentrates (b)	52 984	39 998	44 095	58 545	35 807
Unwrought—					
Base bullion	4 362	1 709	315	449	19
Other	202 617	174 279	71 640	92 166	80 743
Alloys	21 451	20 238	11 693	11 570	12 001
Scrap	2 767	3 645	2 018	1 930	4 107
Argentina					
Unwrought	45	4 421	4 708	...	...
Brazil					
Ore	44 765	41 994	34 801	15 405	—
Unwrought (a)	754	602	12	151	611
Chile					
Unwrought (a)	1 746	...	...	...	...
Colombia					
Unwrought (a)	2 899	2 051	2 612	1 944	1 504
Uruguay					
Unwrought	1 586	3 094	2 663	1 619	966
Venezuela					
Unwrought (a)	2 430	843	5 006	6 697	...
Scrap	2 034	3 378	3 225	404	...
China					
Refined (f)	24 000	34 700	31 500	28 500	12 700
Hong Kong					
Unwrought (a)	1 190	1 902	2 065	1 460	2 026
Scrap	288	458	471	377	205
India					
Unwrought (c)	25 411	35 723	23 829	...	...
Unwrought alloys (c)	1 950	5 349	2 861	...	...
Indonesia					
Unwrought (a)	6 547	4 833	7 397	8 083	6 923
Iran (d)					
Unwrought	3 252	137	4 439	1 120	...
Israel (g)					
Unwrought	2 266	2 883	1 089	1 932	1 752
Japan					
Ore	222 447	218 544	258 634	255 765	225 654
Unwrought	50 923	50 372	73 129	57 464	52 442
Unwrought alloys	8 436	12 300	17 583	10 008	9 336
Scrap	6 704	2 023	5 020	2 668	2 762
Jordan					
Unwrought & scrap	3 786	1 481	2 028	1 377	1 078
Korea, Republic of					
Unwrought (a)	20 500	19 750	20 616	40 156	227 136
Scrap	...	29 437	23 387	4 301	5 704
Malaysia					
Unwrought (a)	3 671	5 367	6 174	...	...
Scrap	2 357	883	486	...	...
Philippines					
Unwrought (a)	7 698	7 649	5 422	7 019	6 323
Singapore					
Unwrought	4 560	(a) 4 373	(a) 8 095	(a) 3 900	(a) 3 163
Syria					
Unwrought & scrap	3 711	2 154	1 624	1 573	...

Lead

Imports of Lead

tonnes

Country	1978	1979	1980	1981	1982
Taiwan					
Unwrought (a)	8 686	8 856	10 777	7 419	8 805
Scrap	22 050	46 964	44 690	38 796	35 142
Thailand					
Unwrought	7 951	9 447	14 417	10 589	10 260
Unwrought alloys	1 508	1 389	2 363	2 060	981
New Zealand (e)					
Unwrought (a)	8 625	7 522	6 758	6 557	5 375

Note: In this table the term 'unwrought' lead corresponds to item 685.1 of the Standard International Trade Classification (Revision 2) and comprises base bullion, pigs, unwrought bars, etc

- (a) Including alloys
- (b) Pb content
- (c) Years ended 31 March following that stated
- (d) Years ended 20 March following that stated
- (e) Years ended 30 June of that stated
- (f) Imports from western countries only
- (g) Figures may be incomplete as value only given in Israeli trade return for imports from some countries
- (h) BGS estimates, based on known exports from certain countries

Production of Lithium Minerals

Country	1978	1979	1980	1981	1982
Portugal					
Lepidolite	1 200	1 200	1 200	1 200	* 800
Soviet Union	* 50 000	* 50 000	* 55 000	* 55 000	* 55 000
Namibia	...	...	* 3 000	* 3 000	...
Rwanda					
Amblygonite	* 28	* 28	* 30	* 25	* 30
Zimbabwe	16 688	13 197	21 030	16 444	9 786
USA (a)(b)	* 4 000	* 5 000	* 5 000	* 5 000	* 3 500
Argentina	803	106	80	25	* 20
Brazil					
Amblygonite	434	187	182	277	* 200
Lepidolite	320	58	51	2	* 50
Petalite	1 996	1 501	2 487	2 080	* 2 500
Spodumene	885	—	98	243	* 200
China	* 10 000	* 10 000	* 13 600	* 13 600	* 14 000
World total (a)	* 5 700	* 6 600	* 6 900	* 6 800	* 5 200

(a) Li content

(b) Mostly spodumene

Lithium

Exports of Lithium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal	1	0	0	3	17
Belgium-Luxembourg					
Oxides	20	8	20	54	67
France					
Oxides	70	75	52	47	105
Germany, Federal Republic of					
Metal	16	12	23	19	40
Oxides	557	717	859	490	510
Netherlands					
Oxides	221	302	34	70	188
South Africa					
Lithium minerals (a)	...	* 3 000	* 4 000	...	...
Zimbabwe					
Lithium minerals	16 427	13 432	18 373	16 163	9 739
USA					
Lithium minerals, compounds & metal (b)	* 1 800	* 2 200	* 2 300	* 2 400	* 2 100
Brazil					
Lithium minerals	—	1 075	2 000	2 204	2 805

(a) BGS estimates, based on known imports into certain countries

(b) Li content

Imports of Lithium

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal	2	3	5	...	...
Oxides	427	611	428	340	1 046
Belgium-Luxembourg					
Metal	10	6	1	7	16
Oxides	135	159	255	133	209
France					
Metal	19	4	27	6	8
Oxides	485	520	451	467	520
Germany, Federal Republic of					
Metal	17	9	8	7	14
Oxides	469	464	568	1 205	1 684
Italy					
Metal	26	0	9	1	0
Oxides	260	385	277	293	120
Netherlands					
Oxides	309	400	81	132	278
Spain					
Lithium minerals	313	416	366	...	...
Metal	—	49	1	0	...
Oxides	96	138	127	120	...
South Africa					
Lithium minerals	9 262	4 452	5 327	870	1 163
USA					
Lithium minerals	...	3 983	5 247	708	14
Brazil					
Oxides	316	356	280	416	220
Japan					
Metal	20	20	20	30	35
Oxides	479	780	603	631	670

Production of Magnesite

tonnes

Country	1978	1979	1980	1981	1982
Greece	1 058 211	1 677 666	1 500 454	961 682	967 106
Austria	982 320	1 103 649	1 318 156	1 158 852	1 031 404
Czechoslovakia	658 000	654 000	666 000	664 000	672 000
Poland	23 746	20 010	19 610	11 282	17 047
Soviet Union	* 1 900 000	* 1 950 000	* 2 000 000	* 2 100 000	* 2 150 000
Spain	306 548	381 867	505 532	476 392	* 450 000
Turkey	418 002	729 442	825 876	783 966	905 159
Yugoslavia	333 000	293 000	262 000	300 000	328 000
South Africa	37 407	65 336	78 808	56 557	31 927
Zimbabwe	65 756	84 495	78 217	60 194	60 660
Canada (b)	40 356	52 553	* 63 000	* 69 000	* 80 000
Brazil	217 270	265 671	315 851	285 792	221 874
Colombia	1 400	1 582	1 582	1 600	* 1 600
China	* 1 800 000	* 2 000 000	* 2 000 000	* 2 000 000	* 2 000 000
India	414 166	396 000	380 113	463 118	383 000
Iran (a)	* 5 000	* 5 000	* 4 000	* 4 000	* 4 000
Korea, Dem. P.R. of	* 1 600 000	* 1 800 000	* 1 900 000	* 1 900 000	* 1 900 000
Pakistan	* 1 852	2 728	778	1 551	* 1 600
Australia	21 350	29 301	32 198	26 445	* 26 200
New Zealand	840	—	—	308	0
World total	9 900 000	11 500 000	12 000 000	11 300 000	11 200 000

Note: In addition to the countries listed, Bulgaria, Egypt, Kenya, New Caledonia and USA are also believed to produce magnesite

(a) Years ended 20 March following that stated

(b) Officially described as magnesitic dolomite and brucite

Exports of Magnesite

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Crude	9 446	2 678	115	70	491
Calcined	10 412	5 777	4 850	7 261	30 532
Belgium-Luxembourg					
Crude	20	1 592	30 640	80	1 293
Calcined	3 514	3 070	3 769	1 418	1 536
France					
Crude	11	51	142	53	1 610
Calcined	1 679	514	1 153	1 363	662
Germany, Federal Republic of					
Crude	168	135	42	47	21
Calcined	16 259	13 314	11 367	22 879	17 093
Greece					
Crude	18 857	25 467	46 830	) 280 863	351 330
Calcined	348 099	448 054	374 335		
Irish Republic	51 146	35 901	73 395	77 361	70 861
Italy					
Crude	302	285	274	965	35 597
Calcined	57 404	49 336	49 737	58 296	1 907
Netherlands					
Crude	1 690	1 919	2 024	1 561	1 302
Calcined	33 554	32 334	28 601	26 169	28 001
Austria					
Crude	1 263	607	) 137 837	96 636	160 567
Calcined	108 274	111 414			
Czechoslovakia	382 000	377 000	385 000	305 000	303 000
Norway	18 210	17 534	17 120	19 247	12 865
Spain					
Crude & calcined	79 029	93 459	91 166	98 749	...
Sweden	138	520	225	169	266
Switzerland					
Calcined	60	32	35	7	24
Turkey					
Crude	12 650	2 360	4 520	16 169	) 135 733
Calcined	56 336	39 146	73 320	99 437	
Yugoslavia					
Calcined	31 342	28 325	24 321	29 360	24 524
South Africa (c)	£44 000	£302 000	£136 000	£35 000	£477 000
Zimbabwe	51 544	57 055	56 877	52 923	...
Brazil					
Calcined	56 219	104 399	88 847	106 189	78 849
China (a)	* 61 000	* 99 000	* 180 000	* 163 000	* 211 000
Hong Kong					
Crude & calcined (Re-exports)	1 213	1 320	5 074	8 988	10 977
India					
Crude	2 410	14	...	...	...
Calcined	8 742	5 415	...	...	...
Israel (b)	20 948	9 183	4 168	—	...
Japan	17	20	1 482	2 560	2 974
Korea, Dem. P.R. of	* 667 700	* 757 800	* 794 000	...	...
Korea, Republic of					
Crude & calcined	550	900	1 000	—	—
Singapore	50	102	337	333	187
of which: Re-exports	50	102	325	125	42
Australia	3 832	4 228	4 627	2 617	...

Notes:

- 1 So far as possible sea water magnesia has been excluded from this table if specifically identified in trade accounts. Countries known to produce sea water magnesia and which do not specifically identify it in their trade accounts are Irish Republic, Israel and Norway
 - 2 The term 'calcined', as used here, includes dead-burned, sintered and caustic-burned (caustic calcined) material
- (a) BGS estimates, based on known imports into certain countries
(b) Figures may be incomplete as value only given in Israeli trade return for exports to some countries
(c) Values shown are for the common customs union

Imports of Magnesite

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Crude	8 241	9 750	12 296	11 707	13 769
Calcined	90 036	102 111	60 799	75 500	69 766
Belgium-Luxembourg					
Crude	888	864	759	663	711
Calcined	23 129	20 834	12 037	10 862	11 953
Denmark					
Crude	443	355	395	1 393	660
Calcined	18 431	15 853	13 024	9 010	9 274
France					
Crude	6 832	412	1 022	395	172
Calcined	77 906	94 488	106 225	106 019	121 048
Germany, Federal Republic of					
Crude	3 430	3 356	2 097	733	797
Calcined	314 334	373 291	408 462	340 779	319 561
Greece					
Crude	210	9	65	) 275	393
Calcined	459	327	711)	
Irish Republic	22 479	29 776	32 116	19 816	37 114
Italy					
Crude	6 390	8 496	15 531	11 955	31 020
Calcined	58 245	74 407	89 262	56 653	30 167
Netherlands					
Crude	2 589	5 589	2 203	2 971	1 792
Calcined	63 032	62 711	68 356	54 815	59 874
Austria					
Crude	454	2	6	52	5
Calcined	88 107	113 184	125 512	104 440	99 694
Finland	7 176	15 379	15 865	16 775	19 973
Hungary					
Calcined	108 011	120 346	118 258	103 856	101 161
Norway	2 662	6 030	4 508	3 840	5 620
Poland					
Calcined	316 668	319 921	317 120	227 767	220 000
Portugal	729	422	1 596	...	...
Soviet Union					
Calcined	480 644	518 021	539 601	593 015	705 112
Spain					
Crude & calcined	49 070	53 822	72 725	78 660	...
Sweden	21 693	22 672	20 024	21 767	22 213
Switzerland					
Calcined	3 955	3 953	4 186	4 753	4 212
Yugoslavia					
Crude	6 531	2 232	30 232	63 011	) 39 906
Calcined	21 139	41 650	46 197	27 159)
Algeria					
Crude	60	78	7	...	...
Calcined	376	592	796	...	...
Egypt	3 705	1 198	106	6 134	...
Morocco	125	109	140	115	163
South Africa					
Crude & calcined	83 792	124 827	98 384	94 090	106 698
Tanzania	165	330	300	165	...
Zaire	228	274	1 179	...	...
Canada					
Calcined	65 307	84 931	76 599	59 017	37 656
Mexico					
Crude & calcined	4 391	28 794	29 099	...	...
USA					
Crude & calcined	85 944	90 285	77 267	91 754	75 758

Imports of Magnesite

tonnes

Country	1978	1979	1980	1981	1982
Argentina					
Calcined	5 360	25 729	8 794	...	...
Brazil					
Crude & calcined	7	48	3 193	849	1 446
Chile					
Calcined	3 072	...	...	...	...
Peru					
Crude & calcined	3 444	4 760	9 230	7 041	2 016
Venezuela					
Crude & calcined	10 156	10 720	5 163	3 014	...
Hong Kong	2 573	2 672	8 493	11 332	17 826
India	7 641	27 153	33 369	...	...
Indonesia	440	967	1 085	225	88
Israel	1 458	2 097	1 426	544	295
Japan					
Crude	11 302	25 292	38 017	30 764	57 432
Calcined	59 736	96 219	142 433	168 592	192 516
Malaysia	699	3 192	5 580	...	...
Pakistan (a)	274	1 014	1 381	1 918	664
Philippines					
Crude & calcined	1 261	3 913	6 856	3 198	5 404
Singapore	180	288	638	431	603
Syria	33	20	87	523	...
Taiwan	750	4 272	7 685	7 446	11 918
Thailand					
Crude	5 181	5 682	8 981	3 860	1 051
Calcined	1 984	1 594	1 689	1 711	1 829
Australia					
Calcined	9 790	15 477	20 782	21 016	...
New Zealand (a)	976	4 617	6 190	2 622	1 841

Notes:

- 1 So far as possible sea water magnesia has been excluded from this table if specifically identified in trade accounts
- 2 The term 'calcined', as used here, includes dead-burned, sintered and caustic-burned (caustic calcined) material

(a) Years ended 30 June of that stated

Production of Manganese Ore

tonnes

Country		1978	1979	1980	1981	1982
Greece	(50%)	7 000	5 750	5 555	5 800	5 600
Italy	(30%)	9 741	9 782	9 165	8 756	8 727
Austria (e)		51 351	58 969	58 141	55 876	61 549
Bulgaria	(30%)	40 000	42 000	49 000	45 000	45 000
Czechoslovakia (d)	(17%)	* 900	* 900	* 900	* 900	* 900
Hungary	(30%)	114 000	83 000	82 564	70 833	93 000
Romania	(22%)	* 81 600	* 81 600	* 81 600	* 81 600	* 81 600
Soviet Union	(35%)	9 057 000	10 244 000	9 750 000	9 150 000	9 200 000
Turkey	(40%)	68 184	41 584	41 634	14 932	7 310
Yugoslavia	(34%)	27 400	30 150	30 250	31 149	* 30 000
Egypt	(35%)	179	—	—	—	—
Gabon	(50%)	1 710 421	2 300 094	2 146 752	1 487 538	* 1 500 000
Ghana	(40%)	316 700	253 800	249 900	233 146	159 946
Morocco	(50%)	126 222	135 709	130 662	109 645	94 120
South Africa						
Metallurgical	(40%)	4 179 995	4 952 920	5 328 737	4 698 831	4 878 697
Chemical	(55%)	137 049	229 423	366 689	340 856	337 820
Ferruginous	(20%)	95 699	—	—	—	—
Zaire	(48%)	—	21 183	16 586	31 000	* 4 000
Mexico	(36%)	523 167	492 664	447 128	578 314	509 000
USA (a)	(13%)	283 154	218 356	157 748	158 540	28 584
Argentina	(30%)	18 497	10 190	6 146	3 086	* 2 000
Brazil	(45%)	1 917 100	2 259 331	2 281 450	2 042 144	* 2 000 000
Chile	(38%)	23 243	24 969	27 701	25 557	16 123
China	(30%)	* 1 300 000	* 1 500 000	* 1 600 000	* 1 600 000	* 1 700 000
India (c)	(35%)	1 619 000	1 771 000	1 692 000	1 526 000	1 468 000
Indonesia	(50%)	5 290	5 909	4 300	* 4 500	* 4 000
Iran (b)	(34%)	30 000	* 23 000	—	—	—
Japan	(35%)	104 100	87 900	79 579	86 178	81 647
Korea, Republic of	(40%)	747	35	81	—	—
Malaysia (d)		42 701	31 605	4 003	—	—
Philippines	(44%)	3 911	3 769	2 556	3 113	4 036
Thailand	(45%)	72 211	35 366	54 310	10 917	7 758
Australia	(48%)	1 257 254	1 724 098	2 019 511	1 429 367	1 152 202
Vanuatu	(42%)	19 288	5 694	—	—	—
World total		23 200 000	26 700 000	26 700 000	23 800 000	23 500 000

Notes:

- 1 Estimated average manganese content is given in parentheses for each country, relating where possible to the later years
- 2 In addition to the countries listed, Colombia, Cuba and Vietnam are also believed to produce manganese ore

(a) Shipments of manganiferous iron ore only

(b) Years ended 20 March following that stated

(c) Includes ore grading 54% to less than 35% Mn

(d) Manganiferous iron ore

(e) Mn content of domestic iron ore

Exports of Manganese

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ore (a)	7 169	4 043	8 331	6 197	6 659
Metal	425	363	405	147	878
Belgium-Luxembourg					
Ore	11 324	6 107	5 929	8 333	8 546
Metal	76	26	306	141	265
France					
Ore (a)	5 606	7 092	6 397	17 242	11 136
Metal	2 138	2 325	2 276	2 987	4 188
Germany, Federal Republic of					
Ore (a)	2 089	1 946	1 406	2 174	1 497
Metal	31	59	124	43	99
Greece					
Ore	1	200	750	1 500	300
Italy					
Ore (a)	30	5	3	1 327	1 345
Netherlands					
Ore	37 452	37 422	39 536	44 913	42 077
Metal	2 768	2 083	2 487	3 266	3 845
Bulgaria					
Ore (c)	* 8 200	* 8 100	* 8 000	* 8 000	* 10 000
Hungary					
Ore	49 649	56 795	37 745	221 066	15 865
Norway					
Ore	—	1 287	1 955	2 561	5
Portugal					
Ore	4 000	2 050	650	3 410	...
Soviet Union					
Ore	1 186 000	1 317 000	1 255 000	1 194 000	1 144 000
Sweden					
Ore	166	164	7	115	182
Metal	183	104	77	79	68
Turkey					
Ore	—	8 450	8 960	—	—
Yugoslavia					
Ore	—	922	—	1 274	3 024
Gabon					
Ore	1 694 416	2 304 700	2 136 000	1 400 000	...
Ghana					
Ore	286 691	(c)* 232 000	(c)* 211 000	143 000	(c)* 127 000
Morocco					
Ore	140 623	139 351	112 317	99 668	81 594
South Africa					
Ore (c)	* 2 600 000	* 3 500 000	* 3 350 000	* 3 200 000	* 2 700 000
Metal (c)	* 25 300	* 27 100	* 26 100	* 27 400	* 17 400
Zaire					
Ore	* 60 000	* 40 000	* 42 000	...	...
Mexico					
Ore	246 776	201 550	135 901	...	...
Metal	7 265	...	...	...	...
USA					
Ore	219 105	59 848	222 483	80 284	34 475
Metal	5 701	6 062	11 374	4 394	3 266
Brazil					
Ore	894 459	1 187 311	1 037 438	1 018 355	845 991
China					
Ore (c)	* 46 200	* 46 700	* 23 900	* 22 000	* 23 300
Metal (c)	* 150	* 100	* 500	* 600	* 300
India					
Ore (b)	577 292	629 944	...	...	...
Indonesia					
Ore	88 528	1 770	9 574	29 018	8 400
Japan					
Ore	4 831	6 230	1 855	991	1 557
Malaysia					
Ore	5 000	11 500	—	...	...

Manganese

Exports of Manganese

tonnes

Country	1978	1979	1980	1981	1982
Philippines					
Ore (a)	7 715	7 383	1 000	2 800	—
Singapore					
Ore	18 501	20 706	32 788	27 203	19 104
of which: Re-exports	1 903	3 687	13 858	6 236	3 668
Thailand					
Ore	37 972	35 738	50 820	16 920	2 000
Australia					
Ore	936 152	1 156 785	1 328 203	899 687	921 000
Vanuatu					
Ore	24 740	12 080	3 520	—	...

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Includes manganiferous iron ore

(b) Includes ferruginous manganese ore

(c) BGS estimates, based on known imports into certain countries

Imports of Manganese

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ore (b)	260 853	544 220	126 610	278 056	178 946
Metal	2 824	3 072	3 292	1 962	2 741
Belgium-Luxembourg					
Ore	252 842	432 140	299 848	244 784	227 057
Metal	522	1 133	1 178	711	1 467
Denmark					
Ore	1 384	1 168	819	611	510
France					
Ore (b)	958 428	1 274 849	1 225 909	880 817	921 816
Metal	1 030	3 471	6 930	984	1 173
Germany, Federal Republic of					
Ore (b)	672 978	716 780	489 548	606 851	393 546
Metal	5 438	5 848	5 731	5 146	5 989
Greece					
Ore	18 208	4 726	29 277	5	26 157
Irish Republic					
Ore (b)	37 120	27 035	32 391	16 103	10 815
Italy					
Ore (b)	284 320	424 231	409 846	354 225	333 064
Metal	1 165	1 887	1 397	1 711	1 713
Netherlands					
Ore	73 223	89 268	46 779	53 392	67 628
Metal	2 388	2 090	2 558	3 474	4 102
Austria					
Ore	520	433	1 726	459	439
Bulgaria					
Ore	72 000	100 000	99 700	114 000	...
Czechoslovakia					
Ore	526 000	541 000	525 000	480 000	502 000
Finland					
Ore	19 737	18 916	10 735	337	1 733
German Democratic Republic					
Ore (a)	73 400	73 800	46 600	46 000	39 800
Hungary					
Ore	14 787	15 569	15 537	150	404
Norway					
Ore	803 130	815 148	807 700	484 640	764 085
Metal	1 025	1 173	713	351	320
Poland					
Ore	651 414	739 889	664 187	583 207	688 000
Portugal					
Ore	144 616	235 709	173 823	109 916	...
Spain					
Ore	369 679	487 333	432 648	253 987	...
Metal	266	351	1 565	2 869	...
Sweden					
Ore	3 290	14 111	354	531	25 835
Metal	917	1 259	1 459	708	1 295
Turkey					
Ore	1 978	2 214	2 429	722	1 952
Yugoslavia					
Ore	96 346	115 041	131 053	87 741	109 043
Ivory Coast					
Ore	1 078	1 103	1 007	900	...
Kenya					
Ore (b)	1 595	3 199	1 404	2 089	...
South Africa					
Ore	3 339	29 842	3 972	7 052	4 352
Zimbabwe					
Ore	5 890	5 850	5 295	4 149	...
Canada					
Ore (a)	136 446	45 150	95 161	119 746	71 656
Metal	7 943	8 275	6 957	10 369	781
Mexico					
Ore	37 398	29 637	99 298	...	...

Manganese

Imports of Manganese

tonnes

Country	1978	1979	1980	1981	1982
USA					
Ore	525 252	430 441	633 228	587 244	208 390
Metal	8 327	6 108	6 937	7 573	5 049
Argentina					
Ore	43 509	87 335	58 891	...	...
Brazil					
Ore	62 276	101 395	28 501	15 289	11 324
Metal	746	1 104	1 019	754	1 020
Colombia					
Ore	2 625	1 962	4 603	3 993	4 284
Peru					
Ore	0	714	963	1 638	1 442
Venezuela					
Ore	4 551	52	5 552	23 386	...
Hong Kong					
Ore	515	1 000	374	—	5
India					
Ore	4 045	5 143	17 881	...	...
Metal	167	392	136	...	...
Indonesia					
Ore	8 605	6 966	11 968	9 513	4 890
Japan					
Ore (c)	2 011 670	2 692 042	2 953 309	2 492 728	2 146 444
Korea, Dem. P.R. of					
Ore	* 21 000	* 21 000	* 29 100	...	...
Korea, Republic of					
Ore	127 193	230 636	208 200	282 015	236 585
Malaysia					
Ore	2 253	2 498	2 351	...	...
Philippines					
Ore (b)	6 982	3 456	6 626	1 984	3 021
Singapore					
Ore	44 980	33 517	60 468	80 900	68 209
Taiwan					
Ore	96 254	148 013	142 975	62 742	135 556
Thailand					
Ore	2 841	2 304	9	9	2 932
Australia					
Ore	2 962	119	2 422	2 139	...
Metal	1 209	957	1 838	1 693	...

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Mn content

(b) Includes manganiferous iron ore

(c) Includes ferruginous manganese ore

Production of Mercury

kilograms

Country	1978	1979	1980	1981	1982
Germany, Federal Republic of	84 000	91 000	56 000	76 000	53 000
Italy	5 000	—	3 303	251 643	159 350
Czechoslovakia	196 000	171 000	159 000	153 000	151 000
Finland	39 477	46 000	75 000	67 189	71 000
Soviet Union	* 2 000 000	* 2 000 000	* 1 800 000	* 1 700 000	* 1 700 000
Spain	1 069 949	1 147 106	1 656 000	1 560 469	1 656 000
Turkey	173 062	162 771	153 801	204 345	246 262
Algeria	1 055 424	507 806	841 904	* 863 000	* 690 000
Mexico	76 000	68 000	145 000	263 000	* 225 000
USA	832 972	1 017 609	1 056 839	961 935	888 025
China	* 700 000	* 700 000	* 700 000	* 700 000	* 700 000
World total	6 200 000	5 900 000	6 600 000	6 800 000	6 500 000

Exports of Mercury

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom	51 092	137 320	79 888	69 515	212 975
Belgium-Luxembourg	56 000	17 800	19 900	14 200	34 200
Denmark	2 600	2 700	4 000	7 200	4 300
France	122 000	132 000	38 000	23 000	8 000
Germany, Federal Republic of	76 000	103 200	219 600	137 000	278 500
Italy	773 000	328 250	229 977	49 791	98 700
Netherlands	62 000	101 000	189 000	149 000	113 000
Austria	28 200	15 100	5 200	6 600	3 500
Finland	13 900	21 000	55 000	52 000	62 000
Norway	39 000	47 000	98 000	69 000	133 000
Spain	1 480 000	1 303 000	665 000	741 000	...
Sweden	26 000	19 000	29 000	9 000	10 000
Switzerland	2 048	6 005	9 023	4 652	3 216
Turkey	295 625	83 283	135 110	156 042	317 000
Yugoslavia	...	...	...	100 000	...
Algeria	406 410	561 900	370 530	...	...
Dominican Republic	7 643	22 044	10 308	5 102	...
Mexico	216 428	183 269	385 876	...	...
USA (a)	* 49 000	* 81 000	* 109 000	* 83 000	* 92 000
China (a)	* 301 500	* 276 200	* 394 200	* 434 200	* 278 000
Hong Kong (Re-exports)	—	28	30 855	133 614	26 769
Japan	238 847	539 922	321 970	238 448	251 503
Singapore	1 249	776	2 337	13 724	50 287
of which: Re-exports	1 249	766	1 936	13 582	50 277

(a) BGS estimates, based on known imports into certain countries

Imports of Mercury

Country	1978	1979	1980	1981	1982
United Kingdom	421 567	306 392	231 607	205 412	260 929
Belgium-Luxembourg	96 000	120 300	224 200	178 800	285 200
Denmark	13 500	14 000	10 100	8 900	7 900
France	182 000	138 000	145 000	108 000	105 000
Germany, Federal Republic of	434 100	461 300	436 400	212 200	242 700
Greece	9 102	2 000	3 000	1 000	4 000
Irish Republic	32 900	4 700	7 600	2 700	15 400
Italy	20 000	59 790	152 577	80 710	37 100
Netherlands	85 000	120 000	205 000	158 000	131 000
Austria	14 300	23 800	19 500	15 200	10 000
Finland	10 900	3 000	4 000	4 000	38 000
German Democratic Republic	* 192 900	* 174 100	(e)* 300 000	(e)* 200 000	(e)* 250 000
Hungary	67 000	39 000	38 000	77 000	...
Norway	1 000	1 000	1 000	1 000	16 000
Poland	* 192 900	* 33 000	...	...	...
Portugal	34 700	28 100	32 300	29 000	...
Romania	* 200 000	* 309 200	* 132 000	...	...
Sweden	25 000	24 000	16 000	23 000	12 000
Switzerland	24 201	25 183	38 114	21 884	30 317
Yugoslavia	7 946	10 372	18 636	45 000	50 000
Algeria	2 112	6 525	1 299	...	...
Madagascar	2 055	40	...	...	...
Morocco	4 355	7 213	9 903	8 699	9 854
South Africa	71 900	52 800	103 000	94 300	63 600
Tunisia	3 559	5 715	188	7 004	...
Canada	43 046	50 712	50 485	48 217	51 664
USA	1 528 131	1 002 642	472 523	455 112	529 512
Argentina	28 917	64 276	35 070	...	...
Brazil	144 361	158 448	201 443	93 372	125 800
Chile	19 746	...	...	...	...
Colombia	8 188	20 689	22 303	47 013	28 201
Peru	26 153	29 859	37 707	24 714	16 946
Uruguay	1 200	300	4 800	2 400	900
Venezuela	20 169	23 233	8 000	4 000	...
Burma (d)	182 000	11 000	26 000	99 000	...
Hong Kong	53 380	74 221	91 690	98 927	70 077
India	74 000	211 000	354 533	...	...
Indonesia	22 515	3 628	53 997	23 645	18 052
Iran (b)	14 997	17 231	5 942	228 846	...
Israel (a)	3 000	10 000	14 000	11 000	...
Japan	105 697	108 350	91 759	69 509	81 309
Korea, Republic of	34 155	26 217	28 805	22 635	19 107
Malaysia	5 000	3 040	103 320	...	...
Pakistan (c)	14 058	32 860	31 754	50 798	43 134
Philippines	26 039	11 552	354	4 655	3 484
Saudi Arabia	...	215 374	1 684 392	83 241	11 721
Singapore	4 188	4 002	3 099	14 301	74 938
Sri Lanka	16 398	1 595	450	12 211	183
Syria	1 023	57	2 594	—	...
Taiwan	91 859	56 678	12 848	14 604	15 570
Thailand	5 829	12 529	12 583	19 987	10 850
Australia	75 941	47 990	38 874	57 791	...

(a) Figures may be incomplete as value only given in Israeli trade return for imports from some countries

(b) Years ended 20 March following that stated

(c) Years ended 30 June of that stated

(d) Years ended 31 March following that stated

(e) BGS estimates, based on known exports from certain countries

Production of Mica

tonnes

Country	1978	1979	1980	1981	1982
France (e)	7 300	7 100	8 838	9 059	7 950
Norway (b)	* 6 000	* 6 000	* 4 500	* 4 600	* 3 600
Soviet Union	* 45 000	* 46 000	* 46 000	* 47 000	* 48 000
Spain (e)	3 345	5 169	4 831	3 524	* 3 300
Yugoslavia	69	338	249	265	* 270
Madagascar					
Phlogopite (c)	1 567	1 168	1 642	588	657
Morocco	—	363	331	1 805	...
Mozambique	* 900	251	200	200	* 200
South Africa					
Waste	2 542	1 720	2 528	2 395	1 762
Sudan	1 000	2 000	1 500	183	165
Tanzania					
Sheet	15	9	3	2	* 2
Zimbabwe	2 764	1 275	1 022	1 406	844
Mexico	401	243	331	400	* 400
USA (d)					
Waste (e)	126 000	122 000	105 000	121 000	96 000
Argentina					
Sheet	356	860	218	44	* 40
Waste	2 276	1 140	616	459	* 400
Brazil (a)	4 553	4 075	4 818	1 950	1 077
India					
Crude	9 592	9 073	7 934	8 375	8 509
Waste	4 681	5 107	4 393	4 310	* 3 500
Sri Lanka	140	369	145	182	* 200
Taiwan	1 388	1 150	338	85	44
World total	220 000	215 000	195 000	208 000	179 000

Note: In addition to the countries listed, Canada, China, Namibia, Pakistan and Romania are also believed to produce mica

- (a) Exports
- (b) Crude only
- (c) Block and splittings
- (d) Sold or used by producers
- (e) Including mica recovered from mica schists and/or kaolin beneficiation

Exports of Mica

Country	1978	1979	1980	1981	1982
United Kingdom					
Unmanufactured	810	966	966	412	508
Ground & waste	2 540	3 911	2 809	2 514	2 940
Belgium-Luxembourg					
Unmanufactured	52	22	41	—	—
Ground	43	138	23	38	18
Denmark					
Ground	65	58	30	12	8
France					
Unmanufactured	46	173	354	2 119	1 473
Ground	3 074	3 111	3 462	3 895	3 608
Germany, Federal Republic of					
Unmanufactured	68	25	20	71	20
Ground	709	618	640	1 020	859
Italy					
Unmanufactured	133	191	440	324	546
Ground	666	471	687	423	677
Netherlands					
Unmanufactured	21	21	75	676	589
Ground	692	1 209	906	2 407	2 521
Austria	57	185	230	448	602
Norway	2 688	2 915	2 112	2 298	1 820
Portugal	360	232	—	189	...
Spain	2 900	3 939	6 059	2 683	...
Sweden	5	10	11	—	—
Switzerland	73	46	117	27	115
Madagascar	316	1 205	1 148	...	...
Morocco	556	1	485	1 353	1 570
Mozambique	...	...	127	...	...
South Africa					
Ground	1 994	1 316	1 091	) (a)* 900	(a)* 1 050
Waste	571	—	—)	
Zimbabwe					
Ground	1 324	1 203	759	758	...
USA					
Unmanufactured	3 341	5 370	6 103	3 892	2 584
Ground	5 351	5 303	7 427	6 364	7 620
Argentina	3 069	2 202	846	...	...
Brazil	4 553	4 075	4 818	1 950	1 077
India					
Block	1 363	1 181	...	...	...
Splittings	4 345	4 135	...	...	...
Condenser films	54	71	...	...	...
Ground	8 548	3 637	...	...	...
Waste	9 674	7 248	...	...	...
Japan	303	246	326	373	149
Korea, Republic of	...	656	—	10	—
Singapore	14	150	272	351	200
of which: Re-exports	14	150	271	350	161
Sri Lanka	381	555	628	1 393	1 007

Note: This table shows unmanufactured mica and includes sheet, block, splittings, ground and waste, unless these are separately specified. Mica powder is included under the term 'ground'

(a) BGS estimates, based on known imports into certain countries

Mica

Imports of Mica

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Block	98	69	89	19	72
Splittings	462	289	475	200	262
Ground	3 955	3 641	6 824	2 180	2 117
Waste	10 823	13 920	13 835	11 495	11 622
Belgium-Luxembourg					
Unmanufactured	2 526	621	3 755	410	750
Ground	1 104	1 183	1 250	1 202	1 054
Denmark	255	274	175	179	167
France					
Unmanufactured	9 171	2 701	5 943	3 930	4 340
Ground	993	717	1 013	989	1 124
Germany, Federal Republic of					
Unmanufactured	6 691	5 563	7 098	5 044	6 684
Ground	3 038	3 068	3 233	4 030	4 661
Greece	117	172	271	192	210
Irish Republic	594	847	358	313	375
Italy					
Unmanufactured	512	455	437	495	283
Ground	735	568	654	786	698
Netherlands					
Unmanufactured	52	57	69	49	203
Ground	1 866	2 094	1 930	3 865	3 782
Austria	340	250	318	231	222
Finland	246	291	253	177	187
German Democratic Republic	1 767	1 234	1 424	1 224	1 616
Norway					
Unmanufactured	147	94	657	283	214
Waste	1 825	1 991	1 512	1 588	1 932
Poland	1 641	1 756	1 844	1 442	1 066
Portugal	399	469	347	464	...
Soviet Union	* 550	* 550	* 550	* 550	* 575
Spain	837	1 030	1 421	1 343	...
Sweden	345	467	408	335	422
Switzerland	638	598	546	655	682
Turkey	52	45	52	22	23
Yugoslavia	541	1 134	686	539	242
Kenya	34	33	40	119	...
Morocco					
Ground	19	15	9	20	8
South Africa	567	685	1 187	948	548
Tanzania	16	4	13	3	...
Tunisia	28	75	94	107	...
Canada	3 492	3 131	2 597	3 133	2 860
Jamaica	138	89	37	73	77
Mexico	61	72	99	...	...
Trinidad & Tobago	174	170	181	176	...
USA					
Block	112	110	32	14	58
Splittings	1 740	1 776	1 916	1 097	809
Ground	1 568	4 111	5 046	6 064	4 911
Waste	554	80	—	186	450
Other unmanufactured	2 164	2 888	3 433	3 489	2 394
Brazil	6	99	153	170	76
Colombia	84	84	49	80	980
Peru	127	66	42	160	49
Uruguay	10	22	184	71	16
Venezuela	869	785	1 338	1 316	...
Brunei	11	94	58	25	...
Hong Kong	31	585	31	33	42
Indonesia	339	105	260	389	587
Iran (a)	555	644	113	253	...

Imports of Mica

Country	1978	1979	1980	1981	1982
Japan					
Block	272	209	2 620	1 344	886
Splittings	527	621	708	516	598
Waste	4 092	611	3 502	4 833	4 008
Other unmanufactured	3 707	3 011	4 830	5 905	9 017
Korea, Republic of	207	163	134	121	185
Malaysia	18	39	111	...	...
Philippines	87	61	109	77	173
Saudi Arabia	270	769	1 038	908	1 584
Singapore	270	265	1 415	1 250	1 392
Taiwan					
Unmanufactured	153	160	92	34	33
Ground	282	364	245	258	224
Thailand	91	116	119	82	91
Australia					
Unmanufactured	203	293	338	243	...
Ground	277	336	621	562	...
New Zealand (b)	£50 000	£70 000	£44 000	£70 000	£92 000

Note: This table shows unmanufactured mica and includes sheet, block, splittings, ground and waste, unless these are separately specified. Mica powder is included under the term 'ground'

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

Molybdenum

Mine Production of Molybdenum

tonnes (metal content)

Country	1978	1979	1980	1981	1982
Bulgaria	* 150	* 150	* 150	* 150	* 150
Soviet Union	* 9 900	* 10 200	* 10 400	* 10 700	* 11 000
Turkey	25	65	100	* 100	...
Canada	13 943	11 175	11 889	12 850	15 232
Mexico	11	48	74	451	* 450
USA	59 803	65 302	68 350	63 458	37 671
Chile	13 196	13 560	13 668	15 360	20 048
Peru	734	1 152	2 407	3 054	3 105
China	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
Japan	74	70	56	74	98
Korea, Republic of	221	190	302	467	363
Mongolia	...	222	487	660	1 000
Philippines	55	141	91	94	60
World total	100 000	104 000	110 000	109 000	91 000

Note: In addition to the countries listed, Australia, Democratic P.R. of Korea, Niger and Romania are also believed to produce molybdenum

Exports of Molybdenum

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates	3 921	4 301	2 290	4 257	5 769
Metal	147	332	174	261	365
Oxides	552	381	1 937	1 086	1 854
Belgium-Luxembourg					
Ores & concentrates	5 872	5 945	5 542	9 093	9 300
Metal	121	177	117	183	67
Oxides	117	105	176	154	53
France					
Ores & concentrates	336	395	1 180	1 481	502
Metal	136	166	133	180	165
Oxides	34	22	21	1	...
Germany, Federal Republic of					
Ores & concentrates	1 117	6 669	6 984	5 428	7 442
Metal	236	391	488	319	431
Italy					
Ores & concentrates	269	184	175	209	348
Oxides	177	95	—	—	—
Netherlands					
Ores & concentrates (b)	24 239	23 363	29 159	16 768	14 047
Metal	153	185	181	148	247
Oxides	1 621	1 445	2 247	1 546	1 683
Austria					
Metal	872	1 101	1 017	1 018	1 047
Sweden					
Ores & concentrates	921	1 206	1 346	1 691	1 970
Metal	13	11	7	38	7
Canada					
Ores & concentrates (a)	13 422	11 482	14 584	13 664	17 443
USA					
Ores & concentrates (a)	31 422	32 789	31 011	23 291	22 581
Metal	776	1 097	937	1 643	998
Chile					
Ores & concentrates (a)	5 534	6 617	7 312	9 109	11 163
Oxides	3 630	...	...	...	...
Peru					
Ores & concentrates	1 118	2 131	2 995	...	...
Japan					
Metal	40	71	37	54	54
Korea, Republic of					
Ores & concentrates	120	374	322	651	360
Philippines					
Ores & concentrates	19	210	180	139	155

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Mo content

(b) May include other ores

Imports of Molybdenum

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates	14 383	15 285	13 672	15 149	17 738
Metal	224	274	237	176	178
Oxides	413	284	296	432	195
Belgium-Luxembourg					
Ores & concentrates	13 381	15 856	15 922	20 772	20 469
Metal	332	189	149	126	162
Oxides	331	28	17	120	192
France					
Ores & concentrates	6 963	7 413	7 094	9 078	7 713
Metal	114	206	263	117	166
Oxides	359	119	227	62	29
Germany, Federal Republic of					
Ores & concentrates	19 203	22 065	18 087	18 138	21 524
Metal	640	797	1 102	984	766
Oxides	457	515	453	502	265
Italy					
Ores & concentrates	5 638	5 866	6 039	4 522	2 768
Metal	176	251	163	120	110
Oxides	819	619	158	68	232
Netherlands					
Ores & concentrates (a)	27 644	27 944	28 247	21 501	19 677
Metal	153	235	175	148	172
Oxides	60	64	107	83	19
Austria					
Metal	87	366	366	188	38
Oxides	1 375	1 639	1 527	1 493	1 896
Finland					
Ores & concentrates	40 111	512	675	454	488
Metal	2	4	5	4	6
Soviet Union					
Ores & concentrates (b)	* 4 400	* 3 400	* 500	* 1 000	...
Spain					
Metal	19	31	33	17	...
Sweden					
Ores & concentrates	6 484	7 927	6 034	5 648	6 397
Metal	75	69	73	43	58
Switzerland					
Metal	19	15	24	20	29
Yugoslavia					
Metal	18	16	15	15	15
South Africa					
Metal	17	32	19	11	11
Oxides	217	144	312	170	138
Canada					
Oxides	330	336	362	423	193
Mexico					
Ores & concentrates	710	693	289	...	...
Metal	68	234	151	...	...
USA					
Ores & concentrates	2 723	2 408	2 050	2 678	2 872
Metal	246	238	305	246	183
Argentina					
Oxides	259	368	296	...	...
Brazil					
Ores & concentrates	2 874	8 535	2 123	2 240	1 303
Metal	42	208	115	44	42
India					
Metal	35	37	17	...	...
Japan					
Ores & concentrates	16 645	18 431	20 388	16 290	17 245
Metal	184	182	146	219	296
Oxides	497	613	826	660	635

Imports of Molybdenum

tonnes

Country	1978	1979	1980	1981	1982
Philippines					
Metal	60	71	4	127	13
Singapore					
Metal	8	0	1	1	9
Taiwan					
Metal	41	48	44	44	45
Australia					
Ores & concentrates	326	243	326	...	...

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) May include other ores

(b) BGS estimates, based on known exports from certain countries

Mine Production of Nickel

tonnes (metal content)

Country	1978	1979	1980	1981	1982
Greece (d)	15 100	14 632	14 000	11 800	5 500
Albania	* 8 000	* 8 500	* 8 500	* 8 800	* 9 000
Finland	5 481	6 618	6 550	6 871	6 335
German Democratic Republic	2 700	2 500	2 700	2 700	2 500
Norway	499	593	508	500	500
Poland	* 1 300	* 1 200	* 1 100	* 1 000	* 800
Soviet Union	* 140 000	* 145 000	* 143 000	* 150 000	* 170 000
Yugoslavia	* 500	* 500	* 500	* 2 000	* 3 500
Botswana	16 049	16 173	15 442	18 278	17 756
Morocco	100	500	500	500	500
South Africa (a)	* 22 500	* 25 300	* 25 700	* 25 000	* 20 500
Zimbabwe	15 701	14 591	15 075	13 018	13 301
Canada (b)	128 310	126 482	184 802	160 247	88 745
Cuba (c)	34 787	32 324	38 230	40 256	37 600
Dominican Republic (d)	14 302	25 112	16 350	19 020	5 958
Guatemala	1 079	6 199	6 940	—	—
USA	12 255	13 667	13 293	10 976	2 906
Brazil	3 600	2 964	4 291	6 811	* 10 000
Burma (e)	18	18	14	20	* 20
China	* 10 000	* 11 000	* 11 000	* 11 000	* 12 000
Indonesia	30 200	35 800	40 600	49 400	48 500
Philippines	29 528	33 287	47 114	29 247	19 700
Australia	82 359	69 709	74 323	74 355	87 552
New Caledonia (f)	67 156	80 464	86 592	78 090	60 129
World total	642 000	673 000	757 000	720 000	623 000

(a) Refined nickel and nickel in matte

(b) Refined nickel and nickel in oxide and salts plus nickel in matte and concentrate exported

(c) Ni and Co content of sulphide slurry and oxide

(d) Ni content of ferro-nickel

(e) Ni content of nickel speiss. Years ended 31 March following that stated

(f) Ni and Co content

Smelter/Refinery Production of Nickel

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	21 367	18 683	19 300	25 400	6 902
France	7 878	2 558	9 792	10 051	7 361
Greece	14 900	14 600	13 880	10 860	4 778
Albania	* 4 000	* 4 500	* 4 500	* 4 500	* 4 500
Czechoslovakia	* 4 000	* 3 000	* 1 800	* 1 600	* 1 300
Finland	7 292	11 176	12 646	13 310	12 615
German Democratic Republic	* 3 000	* 3 000	* 3 000	* 2 800	* 3 000
Norway	23 739	30 686	37 123	36 954	25 644
Poland	* 2 100	* 2 000	* 1 800	* 1 500	* 800
Soviet Union	* 160 000	* 160 000	* 165 000	* 170 000	* 190 000
South Africa	15 000	20 400	18 100	17 200	17 300
Zimbabwe	15 700	14 600	15 100	12 400	14 600
Canada	89 233	83 747	142 155	106 407	61 708
Cuba	18 307	19 052	20 049	20 900	21 000
Dominican Republic (a)	19 760	24 553	16 552	18 679	5 484
USA	33 836	40 089	40 120	44 275	40 783
Brazil	2 288	2 463	2 504	2 340	3 471
China	* 10 000	* 11 000	* 11 000	* 12 000	* 12 500
Indonesia	4 400	4 000	4 421	4 703	5 000
Japan	79 200	105 900	109 300	93 600	87 300
Philippines	16 200	18 800	22 731	19 353	10 200
Australia	37 327	39 341	35 309	42 505	45 931
New Caledonia	19 889	30 373	32 580	27 988	28 000
World total	609 000	664 000	739 000	699 000	610 000

Note: Data relate to refined nickel plus the nickel content of ferro-nickel and nickel oxide

(a) Shipments of ferro-nickel (Ni content)

Exports of Nickel

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Mattes, sinters etc.	265	1 383	2 911	4 941	2 010
Unwrought	19 002	13 518	9 654	18 329	10 166
Unwrought alloys	1 411	1 348	1 332	2 051	1 259
Scrap	3 392	4 341	4 404	4 195	5 136
Oxides	220	252	58	162	294
Belgium-Luxembourg					
Unwrought	90	290	258	62	562
Unwrought alloys	243	116	55	56	127
Scrap	1 219	1 656	1 440	1 432	984
Denmark					
Scrap	52	178	95	32	47
France					
Mattes, sinters etc.	850	2 754	272	3	12
Unwrought	5 324	4 404	5 873	4 711	3 600
Unwrought alloys	536	774	884	553	759
Scrap	2 454	2 708	2 179	2 461	2 064
Oxides	521	1 033	547	235	390
Germany, Federal Republic of					
Mattes, sinters etc.	7	1 332	302	52	136
Unwrought	2 760	8 246	3 441	2 632	6 175
Unwrought alloys	2 416	3 091	2 995	1 869	3 286
Scrap	7 150	8 381	5 317	7 780	7 700
Oxides	290	147	135	95	135
Italy					
Unwrought (a)	100	226	169	131	209
Scrap	161	299	271	318	290
Netherlands					
Mattes, sinters etc.	2 568	4 034	3 686	2 602	3 115
Unwrought (a)	3 246	3 816	4 446	3 087	2 495
Scrap	1 845	2 071	2 168	1 564	1 808
Oxides	273	488	572	264	375
Austria					
Scrap	42	471	302	451	255
Finland					
Mattes, sinters etc.	...	686	1 657	2 690	2 051
Unwrought (a)	5 882	9 578	11 104	11 135	9 757
Norway					
Ore	12 212	12 692	13 773	11 360	10 824
Unwrought	40 854	33 088	31 250	36 931	29 270
Scrap	562	994	391	583	197
Soviet Union					
Unwrought (b)	* 21 400	* 25 600	* 30 000	* 29 000	* 34 000
Spain					
Scrap	359	302	168	78	...
Sweden					
Mattes, sinters etc.	798	64	—	—	106
Unwrought (a)	1 720	1 640	1 906	1 397	717
Scrap	498	482	511	525	573
Switzerland					
Unwrought, mattes, sinters, etc. & scrap	245	679	413	263	264
Yugoslavia					
Scrap	289	210	288	148	170
South Africa (b)					
Slurry, mattes, sinters etc.	* 35 000	* 47 500	* 54 900	* 79 500	* 48 700
Unwrought (a)	* 25 500	* 27 700	* 23 400	* 18 000	* 16 300
Canada					
Ores, concentrates, mattes, sinters etc. (c)	39 077	42 735	42 647	53 840	27 037
Unwrought	107 253	85 459	88 493	79 989	63 463
Scrap	2 308	2 401	2 664	2 927	3 282
Oxides (c)	27 793	17 191	16 989	14 422	13 128
Cuba					
Oxides (e)	19 764	21 671	19 656	) 39 000	...
Sulphide (e)	17 532	13 737	18 139)	...

Exports of Nickel

tonnes

Country	1978	1979	1980	1981	1982
USA					
Unwrought (a)	11 332	20 650	13 854	15 657	31 283
Scrap	4 238	9 241	18 806	9 834	10 100
Hong Kong					
Unwrought (Re-exports)	1 063	1 550	2 169	2 895	2 793
Scrap	193	205	209	435	487
Indonesia					
Ore	576 377	781 881	883 055	842 045	721 518
Mattes, sinters etc.	15 627	29 280	42 763	44 947	37 951
Japan					
Unwrought (a)	2 989	1 752	1 330	1 262	298
Philippines					
Ores & concentrates	578 034	704 299	608 825	557 583	408 712
Unwrought (a)	12 016	14 791	18 823	15 469	5 869
Singapore					
Unwrought (Re-exports)	67	274	1 392	1 201	2 774
Taiwan					
Unwrought	152	41	54	36	38
Scrap	349	641	572	947	1 198
Australia (d)	* 61 400	* 58 300	* 53 000	* 51 600	* 54 500
New Caledonia					
Ores	1 540 093	2 142 152	2 012 082	1 600 877	1 498 837
Mattes, sinters etc.	21 752	17 810	21 980	22 500	10 200

Notes:

- 1 In this table the term 'unwrought' nickel corresponds to item 683.1 of the Standard International Trade Classification (Revision 2) which excludes all electro-plating anodes
 - 2 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) Including alloys
(b) BGS estimates, based on known imports into certain countries
(c) Ni content
(d) BGS estimates; unwrought metal and Ni content of ores, concentrates, matte etc., based on known imports into certain countries
(e) Ni-Co content (mainly nickel)

Imports of Nickel

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Mattes, sinters etc.	31 693	27 822	38 325	41 232	15 015
Unwrought	15 535	17 083	16 762	16 431	14 778
Unwrought alloys	1 274	876	1 478	526	474
Scrap	2 772	3 078	2 174	2 390	3 359
Oxides	700	341	1 020	257	216
Belgium-Luxembourg					
Mattes, sinters etc.	401	177	300	446	338
Unwrought	2 492	3 680	2 624	2 176	3 149
Unwrought alloys	573	570	437	273	969
Scrap	1 072	754	519	983	499
Oxides	137	402	164	106	88
Denmark					
Unwrought	152	193	131	115	159
Unwrought alloys	45	13	49	0	2
France					
Mattes, sinters etc.	12 986	10 500	15 050	19 374	10 756
Unwrought	12 177	16 005	18 029	16 802	16 377
Unwrought alloys	2 566	3 833	4 525	3 109	3 121
Scrap	719	1 444	763	983	466
Oxides	226	141	244	262	243
Germany, Federal Republic of					
Mattes, sinters etc.	16 465	15 746	14 116	12 361	13 847
Unwrought (a)	38 881	47 708	39 329	39 929	40 576
Scrap	4 003	6 505	7 552	5 469	6 419
Oxides	595	612	391	315	193
Greece					
Unwrought	225	175	182	40	153
Irish Republic					
Unwrought (a)	284	108	254	188	187
Italy					
Mattes, sinters etc.	7 202	5 322	2 670	1 766	2 045
Unwrought	11 374	15 318	17 969	11 502	16 672
Unwrought alloys	859	1 534	785	651	1 063
Scrap	299	313	685	335	320
Oxides	3 720	3 755	2 534	2 897	2 430
Netherlands					
Mattes, sinters etc.	3 224	4 267	3 695	2 633	...
Unwrought	3 975	4 949	5 518	3 681	3 312
Unwrought alloys	79	129	49	54	78
Scrap	728	875	1 021	1 377	1 527
Oxides	887	725	1 127	1 075	1 245
Austria					
Mattes, sinters etc.	1 362	1 533	1 279	734	833
Unwrought (a)	2 401	2 849	2 378	2 586	2 129
Scrap	262	1 504	1 597	567	357
Czechoslovakia					
Unwrought (a)	4 862	5 580	7 919	8 347	6 741
Finland					
Ore	14 275	14 798	14 676	12 402	11 579
Mattes, sinters etc.	2 249	7 170	7 522	6 270	7 853
Unwrought (a)	2 297	2 846	4 299	2 460	2 869
Scrap	925	1 176	1 944	1 449	1 959
Norway					
Mattes, sinters etc.	54 429	78 897	89 855	84 252	62 419
Unwrought (a)	65	85	79	188	85
Scrap	573	1	7	21	31
Portugal					
Unwrought	233	206	139	455	...
Spain					
Mattes, sinters etc.	2 654	2 074	1 779	2 244	...
Unwrought (a)	6 708	6 500	6 104	3 668	...
Sweden					
Mattes, sinters etc.	5 249	3 475	4 453	3 113	2 603
Unwrought	8 138	11 257	10 518	7 744	10 554
Unwrought alloys	285	358	292	286	308
Scrap	2 002	2 713	2 609	2 092	2 930

Imports of Nickel

Country	1978	1979	1980	1981	1982
Switzerland					
Unwrought, mattes, sinters, etc. & scrap	1 520	1 806	1 504	1 404	1 276
Yugoslavia					
Unwrought	1 487	1 507	1 960	2 150	1 074
South Africa					
Mattes, sinters etc.	909	362	0	150	560
Unwrought	2 394	651	542	522	103
Scrap	236	37	89	27	—
Canada					
Ores, concentrates & scrap (b)	31 903	19 047	26 149	23 760	22 355
Unwrought (a)	4 014	3 108	5 224	2 925	3 558
Mexico					
Mattes, sinters etc.	2 929	4 590	3 208	...	...
Oxides	377	320	505	...	...
USA					
Ore	—	4 515	4 701	8 354	1 813
Slurry (b)	33 017	26 692	31 452	37 659	23 470
Unwrought (a)	136 160	101 530	107 497	109 804	74 328
Scrap	3 351	3 262	3 240	4 741	3 901
Oxides	5 518	1 650	3 794	3 928	2 852
Argentina					
Unwrought	629	826	636	...	...
Brazil					
Unwrought (a)	3 016	3 080	5 850	4 950	1 747
Venezuela					
Unwrought	203	181	185	207	...
Hong Kong					
Unwrought	1 943	2 248	3 487	4 534	3 312
India					
Unwrought (c)	3 774	2 474	2 872	...	...
Unwrought alloys (c)	639	802	380	...	...
Scrap	2 690	2 377	2 261	...	...
Japan					
Ore	2 999 406	4 014 772	3 950 321	3 462 801	2 996 755
Mattes, sinters etc.	30 044	43 257	51 751	36 608	41 812
Unwrought	10 603	19 263	15 202	17 732	19 689
Unwrought alloys	287	456	415	151	218
Scrap	3 522	1 948	1 806	2 252	2 938
Oxides	296	1 216	1 797	1 439	—
Korea, Republic of					
Unwrought	...	1 927	2 853	3 811	2 451
Scrap	...	77	10	4	318
Malaysia					
Unwrought (a)	4 685	6 890	3 322	...	...
Taiwan					
Unwrought (a)	4 188	2 324	2 230	2 479	3 308
Australia					
Mattes, sinters etc.	1 502	2 683	1 928	0	42
Unwrought	3 065	752	1 359	838	1 261
Unwrought alloys	172	98	276	646	682
New Zealand (d)					
Unwrought (a)	100	38	107	116	142

Notes:

- 1 In this table the term 'unwrought' nickel corresponds to item 683.1 of the Standard International Trade Classification (Revision 2) which excludes all electro-plating anodes
- 2 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Including alloys

(b) Ni content

(c) Years ended 31 March following that stated

(d) Years ended 30 June of that stated

Production of Crude Petroleum

thousand tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	52 932	76 596	78 917	87 946	100 484
Denmark (e)	430	421	270	760	1 663
France	1 117	1 196	1 405	1 676	1 646
Germany, Federal Republic of	5 059	4 774	4 631	4 459	4 255
Italy	1 452	1 662	1 800	1 465	1 727
Netherlands	1 402	1 316	1 280	1 348	1 637
Albania	* 2 300	* 3 280	* 1 590	* 2 190	* 2 310
Austria	1 790	1 726	1 475	1 338	1 290
Bulgaria	* 250	* 250	* 250	* 290	* 300
Czechoslovakia	117	108	93	89	89
German Democratic Republic	50	* 50	* 60	* 60	* 60
Hungary	2 198	2 027	2 031	2 024	2 027
Norway	16 957	18 819	24 451	23 450	24 572
Poland	363	331	329	315	240
Romania	13 724	12 323	11 511	11 644	* 11 590
Soviet Union	571 531	585 571	603 207	608 820	613 000
Spain	979	1 150	1 595	1 253	* 1 490
Turkey	2 735	2 845	2 330	2 364	2 333
Yugoslavia	4 076	4 143	4 229	4 375	4 340
Algeria	57 200	56 900	51 280	44 570	40 110
Angola	7 060	7 270	7 420	6 480	6 590
Cameroon	650	1 730	2 790	4 420	5 410
Congo	2 570	2 784	3 067	3 589	4 300
Egypt	24 299	28 220	29 450	32 100	32 940
Gabon	10 600	9 798	8 895	7 520	7 740
Libya	95 027	100 270	86 619	57 423	54 420
Nigeria	93 424	113 694	100 286	69 927	62 633
Tunisia	4 944	5 536	5 627	5 407	5 101
Zaire	916	1 057	1 000	1 040	1 190
Canada	69 330	79 110	75 997	67 853	64 855
Cuba	288	288	273	253	...
Mexico	62 092	75 032	99 670	118 730	145 478
Trinidad & Tobago	11 826	11 047	10 956	9 757	9 120
USA	433 590	425 827	428 091	444 682	448 676
Argentina	23 947	25 016	26 073	26 296	25 962
Bolivia	1 718	1 476	1 262	1 030	1 130
Brazil	8 791	9 056	9 934	11 298	13 756
Chile	911	1 097	1 763	2 191	* 2 200
Colombia	6 739	6 394	6 486	6 896	7 308
Ecuador	10 053	10 668	10 208	10 518	10 519
Peru	7 422	9 430	9 621	9 500	9 600
Venezuela	113 628	124 106	114 788	111 688	100 036
Abu Dhabi	70 063	70 834	65 600	54 870	42 430
Bahrain	2 760	2 560	2 424	2 300	2 190
Brunei	11 146	12 257	10 458	8 258	8 950
Burma (d)	1 298	1 419	1 404	1 160	1 200
China (a)	104 050	106 150	105 950	101 220	101 550
Dubai	17 499	17 168	16 968	17 370	17 260
India	11 270	12 841	9 397	14 900	19 740
Indonesia	81 206	78 993	78 549	77 380	64 590
Iran	258 299	156 109	72 364	64 844	* 101 250
Iraq	128 750	169 290	135 810	43 260	44 460
Israel	24	22	21	17	13
Japan	574	511	459	456	467
Kuwait	105 454	125 392	83 567	56 589	41 319
Malaysia	10 552	13 639	13 245	12 360	14 543
Neutral Zone (c)	24 020	29 180	28 040	19 160	16 190
Oman	15 644	14 689	14 089	16 326	16 720
Pakistan	499	523	497	474	610
Philippines	—	1 180	490	290	480

Production of Crude Petroleum

thousand tonnes

Country	1978	1979	1980	1981	1982
Qatar	25 783	24 038	22 784	19 270	15 610
Saudi Arabia	407 903	468 428	487 702	490 209	329 480
Sharjah	1 072	665	606	460	660
Syria	9 060	8 990	8 680	8 590	8 840
Taiwan	225	210	193	167	127
Australia	22 976	23 141	20 288	20 837	19 768
New Zealand (b)	660	435	382	460	710
World total	3 040 000	3 200 000	3 010 000	2 840 000	2 700 000

Note: The figures shown in this table exclude natural gasoline

(a) Including oil from shale and coal

(b) Petroleum condensate

(c) Neutral zone of Kuwait and Saudi Arabia

(d) Years ended 31 March following that stated

(e) Sales

Production of Natural Gas

Million m³

Country	1978	1979	1980	1981	1982
United Kingdom	39 108	40 292	38 716	38 755	42 603
Belgium	44	39	47	43	36
France	7 610	7 769	7 536	7 086	6 585
Germany, Federal Republic of	20 450	20 685	18 645	19 058	16 109
Italy	13 701	13 466	12 531	13 943	14 589
Netherlands	88 730	96 488	91 153	84 617	72 035
Albania	* 350	* 370	* 370	* 380	* 450
Austria	2 414	2 312	1 903	1 437	1 324
Bulgaria	32	137	190	137	...
Czechoslovakia	740	851	626	662	656
German Democratic Republic	* 8 600	* 8 800	* 9 000	* 9 900	* 7 900
Hungary	7 346	6 521	6 142	6 011	6 627
Norway	14 891	21 581	25 973	26 162	25 399
Poland	7 991	7 335	6 329	6 172	5 533
Romania	35 543	34 057	35 171	35 093	32 600
Soviet Union	372 194	406 597	435 217	465 262	501 000
Yugoslavia	1 935	1 857	1 820	2 197	2 286
Algeria	13 880	* 14 600	* 11 700	* 13 200	* 13 300
Angola	* 70	* 70	* 70	* 70	* 70
Egypt	873	3 400	* 1 700	* 2 000	* 2 200
Gabon	56	61	72	* 70	...
Libya	5 119	6 785	5 168	3 058	* 4 000
Morocco	81	75	67	* 70	...
Nigeria	799	1 019	1 343	2 454	...
Tunisia	286	330	355	388	423
Canada	88 324	94 426	87 109	85 494	87 103
Mexico	21 093	25 906	31 978	34 383	* 36 000
Trinidad & Tobago	2 401	2 477	2 754	2 834	* 2 800
USA	565 602	579 681	577 063	571 369	522 800
Argentina	11 504	9 270	9 872	10 159	11 864
Bolivia	1 819	2 133	2 529	2 760	* 2 800
Brazil	1 016	990	1 260	1 111	1 360
Chile	3 500	3 910	* 3 800	* 3 700	...
Colombia	2 756	3 063	3 357	3 400	* 3 700
Peru	903	596	* 595	* 595	...
Venezuela	14 729	16 298	16 679	16 643	17 273
Afghanistan (c)	2 317	1 700	* 1 700	* 1 980	* 2 600
Bahrain	2 600	2 916	2 760	3 400	* 3 700
Bangladesh (d)	971	1 112	1 285	1 414	...
Brunei	8 890	9 360	9 290	8 850	8 678
Burma (b)	280	341	420	665	* 700
China	* 13 700	* 14 500	* 13 600	* 12 900	* 10 800
India	1 731	1 925	1 462	1 949	2 335
Indonesia	23 223	28 272	29 612	31 820	31 502
Iran	19 465	19 990	8 270	7 200	* 5 700
Iraq	1 609	2 230	2 237	1 760	* 1 700
Israel	51	68	142	175	73
Japan	2 641	2 414	2 197	2 102	2 047
Kuwait (a)	6 260	8 613	6 895	5 334	4 608
Malaysia	94	98	827	* 750	1 338
Pakistan	5 187	6 797	8 134	8 937	* 9 000
Qatar	1 479	4 362	2 264	2 669	...
Saudi Arabia (a)	* 6 800	* 11 700	* 14 600	* 14 600	* 12 200
Taiwan	1 841	1 721	1 708	1 502	1 232
Australia	7 324	8 381	9 567	11 268	11 594
New Zealand	1 804	1 428	1 125	1 374	2 473
World total	1 500 000	1 600 000	1 600 000	1 600 000	1 600 000

Note: So far as possible the figures in this table exclude flared gas

(a) Includes one-half of the output of the Neutral Zone

(b) Years ended 31 March following that stated

(c) Years ended 20 March following that stated

(d) Years ended 30 June of that stated

Exports of Crude Petroleum

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	23 138 777	38 833 712	38 595 732	52 548 820	60 376 152
Belgium-Luxembourg	80 903	3	2	58 553	181 564
Germany, Federal Republic of	999 941	1 035 545	1 257 056	1 071 236	1 141 828
Netherlands	2 962	15 387	14 683	46 633	101 802
Norway	16 685 295	18 710 771	23 197 329	20 453 396	20 665 923
Soviet Union	* 115 000 000	* 120 000 000	* 125 000 000	* 120 000 000	* 130 000 000
Algeria	47 360 501	51 739 198	46 528 964	* 45 000 000	...
Angola	* 5 500 000	* 5 925 000	* 6 204 000	* 5 858 000	...
Congo	1 109 533	3 721 086	74 984	2 665 099	...
Egypt	4 270 009	5 245 837	8 005 645	7 187 997	...
Gabon	8 829 843	6 939 400	7 687 100	* 6 000 000	...
Libya	98 262 445	104 155 494	89 864 479	* 55 000 000	...
Nigeria	85 529 262	109 143 000	96 760 000	64 392 000	...
Tunisia	4 673 652	5 253 953	4 609 280	4 991 407	...
Canada	14 221 630	15 277 740	11 349 029	8 677 140	11 104 606
Mexico	19 328 113	27 361 000	42 505 000	56 384 000	76 620 000
Netherlands Antilles	* 1 200 000	* 2 200 000	...	...	...
Trinidad & Tobago	7 950 743	7 872 600	6 710 020	6 408 519	...
USA	4 725 147	4 185 611	5 259 570	2 468 931	1 898 938
Bolivia	363 253	197 770	—	—	...
Brazil	—	0	58 812	606 665	1 087 486
Ecuador	6 141 658	6 036 003	5 613 596	6 338 751	5 095 288
Peru	1 260 309	1 846 438	1 883 910	* 2 000 000	...
Venezuela	65 157 000	73 729 000	67 782 000	66 138 000	55 350 000
Brunei	11 200 833	12 239 044	11 218 160	8 028 719	...
China (a)	* 9 750 000	* 11 320 000	* 11 300 000	* 12 200 000	* 13 360 000
Indonesia	69 560 158	60 417 683	50 886 849	50 130 321	56 069 961
Iran (b)	219 143 000	118 611 000	39 367 000	(a)* 26 500 000	(a)* 52 300 000
Iraq	116 773 000	160 606 000	120 909 000	* 36 592 000	...
Kuwait	87 234 767	104 640 105	63 509 634	36 567 575	...
Malaysia	9 152 866	12 034 451	11 226 921	* 11 975 000	...
Oman	15 766 503	14 661 756	13 911 620	16 380 250	...
Qatar	25 431 046	24 042 481	22 506 645	* 18 967 000	...
Saudi Arabia	383 306 900	440 137 000	454 661 000	444 021 000	277 321 408
Singapore	90 487	124 215	75 652	50 440	276 145
of which: Re-exports	90 487	124 215	75 247	50 440	276 143
Syria	8 109 942	7 697 000	* 6 316 000	* 6 320 000	...
United Arab Emirates	87 892 000	87 666 000	82 064 000	* 70 622 000	...
Australia	269 670	303 723	84 425	55 663	...

(a) BGS estimates, based on known imports into certain countries

(b) Years ended 20 March following that stated

Imports of Crude Petroleum

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	65 458 875	57 830 226	44 541 358	32 990 199	28 256 208
Belgium-Luxembourg	30 795 740	31 596 685	29 913 668	27 213 278	23 484 441
Denmark	7 724 824	7 951 692	5 764 051	5 017 574	4 492 081
France	116 387 810	126 010 262	109 722 147	90 095 874	76 456 847
Germany, Federal Republic of	94 375 050	107 354 974	96 875 766	79 246 855	72 541 789
Greece	12 371 250	15 495 179	10 167 382	8 904 000	11 539 000
Irish Republic	2 067 755	2 027 219	2 113 988	652 678	495 803
Italy	107 837 605	109 265 764	88 534 643	84 365 702	77 357 539
Netherlands	57 827 057	61 161 661	50 448 982	39 662 317	38 160 400
Austria	8 066 333	8 827 011	8 318 277	7 532 649	6 158 356
Bulgaria	12 644 000	* 13 000 000	* 13 000 000	* 12 500 000	...
Czechoslovakia	18 577 000	18 834 000	19 262 000	* 18 800 000	...
Finland	10 453 872	12 716 457	12 876 406	10 774 257	9 699 907
German Democratic Republic	19 925 000	20 694 000	21 876 000	22 734 000	21 745 000
Hungary	9 960 047	9 638 368	8 336 292	7 754 183	8 775 705
Norway	8 391 833	7 611 074	6 197 743	3 899 913	3 014 340
Poland	16 615 000	16 608 000	16 347 000	13 510 000	13 223 000
Portugal	6 437 121	7 690 682	8 032 076	7 503 753	...
Romania	12 937 000	14 298 000	15 961 000	12 900 000	...
Soviet Union	* 6 000 000	* 3 500 000	* 5 000 000	* 5 000 000	* 5 000 000
Spain	39 136 394	42 717 210	43 465 852	40 348 159	...
Sweden	15 641 573	16 160 000	17 898 000	14 744 000	12 769 574
Switzerland	3 872 225	4 203 409	3 832 443	3 241 634	3 636 660
Turkey	10 762 108	7 191 341	12 053 569	11 601 750	13 862 000
Yugoslavia	10 379 841	11 813 749	10 944 393	9 353 863	8 490 000
Canary Islands	5 934 783	6 031 883	6 143 221	5 427 477	...
Ethiopia	611 433	698 574	636 415	749 340	...
Ghana	631 833	* 600 000	* 550 000	* 500 000	...
Ivory Coast	1 550 623	1 973 807	1 861 844	1 520 979	...
Kenya	2 369 217	2 471 453	3 119 466	2 556 771	...
Liberia	99 590	548 366	592 466	388 943	...
Madagascar	467 608	299 237	130 237	* 150 000	...
Morocco	2 872 440	4 541 618	4 001 187	4 476 243	4 408 065
Mozambique	638 200	701 100	631 327	* 500 000	...
Senegal	852 016	794 967	248 678	684 784	...
Sierra Leone	246 331	290 750	187 224	40 962	...
South Africa	* 15 865 000	* 13 000 000	* 15 000 000	* 17 000 000	...
Sudan	1 023 600	* 1 050 000	690 834	809 590	...
Tanzania	1 106 452	568 099	621 572	541 270	...
Tunisia	942 498	1 454 996	1 146 325	1 399 364	...
Zaire	208 300	* 180 000	* 180 000	* 160 000	...
Zambia	874 228	699 000	762 000	* 600 000	...
Bahamas	* 9 282 000	* 8 700 000	* 9 000 000	* 8 600 000	...
Barbados	108 256	* 110 000	91 000	* 164 000	...
Canada	33 552 992	32 253 452	29 861 177	27 528 911	17 957 870
Costa Rica	419 595	366 234	485 423	477 783	396 156
Cuba	6 359 000	6 131 000	6 025 000	6 355 000	...
Dominican Republic	1 736 192	1 712 598	1 457 172	1 612 837	...
El Salvador	705 179	643 421	702 885	741 599	...
Guatemala	860 510	828 869	680 421	615 071	496 352
Honduras	429 724	434 052	460 081	246 792	...
Jamaica	1 011 389	1 211 505	982 578	796 013	908 707
Martinique	432 760	195 299	149 841	48 780	...
Netherlands Antilles	* 29 300 000	* 26 400 000	* 25 400 000	* 25 700 000	...
Nicaragua	507 220	437 136	587 670	* 550 000	...
Panama	2 330 355	2 165 654	1 926 424	1 487 358	1 635 407
Trinidad & Tobago	7 749 670	6 118 448	6 977 141	5 599 384	...
USA	347 232 620	357 765 623	286 983 297	255 897 319	206 212 179
Argentina	1 970 002	1 773 290	2 219 366	1 320 263	...
Brazil	44 749 557	50 158 455	43 590 021	42 209 325	39 766 369
Chile	3 563 892	4 649 000	3 326 000	2 614 000	...
Colombia	1 081 355	1 019 243	699 612	1 530 673	849 546
Paraguay	319 904	286 006	197 391	250 538	222 849
Peru	6 172 287	622	1 383	627	—
Uruguay	600 798	1 149 271	1 107 793	1 758 619	1 731 545

Imports of Crude Petroleum

tonnes

Country	1978	1979	1980	1981	1982
Bahrain	9 575 600	9 876 000	9 548 000	10 638 000	...
Bangladesh	1 064 000	1 040 000	1 278 000	1 305 000	...
Cyprus	486 120	514 253	624 353	623 950	543 772
India	14 892 000	15 467 000	15 979 000	15 552 000	...
Indonesia	2 180 800	3 069 846	4 903 138	2 676 126	4 183 387
Israel	8 149 000	7 927 000	7 399 000	6 887 000	...
Japan	238 729 354	249 255 344	223 917 000	202 897 396	190 019 797
Jordan	1 332 285	1 730 735	1 753 648	2 159 972	2 572 474
Korea, Republic of	23 790 300	25 047 873	24 844 075	24 529 305	24 808 174
Lebanon	* 1 829 000	* 1 855 000	* 2 047 000	* 1 521 000	...
Malaysia	4 225 302	4 426 235	3 960 733	* 3 450 000	...
Pakistan	3 367 918	2 945 695	4 619 075	3 954 967	4 478 376
Philippines	10 021 582	9 122 255	8 831 761	8 908 538	7 895 752
Singapore	27 651 237	28 163 001	25 085 274	31 664 934	30 311 873
Sri Lanka	1 516 127	1 438 009	1 860 653	1 698 503	1 940 543
Syria	2 371 185	3 322 276	3 154 711	4 954 216	...
Taiwan	17 129 796	17 435 865	18 107 629	17 183 443	15 900 414
Thailand	8 876 435	9 334 861	8 995 207	8 759 983	7 746 725
Yemen, People's Dem. Rep. of	* 1 930 000	* 1 950 000	* 1 950 000	* 2 070 000	...
Australia	10 328 206	10 020 845	10 012 576	10 079 169	12 300 435
New Zealand (a)	1 566 841	1 836 321	2 017 872	2 055 564	1 899 741

(a) Years ended 30 June of that stated

Production of Phosphate Rock

tonnes

Country	1978	1979	1980	1981	1982
France	24 500	* 24 000	25 400	28 700	24 400
Finland	4 218	2 690	137 950	200 927	233 053
Soviet Union	* 24 800 000	* 24 500 000	* 24 700 000	* 25 400 000	* 26 600 000
Sweden	83 000	58 000	88 000	124 000	128 000
Turkey	32 205	37 571	82 655	103 129	35 400
Algeria	1 124 000	1 132 000	1 025 400	857 700	947 000
Egypt	638 734	645 000	658 300	720 300	707 600
Morocco	19 273 200	20 030 768	18 824 243	18 562 162	17 753 600
Senegal					
Phosphate rock	1 460 000	1 523 000	1 289 543	1 792 000	837 000
Aluminium phosphate (a)	356 723	390 963	83 060	199 218	400 000
Seychelles					
Guano (b)	6 089	6 383	4 285	1 440	—
South Africa	2 699 100	3 221 000	3 282 000	3 033 500	3 173 000
Togo	2 826 614	2 915 811	2 932 845	2 215 363	2 035 000
Tunisia	3 712 338	4 056 960	4 501 907	4 924 000	4 729 391
Zimbabwe	106 639	136 238	130 337	122 235	121 608
Mexico	322 076	274 428	396 646	251 000	415 000
Netherlands Antilles	81 000	49 000	—	—	—
USA	50 037 000	51 611 000	54 415 000	53 624 000	37 414 000
Brazil	1 050 118	1 628 193	2 611 641	2 710 604	2 732 000
Chile					
Guano	240	—	—	1 100	* 1 000
Colombia	1 320	6 776	8 370	15 000	18 000
Venezuela	11 000	—	—	—	—
China	* 4 400 000	8 517 000	10 726 000	10 862 000	11 228 000
Christmas Island (b)(c)	1 378 046	1 360 852	1 638 315	1 358 572	1 342 032
India	789 270	681 486	543 004	565 902	* 569 000
Indonesia	6 071	5 323	* 5 000	* 5 000	* 5 000
Israel	1 553 900	2 085 500	2 307 100	1 918 700	2 710 600
Jordan	2 328 700	2 825 823	3 911 166	4 243 643	4 460 795
Korea, Dem. P.R. of	* 500 000	* 500 000	* 500 000	* 500 000	* 500 000
Philippines					
Phosphate rock	1 074	2 495	17 679	8 380	* 10 000
Guano	821	3 158	24 836	2 051	* 3 000
Syria	800 000	1 170 000	1 319 000	1 320 500	1 455 000
Thailand	3 485	4 542	5 570	2 610	4 265
Vietnam	* 1 600 000	* 400 000	* 500 000	* 500 000	* 500 000
Australia	248 328	7 557	6 621	21 997	235 000
Banaba (b)	468 400	(d) 445 700	—	—	—
Nauru (b)	1 998 900	1 828 420	2 086 676	1 479 900	1 333 300
World total	125 000 000	132 000 000	139 000 000	137 000 000	123 000 000

(a) Including lime phosphates

(b) Exports

(c) Including phosphate dust

(d) Figure is for 11 months only; mining ceased in November 1979

Exports of Phosphate Rock

tonnes

Country	1978	1979	1980	1981	1982
Belgium-Luxembourg	14 203	18 433	11 291	14 779	10 379
France	16 503	26 017	15 498	3 441	3 804
Germany, Federal Republic of	1 230	952	1 555	1 959	1 602
Netherlands	66 605	71 427	64 064	26 250	23 926
Soviet Union (c)	* 6 025 000	* 6 025 000	* 4 525 000	* 5 025 000	* 5 025 000
Sweden	65 045	43 816	60 675	92 575	81 414
Algeria	614 450	836 122	807 829	791 000	704 000
Egypt	64 093	...	25 945	55 817	...
Morocco	17 284 372	17 856 090	16 527 145	15 635 480	13 976 076
Senegal					
Calcium phosphate	1 569 492	1 429 308	1 483 273	1 206 539	) * 1 250 000
Aluminium phosphate	170 151	101 830	77 430	50 819)
Seychelles					
Guano	6 089	6 383	4 285	1 440	—
South Africa	—	5 321	2 841	21 521	124 180
Togo	2 801 507	2 692 710	2 818 806	2 212 495	2 055 000
Tunisia	1 669 010	1 598 246	1 317 125	951 028	...
Western Sahara	441 000	...	...	...	...
Netherlands Antilles	78 800	* 48 000	18 373	...	...
USA	13 692 646	14 786 811	14 320 352	10 553 611	9 735 025
Christmas Island (a)	1 378 046	1 360 852	1 638 315	1 358 572	1 342 032
Israel (b)	479 401	474 653	601 887	1 215 523	664 339
Jordan	2 159 920	2 754 615	3 623 069	3 529 381	3 569 701
Singapore	13 019	12 465	18 653	29 988	23 791
of which: Re-exports	13 016	10 911	14 702	27 812	20 374
Syria	919 804	1 253 389	744 034	955 497	722 000
Australia	* 284 300	104	116	...	...
Banaba	468 400	445 700	—	—	—
Nauru	1 998 900	1 828 420	2 086 676	1 479 900	1 333 300

(a) Including phosphate dust

(b) Figures may be incomplete as value only given in Israeli trade return for exports to some countries

(c) Including apatite ore

Imports of Phosphate Rock

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	1 771 722	1 751 800	1 755 115	1 456 130	1 312 124
Belgium-Luxembourg	1 941 348	2 155 347	2 326 081	2 251 950	2 088 573
Denmark	281 525	264 651	312 163	338 153	260 207
France	4 965 571	5 385 589	5 449 733	4 551 522	4 455 205
Germany, Federal Republic of	2 441 220	2 584 042	2 560 313	2 210 349	1 930 572
Greece	99 064	82 864	244 260	218 772	156 986
Irish Republic	104 728	106 400	87 059	36 859	9 669
Italy	1 618 707	1 624 800	1 739 719	1 377 281	1 161 597
Netherlands	2 207 702	2 451 072	2 485 238	2 137 710	1 949 370
Austria	314 341	410 100	409 810	421 341	351 615
Bulgaria (b)	* 671 000	* 697 000	* 328 000	* 387 000	* 322 000
Czechoslovakia (a)	317 000	322 000	323 000	271 000	280 000
Finland	429 807	672 526	613 628	410 231	495 418
German Democratic Republic (a)	460 200	544 700	533 500	416 100	420 100
Hungary	759 076	595 111	671 784	674 150	567 966
Norway	419 329	427 397	477 212	402 098	461 447
Poland	3 232 000	3 327 000	3 242 000	2 938 000	3 280 000
Portugal	389 748	355 748	457 055	342 560	340 000
Romania (a)	879 100	923 500	896 800	* 862 000	* 748 000
Spain	2 947 057	2 926 065	2 604 073	2 399 392	2 334 000
Sweden	574 401	619 160	597 445	618 932	678 931
Switzerland	11 393	13 020	13 055	9 799	7 344
Turkey	591 842	513 122	856 070	1 268 261	625 537
Yugoslavia	902 610	896 443	1 382 685	1 057 978	1 265 072
Canary Islands	8 270	6 350	2 745	6	...
Ivory Coast	9 315	6 207	3 630	6 100	11 000
Mozambique	3 000	3 000	4 000	4 000	2 000
Nigeria	3 000	25 000	15 000	32 000	21 000
Tanzania	20 588	17 951	50 000	31 000	...
Tunisia	1 801	1 000	1	...	...
Canada	3 043 899	3 341 039	3 816 514	3 245 447	2 511 724
Mexico	1 349 427	1 195 915	1 000 013	1 164 000	1 170 000
USA	920 305	893 495	487 049	16 801	31 336
Brazil	1 155 826	753 687	772 154	466 308	234 643
Colombia	65 049	48 842	40 758	37 849	67 286
Peru	15 952	7 996	50	0	41
Uruguay	65 140	130 145	68 540	50 560	29 860
Venezuela	40 781	95 020	95 040	54 290	73 400
Bangladesh	86 000	93 000	139 000	111 000	100 000
China	1 412 000	427 000	579 000	301 000	427 000
India	851 078	1 145 464	1 339 000	1 371 000	1 551 000
Japan	2 599 162	2 827 538	2 762 404	2 255 714	2 216 490
Korea, Dem. P.R. of	217 000	325 000	197 000	159 000	109 000
Korea, Republic of	1 645 000	1 845 039	1 670 321	1 136 814	1 505 459
Lebanon	236 000	438 000	313 000	322 000	5 000
Malaysia	173 554	160 861	234 000	98 000	191 000

Imports of Phosphate Rock

tonnes

Country	1978	1979	1980	1981	1982
Pakistan (c)	42 432	56 447	143 777	115 454	183 321
Philippines	21 776	96 632	30 011	5	12
Singapore	14 108	5 405	20 393	20 250	27 129
Sri Lanka	—	9	27 500	13 300	17 767
Taiwan	287 758	359 569	297 797	314 016	288 081
Australia	2 051 862	2 368 694	2 682 737	1 962 000	1 924 000
New Zealand (c)	1 137 193	1 349 279	1 209 305	1 024 671	1 025 368

(a) P₂O₅ content

(b) BGS estimates, based on known exports from certain countries

(c) Years ended 30 June of that stated

Mine Production of Platinum Group Metals

kilograms (metal content)

Country	1978	1979	1980	1981	1982
Finland (a)	57	48	28	50	50
Soviet Union	* 95 000	* 100 000	* 101 000	* 104 000	* 109 000
Yugoslavia					
Platinum (a)	13	21	13	15	* 15
Palladium (a)	173	163	140	97	* 95
Ethiopia (c)	4	3	4	* 4	* 4
South Africa	* 88 950	* 93 800	* 96 400	* 96 700	* 80 900
Zimbabwe					
Platinum	—	—	93	72	53
Palladium	—	—	211	162	86
Canada (b)	10 768	6 157	12 776	11 902	8 590
USA	256	227	104	228	250
Colombia	465	402	446	460	370
Japan					
Platinum (a)	317	378	385	327	479
Palladium (a)	753	700	901	800	867
Australia					
Platinum	92	86	64	65	* 60
Palladium	230	214	328	401	* 370
World total	197 000	202 000	213 000	215 000	201 000

Notes:

- 1 Wherever possible, figures relate to quantities of platinum group metals thought to be recovered from ores originating in the country stated. Figures for metal production are only given for countries where recovery is thought to be based predominantly on domestic materials or on imported materials which have not been recorded as mine production elsewhere in the table
- 2 In addition to the countries listed, Bulgaria, China, Indonesia, Papua New Guinea and Philippines are also believed to produce platinum group metals

(a) Metal production

(b) Platinum metals content of concentrates (produced from Ni-Cu ores), residues and matte exported

(c) Years ended 6 July of that stated

Exports of Platinum Group Metals

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom					
Platinum	22 075	21 451	28 967	26 165	27 232
Palladium	10 807	8 695	10 375	13 544	11 515
Other platinum metals	5 377	12 463	14 176	2 890	3 645
Waste & scrap	313	232	1 275	104	1 781
Belgium-Luxembourg					
Platinum	1 365	995	1 204	1 592	1 674
Platinum metals	2 295	2 527	2 901	4 214	4 828
Denmark					
Platinum	40	65	80	148	368
Waste & scrap	—	—	—	2 388	1 768
France					
Platinum	1 889	2 484	3 120	2 865	12 560
Platinum metals	1 352	2 586	915	1 196	1 911
Waste & scrap	3 150	443	7 701	1 222	3 070
Germany, Federal Republic of					
Platinum	7 853	9 014	8 676	7 431	7 378
Palladium	3 450	4 176	3 267	2 941	4 461
Other platinum metals	2 518	3 565	2 579	2 334	2 822
Waste & scrap	25 386	44 562	37 568	137	211
Irish Republic					
Platinum & platinum metals	441	119	1 446	593	1 388
Italy					
Platinum	2 064	1 352	1 973	1 687	1 552
Platinum metals	45	383	1 757	747	315
Netherlands					
Platinum	723	905	813	735	1 010
Platinum metals	454	648	449	255	562
Waste & scrap	...	...	...	2 000	4 000
Austria					
Platinum & platinum metals	238	179	320	288	335
Norway					
Platinum & platinum metals	968	1 161	833	1 060	1 033
Soviet Union					
Platinum & platinum metals (a)	* 58 100	* 67 100	* 46 000	* 46 000	* 52 400
Spain					
Platinum & platinum metals	387	1 481	311	593	...
Switzerland					
Platinum	27 869	19 645	18 389	29 233	24 816
Yugoslavia					
Platinum	2 076	1 997	126	—	...
South Africa					
Platinum & platinum metals (a)	* 81 300	* 98 700	* 89 500	* 87 600	* 78 900
Canada					
Ores & concentrates (b)	10 557	4 906	12 369	10 096	7 173
Platinum metals	1 080	1 779	1 165	1 000	954
of which: Re-exports	169	43	9	0	8
Waste & scrap	1 324	1 665	1 431	3 394	25 806
USA					
Ores & concentrates (b)	451	466	87	296	1 120
Platinum	4 911	6 045	8 608	10 459	7 612
of which: Re-exports	368	192	693	278	3 706
Palladium	3 605	6 966	5 897	5 393	5 829
of which: Re-exports	278	293	308	734	622
Other platinum metals	7 836	9 310	4 022	2 729	2 903
of which: Re-exports	488	1 259	616	184	264
Waste & scrap	5 139	5 476	5 296	6 398	12 529
Colombia					
Platinum	228	—	—	37	—
Hong Kong					
Platinum & platinum metals (Re-exports)	689	606	441	124	193

Exports of Platinum Group Metals

kilograms

Country	1978	1979	1980	1981	1982
Japan					
Platinum	1 282	1 701	1 101	1 884	1 632
Platinum metals	2 519	1 816	1 780	1 388	3 405
Australia					
Platinum & platinum metals	1 838	339	256	...	...

Note: In this table the term 'Platinum' and/or 'Platinum metals' as used here includes unwrought, partly worked and alloys

(a) BGS estimates, based on known imports into certain countries

(b) Platinum metals content

Imports of Platinum Group Metals

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates (a)	* £80 880 000	* £90 332 000	* £187 731 000	* £169 072 000	* £90 723 000
Platinum	3 859	7 815	8 025	4 643	11 209
Palladium	5 135	1 625	7 444	4 464	6 636
Other platinum metals	2 138	2 623	4 317	1 203	1 145
Waste & scrap	8 314	11 640	10 512	15 560	56 188
Belgium-Luxembourg					
Platinum	2 159	1 605	2 137	2 008	1 989
Platinum metals	494	1 006	537	838	858
Denmark					
Platinum & platinum metals	1 041	693	501	612	563
France					
Platinum	5 396	9 281	6 340	5 568	6 401
Platinum metals	2 544	4 048	5 465	9 858	18 330
Waste & scrap	2 578	2 100	3 092	3 479	1 536
Germany, Federal Republic of					
Platinum	9 374	15 853	12 930	13 475	24 180
Palladium	11 458	11 882	11 443	9 022	26 553
Other platinum metals	3 982	3 543	3 723	3 012	3 013
Waste & scrap	48 536	29 929	59 061	23 064	38 547
Greece					
Platinum & platinum metals	£485 000	£1 200 000	£692 000	£285 000	£264 000
Irish Republic					
Platinum & platinum metals	1 445	535	935	552	367
Italy					
Platinum	2 807	3 050	3 574	2 392	2 159
Platinum metals	4 140	4 613	3 942	2 977	3 362
Waste & scrap	...	...	...	34 335	41 100
Netherlands					
Platinum	965	1 108	1 379	1 059	1 318
Platinum metals	943	896	586	545	798
Austria					
Platinum & platinum metals	2 118	705	813	687	893
Bulgaria					
Platinum & platinum metals (e)	* 20	* 500	* 600	* 300	* 200
Czechoslovakia					
Platinum & platinum metals (e)	* 200	* 150	* 500	* 150	* 50
Finland					
Platinum & platinum metals	104	112	182	55	88
Hungary					
Platinum & platinum metals (e)	* 400	* 300	* 400	* 500	* 600
Norway					
Platinum & platinum metals	298	210	172	237	339
Poland					
Platinum & platinum metals (e)	* 600	* 400	* 100	* 50	* 500
Portugal					
Platinum & platinum metals	186	272	271	...	...
Romania					
Platinum & platinum metals (e)	* 500	* 400	* 300	* 400	* 100
Spain					
Platinum & platinum metals	362	2 431	15 185	8 245	...
Sweden					
Platinum & platinum metals	3 000	4 000	4 000	2 000	3 000
Switzerland					
Platinum	15 741	15 410	30 876	26 348	30 474
Turkey					
Platinum & platinum metals	344	135	862	1 348	...
Yugoslavia					
Platinum	2 220	2 474	202	...	...
Algeria					
Platinum & platinum metals	178	624	92	...	...
Nigeria					
Platinum & platinum metals	220	23	...	...	...
South Africa					
Platinum & platinum metals	669	854	715	810	1 901

Imports of Platinum Group Metals

kilograms

Country	1978	1979	1980	1981	1982
Tunisia					
Platinum	3	91	11	...	...
Zambia					
Platinum	33	...	...	...	...
Canada					
Platinum & platinum metals (c)	1 747	1 603	1 582	1 258	910
Costa Rica					
Platinum & platinum metals	275	425	434	562	350
Mexico					
Platinum	51	2	3	...	...
Palladium	133	148	107	...	...
Other platinum metals	23	12	34	...	...
Trinidad & Tobago					
Platinum & platinum metals	7	94	151	15	...
USA					
Ores & concentrates (d)	308	345	21	45	43
Platinum	36 541	44 612	44 715	33 288	25 101
Platinum metals —					
Palladium	38 075	46 795	40 952	38 285	34 214
Iridium, osmium & osmiridium	1 501	1 283	1 149	670	854
Rhodium	3 201	3 391	3 430	2 348	2 176
Ruthenium	2 287	3 885	3 063	5 612	4 162
Waste & scrap	5 851	4 873	11 711	17 940	10 547
Argentina					
Platinum	70	28	26	...	...
Palladium	393	212	900	...	...
Other platinum metals	—	126	1 000	...	...
Brazil					
Platinum	119	299	164	143	35
Palladium	388	518	658	334	561
Ecuador					
Platinum & platinum metals	101	1 693	6	...	...
Venezuela					
Platinum & platinum metals	245	2 074	...	...	...
China					
Platinum & platinum metals (e)	* 1 800	* 1 300	* 300	* 200	* 200
Hong Kong					
Platinum & platinum metals	3 834	1 995	1 544	2 448	2 264
India					
Platinum	417	393	478	...	...
Iran (f)					
Platinum & platinum metals	£111 400	£1 180 800	£874 100	£897 500	...
Israel					
Platinum metals	* 130	192	136	187	...
Japan					
Platinum	38 946	30 486	31 410	38 078	34 673
Platinum metals	25 143	33 247	26 074	32 000	35 380
Korea, Republic of					
Platinum & platinum metals	1 263	3 093	2 350	56 339	829
Malaysia					
Platinum & platinum metals	283	87	536	...	...
Singapore					
Platinum	44	161	600	3 963	990
Taiwan					
Platinum & platinum metals	3 868	8 800	3 203	3 541	2 998
Thailand					
Platinum & platinum metals	6	7	38	5	40

Imports of Platinum Group Metals

kilograms

Country	1978	1979	1980	1981	1982
Australia					
Platinum metals	4 669	4 157	25 670	23 422	...
New Zealand (b)					
Platinum & platinum metals	63	84	56	93	71

Note: In this table the term 'Platinum' and/or 'Platinum metals' as used here includes unwrought, partly worked and alloys

- (a) Values shown refer to imports of 'ores and concentrates of silver, platinum and platinum metals', assuming that the imports of silver ores and concentrates are negligible
- (b) Years ended 30 June of that stated
- (c) Derived from Canadian ores and concentrates exported for treatment
- (d) Platinum metals content
- (e) BGS estimates, based on known exports from certain countries
- (f) Years ended 20 March following that stated

Potash

Production of Potashtonnes (K₂O content)

Country	1978	1979	1980	1981	1982
United Kingdom					
Chloride	157 342	277 684	321 469	294 150	252 936
France					
Potassic salts	1 928 000	2 075 000	2 039 000	1 969 000	1 824 000
Germany, Federal Republic of					
Potassic salts	2 470 000	2 616 000	2 737 000	2 610 000	2 057 000
Italy					
Potassic salts	248 310	182 429	130 164	141 780	146 023
German Democratic Republic					
Potassic salts	3 323 000	3 395 000	3 422 000	3 460 000	3 434 000
Soviet Union	8 193 000	6 635 000	8 064 000	8 449 000	9 000 000
Spain					
Potassic salts	722 301	780 632	791 498	860 891	822 696
Canada					
Chloride	6 109 555	6 704 728	7 302 901	7 146 629	5 197 238
USA					
Potassic salts	2 253 000	2 225 000	2 239 000	2 156 000	1 784 000
Chile					
Nitrate	* 14 900	* 21 600	* 25 300	* 21 400	* 20 600
China	* 21 000	* 16 000	* 12 000	* 11 000	* 25 000
Israel					
Chloride	695 000	730 000	797 000	839 000	* 1 000 000
World total	26 100 000	25 700 000	27 900 000	28 000 000	25 600 000

Exports of Potash

Country	1978	1979	1980	1981	1982
United Kingdom					
Sulphate	326	40	473	1 237	1 093
Chloride	62 951	164 700	200 240	91 216	76 552
Potassic chemicals	549	1 742	1 745	1 758	2 159
Belgium-Luxembourg					
Fertiliser salts (a)	138	566	729	713	112
Sulphate (a)	274 416	297 668	325 076	291 287	...
Chloride (a)	8 551	5 138	6 060	5 849	15 367
Potassic chemicals	1 651	1 389	1 700	2 113	3 279
France					
Fertiliser salts	11 533	18 453	13 293	8 807	11 892
Chloride	492 681	412 820	311 855	345 239	447 959
Other potassic fertilisers	30 621	33 937	23 553	21 825	17 604
Potassic chemicals	14 819	20 189	18 981	21 655	22 152
Germany, Federal Republic of					
Fertiliser salts	32 280	49 296	35 585	39 882	38 562
Sulphate	485 992	569 272	) 2 503 623	2 348 198	1 996 789
Chloride	1 891 526	1 863 298)		
Potassic chemicals	33 628	34 132	32 413	38 012	37 656
Italy					
Sulphate	106 804	105 194	72 040	40 426	39 789
Potassic chemicals	301	303	214	20 656	25 941
Netherlands					
Chloride (a)	473	1 504	3 423	3 456	2 330
Potassic chemicals	1 719	1 738	1 351	1 912	1 505
German Democratic Republic					
Fertiliser salts (a)	2 744 000	2 745 000	2 817 000	2 860 000	2 834 000
Potassic chemicals	1 412	* 1 980	* 2 400	...	...
Poland					
Potassic chemicals	8 342	6 762	14 000	...	...
Portugal					
Sulphate	1 315	—	100	...	...
Other potassic fertilisers	—	100	1 295	...	...
Soviet Union					
Fertiliser salts	5 771 093	4 773 334	6 604 707	5 244 747	4 956 288
Spain					
Sulphate	64 466	80 369	78 485	95 436	...
Chloride	340 268	597 132	495 867	512 038	...
Potassic chemicals	12 771	19 473	13 478	6 299	...
Sweden					
Chloride	3 371	441	1	—	56
Potassic chemicals	3 128	3 643	3 714	3 696	4 818
Yugoslavia					
Potassic chemicals	1 073	2 349	2 115	2 611	...
Canada					
Chloride	9 275 810	10 630 584	10 565 401	10 067 852	7 221 375
USA					
Sulphate	183 531	227 805	147 731	99 363	99 758
Chloride	1 126 000	891 378	1 174 548	712 887	717 969
Other potassic fertilisers	227 239	310 483	324 265	279 607	288 074
Potassic chemicals	22 457	27 323	34 155	27 206	8 900
Hong Kong					
Potassic chemicals (Re-exports)	206	772	1 012	846	891
India					
Potassic chemicals (c)	1 518	705	794	...	...
Israel (b)					
Potassic chemicals	3 413	2 435	3 938	3 991	4 400
Japan					
Sulphate	4 149	2 002	3	4 300	1 020
Chloride	4	4	3	3 918	55
Potassic chemicals	5 617	5 415	7 096	5 433	6 421

Potash

Exports of Potash

tonnes

Country	1978	1979	1980	1981	1982
Singapore					
Sulphate	...	524	468	737	2 005
of which: Re-exports	...	524	468	737	1 979
Chloride	...	2 413	2 349	4 553	5 354
of which: Re-exports	...	2 406	2 098	3 852	5 054
Other potassic fertilisers	203 616	231 230	185 837	261 224	182 649
of which: Re-exports	203 490	231 172	185 736	261 090	182 539
Taiwan					
Potassic chemicals	1 110	1 082	1 172	685	516

Note: So far as possible the term 'potassic chemicals', as used in this table, relates to items 522. 54,523. 1 and 2 of the Standard International Trade Classification (Revision 2) and includes caustic potash, carbonate, chlorate, nitrate and sulphate

- (a) K₂O content
- (b) Figures may be incomplete as value only given in Israeli trade return for exports to some countries
- (c) Years ended 31 March following that stated

Imports of Potash

Country	1978	1979	1980	1981	1982
United Kingdom					
Fertiliser salts	23 552	37 626	25 428	25 011	22 492
Sulphate	21 973	21 803	17 889	12 664	14 126
Chloride	644 822	607 860	534 836	467 011	481 542
Potassic chemicals	25 969	25 700	22 379	18 290	22 596
Belgium-Luxembourg					
Fertiliser salts (a)	8 419	10 827	8 010	7 388	5 925
Sulphate (a)	18 959	17 398	12 005	13 024	13 862
Chloride (a)	558 428	595 927	655 843	569 324	518 526
Potassic chemicals	8 079	8 846	8 205	7 338	10 227
Denmark					
Fertiliser salts	825	825	849	875	1 775
Sulphate	24 898	62 616	46 855	68 020	35 752
Chloride	194 748	177 777	192 380	179 635	198 663
Potassic chemicals	4 602	5 247	5 785	5 764	6 598
France					
Sulphate	155 548	177 885	177 714	154 368	143 318
Chloride	164 869	184 458	276 936	197 175	212 627
Potassic chemicals	23 660	27 954	27 410	15 450	24 137
Germany, Federal Republic of					
Chloride	92 365	208 373	216 961	172 867	171 274
Potassic chemicals	13 917	15 167	17 102	13 744	21 783
Greece					
Sulphate	20 303	9 116	48 480	5 075	2 317
Potassic chemicals	2 110	788	3 596	2 918	3 070
Irish Republic					
Sulphate	4 266	4 078	7 559	8 204	9 250
Chloride	327 357	373 008	258 761	311 562	248 368
Other potassic fertilisers	2 399	40	6 092	20	402
Potassic chemicals (f)	583	861	677	1 305	1 121
Italy					
Fertiliser salts	19 153	22 316	16 983	12 719	11 341
Sulphate	51 793	64 990	41 925	50 904	27 502
Chloride	479 212	632 046	631 323	480 139	461 404
Other potassic fertilisers	35	259	32 114	21 220	21 998
Potassic chemicals	21 513	16 614	16 738	15 248	26 242
Netherlands					
Fertiliser salts (a)	403	881	578	175	462
Sulphate (a)	38 781	44 617	30 961	37 928	28 541
Chloride (a)	154 944	160 386	157 754	166 019	184 046
Potassic chemicals	21 671	27 670	28 277	25 695	26 196
Austria					
Fertiliser salts	19 231	16 302	12 216	13 531	10 963
Sulphate	36 784	36 967	25 547	28 913	33 283
Chloride	215 872	257 027	269 149	260 144	224 644
Other potassic fertilisers	14	102	1 508	2 151	3 948
Potassic chemicals	3 909	3 815	4 676	5 489	5 795
Czechoslovakia					
Fertiliser salts (a)	670 000	624 000	578 000	639 100	639 000
Finland					
Sulphate	—	10 517	17 544	30 339	187
Chloride	243 382	289 498	288 983	262 794	302 511
Other potassic fertilisers	0	0	2	5 018	6 305
Potassic chemicals	2 065	1 524	3 504	2 204	3 294
Hungary					
Fertiliser salts	3 140	1 897	2 312	2 719	3 131
Potassic fertilisers	1 525 000	1 110 300	1 322 200	1 396 505	1 189 723
Potassic chemicals	1 629	1 642	1 754	961	1 634
Iceland					
Sulphate	1 448	3 500	200	2 687	3 450
Chloride	4 353	2 173	6 999	5 697	5 579
Potassic chemicals	236	169	177	190	198
Norway					
Sulphate	106 612	98 338	122 527	103 185	67 872
Chloride	161 677	203 879	196 714	184 502	215 797
Other potassic fertilisers	380	373	231	376	687
Potassic chemicals	5 602	3 042	2 265	2 432	3 256

Imports of Potash

tonnes

Country	1978	1979	1980	1981	1982
Poland					
Fertiliser salts	2 436 000	1 761 000	2 428 000	2 865 000	2 377 000
Chloride	22 599	21 646	18 230	13 409	...
Potassic chemicals	8 852	10 095	10 856	7 046	...
Portugal					
Sulphate	0	1 040	2 300	4 350	...
Chloride	72 983	89 944	83 826	86 507	...
Potassic chemicals	2 385	2 521	2 726	...	...
Romania					
Fertiliser salts (a)	161 900	179 000	150 100	226 000	...
Spain					
Potassic chemicals	3 938	7 284	4 892	14 730	...
Sweden					
Fertiliser salts	3	—	459	1 026	1 323
Potassic fertilisers	923	1 095	616	418	893
Potassic chemicals	3 180	2 982	3 549	2 583	2 087
Switzerland					
Fertiliser salts	84 004	87 606	87 735	85 990	86 356
Potassic chemicals	7 059	8 843	9 413	8 175	8 652
Turkey					
Sulphate	—	28 465	23 064	51 381	) 56 931
Other potassic fertilisers	4 163	4 593	3 792	2)
Potassic chemicals	4 843	6 711	4 901	3 563	...
Yugoslavia					
Sulphate	17 768	13 455	13 582	13 850	) 451 529
Chloride	425 403	381 541	448 216	431 091)
Potassic chemicals	198 043	264 897	260 310	194 298	...
Algeria					
Sulphate	54 760	42 416	47 045	...	...
Potassic chemicals	295	1 134	371	...	...
Angola					
Sulphate (a)	500	...	...	...	...
Chloride (a)	600	...	...	...	...
Cameroon					
Fertiliser salts	7 146	9 000	5 000	...	...
Potassic fertilisers	4 148	4 820	8 297	...	...
Canary Islands					
Potassic chemicals	1 359	2 251	2	2 400	...
Egypt					
Potassic fertilisers	—	4 731	5 025	24 814	5 000
Ivory Coast					
Sulphate	8 313	9 800	2 708	8 150	...
Chloride	41 176	32 537	16 015	35 327	...
Potassic chemicals	140	110	11	18	...
Kenya					
Potassic fertilisers	10 752	91	613	5 855	...
Liberia					
Potassic fertilisers	546	863	202	139	...
Libya					
Potassic fertilisers	16 165	17 576	38 814	...	...
Madagascar					
Potassic fertilisers	6 900	7 443	3 286	...	...
Malawi					
Potassic fertilisers	1 550	13 542	9 553	...	...
Mauritius					
Potassic fertilisers	20 590	24 838	22 694	23 198	...
Morocco					
Sulphate	31 285	47 195	36 734	43 141	47 226
Chloride	22 428	35 636	41 660	31 216	24 620
Potassic chemicals	1 406	1 644	1 436	1 577	1 610
Mozambique					
Potassic fertilisers	...	...	5 595	...	...
Nigeria					
Potassic fertilisers	354 590	5 288	...	...	...
Senegal					
Potassic fertilisers	27 470	19 938	196	17 230	...

Imports of Potash

Country	1978	1979	1980	1981	1982
South Africa					
Potassic fertilisers	264 871	201 372	244 573	272 883	210 098
Potassic chemicals	3 950	4 473	4 402	4 285	5 529
Sudan					
Potassic chemicals	36	151	202	...	...
Tanzania					
Potassic fertilisers	11 718	6 050	8 333	...	...
Tunisia					
Potassic fertilisers	6 719	12 228	15 112	5 638	...
Zaire					
Potassic fertilisers	1 495	2 593	934	...	...
Zimbabwe					
Sulphate	140	21 815	31 207	20 428	...
Chloride	...	28 644	...	24 171	...
Belize					
Potassic fertilisers	508	403	—	377	335
Canada					
Sulphate	20 036	20 106	9 414	18 288	20 045
Chloride	1 793	2 042	28 889	8 594	1 881
Other potassic fertilisers	53 851	49 626	44 549	52 864	57 650
Potassic chemicals	8 754	8 145	7 824	7 077	6 965
Costa Rica					
Potassic fertilisers	44 702	52 863	63 106	49 625	42 537
Cuba					
Sulphate	24 467	23 800	24 800	...	...
Chloride	258 307	189 800	295 800	...	...
Dominica					
Potassic fertilisers	5 631	* 2 000	* 4 000	* 4 000	...
Dominican Republic					
Sulphate	4 069	2 040	) 43 434	34 265	...
Other potassic fertilisers	19 415	15 411	)	...	...
El Salvador					
Potassic fertilisers	3 653	13 991	140	80	...
Guadeloupe					
Potassic fertilisers	2 200	2 530	3 617	10 700	...
Guatemala					
Potassic fertilisers	4 733	12 091	17 724	20 740	4 978
Honduras					
Potassic fertilisers	9 443	9 148	5 623	8 550	...
Jamaica					
Potassic fertilisers	5 722	8 780	2 869	13 687	8 477
Martinique					
Potassic fertilisers	624	1 098	648	14 586	...
Mexico					
Sulphate	24 727	38 596	28 109	...	...
Chloride	111 493	116 886	120 564	...	...
Potassic chemicals	5 701	5 275	3 288	...	...
Nicaragua					
Potassic fertilisers	8 525	18	12 932	...	...
Panama					
Potassic fertilisers	4 564	8 743	4 976	1 480	7 501
St. Kitts-Nevis-Anguilla					
Potassic fertilisers	1 500	4	0	499	182
Trinidad & Tobago					
Potassic fertilisers	5 076	1 782	5 266	106 511	...
USA					
Fertiliser salts	66 655	33 035	35 788	38 789	23 068
Sulphate	58 097	20 190	45 302	36 756	12 147
Chloride	7 610 926	8 413 900	8 039 331	7 803 130	6 489 641
Other potassic fertilisers	3 404	86	2 878	137	33
Potassic chemicals	11 514	12 168	12 259	14 786	...
Argentina					
Sulphate	5 877	11 445	8 200	...	...
Chloride	6 392	7 503	6 360	...	...
Potassic chemicals	2 238	6 968	1 608	...	...

Imports of Potash

tonnes

Country	1978	1979	1980	1981	1982
Brazil					
Sulphate	58 320	71 168	65 975	50 647	68 334
Chloride	1 602 315	1 758 874	2 119 950	1 222 908	1 425 443
Potassic chemicals	25 251	25 613	28 735	16 572	12 389
Chile					
Sulphate	13 997	...	...	...	...
Chloride	11 659	...	...	...	...
Colombia					
Sulphate	29 829	19 066	19 057	8 142	13 003
Chloride	105 697	82 392	135 749	89 034	148 770
Potassic chemicals	1 603	1 834	1 759	1 910	2 437
Ecuador					
Chloride	9 310	10 815	25 901	...	...
Other potassic fertilisers	2 086	1 846	1 873	...	...
Guyana					
Potassic fertilisers	662	700	518	2 024	2 251
Peru					
Sulphate	16 561	3 841	7 053	4 489	3 167
Chloride	19 388	17 004	14 211	16 523	6 304
Potassic chemicals	942	582	1 067	635	850
Uruguay					
Sulphate	927	2 001	1 934	1 500	—
Chloride	4 942	11 117	7 480	6 028	3 134
Potassic chemicals	177	120	144	113	22
Venezuela					
Potassic fertilisers	5	2	48 430	74 790	...
Potassic chemicals	3 479	1 087	...	...	...
China					
Potassic fertilisers (e)	* 75 000	* 429 000	* 397 000	* 762 000	* 200 000
Cyprus					
Potassic fertilisers	606	1 037	408	671	2 195
Hong Kong					
Potassic chemicals	948	676	1 589	1 621	1 336
India (b)					
Sulphate	10 665	8 445	99 356	...	...
Chloride	347 478	406 513	640 706	...	...
Other potassic fertilisers	67 282	70 568	149 201	...	...
Potassic chemicals	123	223	607	...	...
Indonesia					
Sulphate	315	2 950	5 852	32 631	19 022
Other potassic fertilisers	107 352	107 175	136 314	180 946	204 746
Potassic chemicals	1 305	913	901	1 424	1 304
Iran (c)					
Potassic chemicals	* 100	* 50	(e)* 100	(e)* 300	(e)* 50
Japan					
Sulphate	200 703	208 435	234 658	190 651	201 623
Chloride	1 088 061	1 098 918	1 263 195	978 037	1 049 094
Other potassic fertilisers	33 687	34 419	35 547	40 275	49 341
Potassic chemicals	8 664	3 146	9 566	12 461	15 340
Jordan					
Potassic fertilisers	1 850	994	144	274	1 117
Korea, Republic of					
Sulphate	...	32 098	27 800	11 926	24 801
Chloride	...	242 688	231 237	217 104	365 366
Other potassic fertilisers	...	84 516	—	40 548	—
Potassic chemicals	...	5 404	4 827	5 631	2 937
Malaysia					
Fertiliser salts	1 245	214	1 188	...	...
Sulphate	6 269	9 664	6 026	...	...
Chloride	4 158	81 371	196 461	...	...
Other potassic fertilisers	274 119	286 079	273 254	...	...
Philippines					
Sulphate	4 560	8 246	4 899	8 365	10 300
Chloride	38	92 740	129 474	79 175	88 391
Other potassic fertilisers	5 342	6 505	1 102	1 436	1 490
Potassic chemicals	738	1 220	1 128	1 439	1 734

Imports of Potash

Country	1978	1979	1980	1981	1982
Singapore					
Sulphate	—	13 687	22 570	8 225	2 000
Chloride	—	26 858	45 754	14 814	39 411
Other potassic fertilisers	247 697	257 099	239 303	234 276	220 091
Sri Lanka					
Chloride	20 780	33 529	75 018	61 701	51 038
Other potassic fertilisers	21	5 000	19 915	10 650	19 720
Taiwan					
Chloride	107 110	161 647	224 387	247 244	138 206
Potassic chemicals	5 533	7 814	6 512	7 361	4 807
Thailand					
Sulphate	3 000	7 900	10 500	12 005	11 600
Chloride	15 952	—	18 505	22 278	8 985
Other potassic fertilisers	3 800	7 700	500	200	30 379
Potassic chemicals	2 682	10 820	4 643	5 674	10 356
Australia					
Sulphate	6 366	8 546	19 013	22 172	7 800
Chloride	173 463	158 064	183 522	178 467	202 000
Other potassic fertilisers	2 443	15 037	24 332	725	1 000
Potassic chemicals (d)	7 463	9 612	9 512	9 419	...
Fiji					
Potassic fertilisers	3 031	2 241	2 767	4 389	3 592
New Zealand (d)					
Sulphate	4 479	1 134	1 874	1 418	817
Chloride	230 502	220 463	149 752	198 806	168 381
Other potassic fertilisers	592	136	72	4 933	1 821
Potassic chemicals	1 230	1 778	1 292	632	349

Note: So far as possible the term 'potassic chemicals', as used in this table, relates to items 522. 54,523.1 and 2 of the Standard International Trade Classification (Revision 2) and includes caustic potash, carbonate, chlorate, nitrate and sulphate.

- (a) K₂O content
- (b) Years ended 31 March following that stated
- (c) Years ended 20 March following that stated
- (d) Years ended 30 June of that stated
- (e) BGS estimates, based on known exports from certain countries
- (f) May include some sodium peroxide

Production of Rare Earth Minerals

tonnes

Country	1978	1979	1980	1981	1982
Burundi					
Bastnaesite	40	30	30	* 30	...
Nigeria					
Monazite	* 20	* 20	* 20	—	—
Zaire					
Monazite	77	92	51	35	32
USA					
Bastnaesite (a)	14 148	16 515	15 986	17 082	* 16 800
Monazite (a)	* 1 250	* 1 200	* 700	* 850	* 1 000
Brazil					
Monazite	2 541	1 900	2 532	2 100	* 2 100
India					
Monazite (d)	3 303	3 254	* 4 210	* 4 300	* 4 200
Malaysia					
Monazite (b)	1 607	466	327	320	582
Xenotime (b)	—	—	—	—	14
Sri Lanka					
Monazite	18	4	63	* 60	304
Thailand					
Monazite	—	32	152	107	162
Xenotime	—	6	52	45	46
Australia					
Monazite	14 992	16 340	14 079	13 282	9 562
Xenotime	23	19	27	52	...
World total (c)	48 300	51 700	49 400	50 200	46 700
World total (REO content)	* 28 900	* 31 000	* 29 500	* 30 100	* 28 000

Notes:

- 1 With the exception of the data for USA, figures in this table refer to gross tonnage of rare earth concentrates
- 2 Rare earth minerals are also believed to be produced in China and the Soviet Union (about 2 300 tonnes REO per annum) and possibly, on a small scale, in Indonesia, Democratic P.R. of Korea and South Africa

(a) REO content

(b) Exports

(c) Expressed as weight of concentrates produced; USA production has been grossed up to concentrate equivalent on the assumption that both its bastnaesite and monazite concentrates contain 60% REO

(d) Years ended 31 March following that stated

Exports of Rare Earths

Country	1978	1979	1980	1981	1982
United Kingdom					
Ferro-cerium & other pyrophoric alloys	29	22	31	9	25
Metals	110	48	56	34	65
Belgium-Luxembourg					
Ferro-cerium & other pyrophoric alloys	—	—	—	47	24
France					
Cerium compounds	1 579	...	...	...	...
Other rare earth compounds	2 128	...	...	...	...
Ferro-cerium & other pyrophoric alloys	20	10	13	82	56
Metals	13	109	34	24	18
Germany, Federal Republic of					
Cerium compounds	943	1 773	1 874	1 712	880
Other rare earth compounds	220	126	86	66	53
Ferro-cerium & other pyrophoric alloys	62	39	75	55	54
Metals	249	154	157	147	253
Italy					
Ferro-cerium & other pyrophoric alloys	1	5	...	—	15
Metals	141	107	26	10	10
Austria					
Metals	310	300	196	275	378
Algeria					
Cerium metal	245	—	47	...	...
South Africa (a)					
Rare earth compounds	£1 550	£1 500	£1 000	£1 200	—
USA					
Ores & concentrates	7 494	8 334	9 115	9 587	4 836
Ferro-cerium & other pyrophoric alloys	17	38	16	10	27
Brazil					
Cerium compounds	530	120	0	15	310
Ferro-cerium & other pyrophoric alloys	592	600	451	235	174
Metals	29	4	18	70	68
Japan					
Ferro-cerium & other pyrophoric alloys	81	76	76	89	59
Malaysia					
Ores & concentrates	1 607	466	327	320	596
Thailand					
Ores & concentrates	696	47	10	76	120
Australia					
Ores & concentrates	11 600	13 154	10 250	14 028	...

Notes:

- Trade in rare earth compounds has been omitted from this table in those cases where it is not separately distinguished from the trade in compounds of thorium and uranium, as under the Standard International Trade Classification (Revision 2), item 524.92
- Rare earths are here taken to include yttrium and scandium; the term 'metals' includes intermixtures and interalloys thereof

(a) Values shown are for the common customs area

Imports of Rare Earths

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ferro-cerium & other pyrophoric alloys	25	30	44	26	15
Metals	29	95	108	33	11
Belgium-Luxembourg					
Cerium compounds	15	53	52	97	81
Other rare earth compounds	18	6	23	5	61
Ferro-cerium & other pyrophoric alloys	1	1	28	14	23
Metals	29	43	21	1	10
Denmark					
Cerium compounds	1	2	1	1	1
Ferro-cerium & other pyrophoric alloys	3	2	2	2	2
France					
Cerium compounds	127	149	66	46	264
Other rare earth compounds	367	423	328	653	787
Ferro-cerium & other pyrophoric alloys	43	119	129	70	73
Metals	88	15	11	64	76
Germany, Federal Republic of					
Cerium compounds	831	965	752	509	587
Other rare earth compounds	146	230	152	188	193
Ferro-cerium & other pyrophoric alloys	67	37	14	30	11
Metals	110	107	60	76	74
Italy					
Ferro-cerium & other pyrophoric alloys	12	14	9	13	50
Metals	122	28	138	37	140
Netherlands					
Cerium compounds	1 356	1 075	1 263	1 354	2 160
Other rare earth compounds	36	54	29	335	2 526
Metals	1	5	0	0	1
Austria					
Metals	6	170	2	3	149
Finland					
Ferro-cerium & other pyrophoric alloys	1	4	1	10	1
Portugal					
Ferro-cerium & other pyrophoric alloys	4	5	5	2	...
Switzerland					
Ferro-cerium & other pyrophoric alloys	4	4	4	4	0
Metals	3	7	6	1	2
Turkey					
Metals	7	2	4	—	...
South Africa					
Rare earth compounds (a)	£68 800	£130 100	£84 000	£79 000	£58 000
USA					
Ores & concentrates	6 996	6 287	5 147	7 469	6 799
Cerium compounds	3	6	6	8	26
Other rare earth compounds	169	385	506	203	177
Ferro-cerium & other pyrophoric alloys	59	56	65	83	86
Metals	443	81	346	188	96
Argentina					
Cerium compounds	10	8	12	...	...
Other rare earth compounds	1	7	29	...	...
Ferro-cerium & other pyrophoric alloys	1	1	24	...	...
Metals	9	30	27	...	...

Imports of Rare Earths

tonnes

Country	1978	1979	1980	1981	1982
Brazil					
Cerium compounds	23	65	51	29	91
Other rare earth compounds	—	—	27	10	16
Metals	3	14	21	26	53
Venezuela					
Ferro-cerium & other pyrophoric alloys	8	3	2	...	...
Indonesia					
Ferro-cerium & other pyrophoric alloys	47	58	61	3	0
Japan					
Cerium compounds	62	70	52	62	58
Other rare earth compounds	3 226	4 648	4 809	5 694	3 969
Ferro-cerium & other pyrophoric alloys	13	15	7	10	16
Metals	53	86	42	8	9
Korea, Republic of					
Cerium compounds	...	58	31	38	85

Notes:

- 1 Trade in rare earth compounds has been omitted from this table in those cases where it is not separately distinguished from the trade in compounds of thorium and uranium, as under the Standard International Trade Classification (Revision 2), item 524.92
- 2 Rare earths are here taken to include yttrium and scandium; the term 'metals' includes intermixtures and interalloys thereof

(a) Values shown are for the common customs area

Salt

Production of Salt

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Rock salt	1 311 000	1 590 000	1 746 000	1 350 000	2 209 000
Brine salt	1 760 000	1 915 000	1 607 608	1 454 204	1 554 000
Salt in brine (a)	4 239 000	4 315 000	3 799 900	3 915 824	3 874 000
Denmark	325 093	380 448	347 423	397 578	399 280
France					
Rock salt	966 500	1 274 000	851 000	749 000	925 000
Salt in brine	4 100 000	5 042 000	4 415 310	3 870 300	3 711 000
Sea salt	864 500	1 814 000	1 277 000	1 392 000	1 539 000
Germany, Federal Republic of					
Rock salt	7 211 000	9 270 000	7 197 000	8 211 000	7 044 000
Brine salt	868 313	893 000	880 000	836 000	842 000
Salt in brine	4 880 030	5 182 885	4 578 299	4 461 585	4 296 827
Greece	124 711	162 534	120 969	* 118 000	...
Italy					
Rock salt & brine salt	3 721 266	4 490 118	3 997 096	3 600 846	3 604 580
Sea salt	1 210 200	1 179 000	* 1 270 000	* 1 270 000	...
Netherlands	2 939 000	3 951 000	3 464 000	3 578 000	3 191 000
Albania	* 50 000	* 62 500	* 66 500	* 66 500	* 66 500
Austria					
Rock salt	1 173	968	1 018	1 330	1 085
Salt in brine	188 000	247 000	261 000	264 000	* 235 000
Evaporated salt	320 886	380 329	410 130	462 485	433 557
Bulgaria	87 000	86 000	87 000	* 86 000	...
Czechoslovakia	351 293	372 277	371 241	409 436	436 489
German Democratic Republic	2 741 400	3 052 000	3 127 700	3 111 800	4 115 000
Poland					
Rock salt	1 435 000	1 458 000	1 464 000	1 313 000	1 338 000
Brine salt	880 000	) 2 971 000	3 069 000	2 960 000	2 519 000
Other salt	2 078 000)			
Portugal					
Rock salt	326 255	408 959	401 923	406 699	406 255
Sea salt	149 835	166 620	217 560	249 055	* 200 000
Romania	4 739 000	4 720 000	5 056 000	* 5 000 000	...
Soviet Union	* 14 500 000	* 14 300 000	* 14 500 000	* 15 200 000	* 15 500 000
Spain					
Rock salt	2 091 919	2 187 419	2 379 476	2 300 175	...
Sea salt	1 252 020	1 236 864	1 103 665	1 393 033	...
Other salt	25 000	23 090	25 570	27 972	...
Switzerland					
Evaporated salt	35 651	34 006	30 020	29 902	34 557
Other salt	310 827	306 680	330 359	355 406	282 307
Turkey	929 349	1 087 843	1 169 331	1 319 770	1 318 870
Yugoslavia					
Sea salt	20 966	20 500	22 081	36 185)
Rock salt	85 231	137 441	168 921	192 579	) 428 000
Other salt	193 987	193 807	188 414	191 112)
Algeria					
Brine salt & sea salt	171 458	162 000	154 000	* 187 000	* 170 000
Angola	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Cape Verde Islands	16 891	...	...	...	...
Egypt	754 843	615 979	636 000	837 000	829 000
Ethiopia (d)	40 119	107 433	121 977	* 110 000	...
Ghana	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Kenya	19 514	16 158	26 966	27 796	24 411
Libya	11 330	* 10 000	* 10 000	* 10 000	...
Madagascar	30 000	* 30 000	* 30 000	27 919	29 638
Mali	* 4 500	* 4 500	* 4 500	* 4 500	...
Mauritius (c)	* 6 000	* 6 000	* 6 000	5 000	4 500
Morocco	17 164	102 000	67 477	47 219	63 592
Mozambique	* 28 000	* 28 000	* 28 000	* 28 000	* 28 000
Namibia	* 230 000	* 230 000	* 230 000	193 000	184 000
Senegal	147 295	140 000	* 140 000	* 140 000	...
Somalia	2 000	30 000	30 000	* 30 000	...
South Africa	489 925	538 785	573 474	539 801	632 812
Sudan	100 000	81 210	73 537	72 649	27 930

Production of Salt

Salt

tonnes

Country	1978	1979	1980	1981	1982
Tanzania	33 993	34 352	36 734	27 400	...
Tunisia (c)	431 000	417 000	460 000	462 000	421 200
Bahamas	1 633 000	440 000	684 000	970 000	816 000
Canada					
Rock salt	4 625 528	4 934 574	4 507 416	) 7 240 000	8 076 000
Other salt (e)	2 262 404	2 381 374	2 915 438		
Costa Rica	34 000	46 000	40 000	* 41 000	...
Cuba	130 607	122 487	130 453	161 000	198 000
Dominican Republic	37 146	41 081	45 665	33 017	47 692
El Salvador (c)	* 27 000	* 27 000	* 27 000	* 23 000	...
Guatemala (c)	10 797	14 493	9 526	13 679	...
Honduras	* 32 000	* 32 000	* 32 000	* 32 000	* 32 000
Mexico	5 635 000	6 169 426	6 575 302	7 953 263	* 7 900 000
Netherlands Antilles	* 400 000	* 400 000	* 400 000	* 400 000	* 400 000
Nicaragua (c)	* 18 000	* 18 000	* 20 000	* 18 000	...
Panama (c)	15 201	17 085	18 583	14 562	11 051
USA (f)					
Rock salt	13 325 000	13 509 000	10 710 000	10 769 000	) * 35 100 000
Salt in brine	20 263 000	22 390 000	20 168 000	18 901 000	
Evaporated salt	5 302 000	5 644 000	5 728 000	5 625 000	
Argentina					
Rock salt	1 196	865	474	* 1 000	...
Other salt	699 482	618 692	1 003 202	1 093 000	...
Brazil					
Rock salt	571 734	688 905	795 781	838 879	...
Sea salt	2 726 951	2 866 000	3 042 396	2 766 319	...
Chile	393 499	589 845	441 105	290 279	674 000
Colombia					
Rock salt	377 193	383 459	346 568	316 000	301 000
Sea salt	459 559	369 456	491 017	399 000	202 000
Peru	348 056	398 820	456 987	500 000	...
Venezuela (c)	111 264	246 182	243 145	280 060	329 677
Afghanistan (g)	80 700	* 20 000	* 5 000	* 6 000	...
Bangladesh (j)	785 490	674 038	463 378	269 058	* 180 000
Burma (b)(c)(h)	243 000	258 000	268 000	* 270 000	* 280 000
China	19 530 000	14 770 000	17 280 000	18 325 000	* 18 145 000
Cyprus	3 293	5 920	7 581	9 298	9 298
India					
Rock salt	4 281	4 363	4 683	4 325	...
Other salt	6 696 000	7 031 000	* 7 250 000	* 7 250 000	* 7 250 000
Indonesia	235 000	706 000	690 000	* 700 000	...
Iran (g)	700 000	* 700 000	* 600 000	* 600 000	* 700 000
Iraq	* 82 000	* 91 000	* 91 000	* 82 000	* 80 000
Israel	121 560	107 352	118 010	132 250	187 990
Japan (i)	1 073 000	1 090 000	1 102 000	1 100 000	...
Jordan (b)	17 000	18 000	30 583	24 200	8 940
Kampuchea, Democratic	* 12 000	* 26 000	* 30 000	* 27 000	...
Korea, Dem. P.R. of	* 560 000	* 560 000	* 570 000	* 570 000	...
Korea, Republic of	650 000	500 000	455 000	450 000	...
Kuwait	18 972	19 986	20 825	18 931	19 347
Laos	* 15 000	* 18 000	* 20 000	* 18 000	...
Lebanon	* 25 000	* 20 000	* 20 000	* 20 000	* 20 000
Mongolia	* 15 000	* 15 000	* 15 000	* 18 000	...
Pakistan					
Rock salt	402 000	512 000	507 359	511 582	534 000
Sea salt	217 600	191 700	181 107	5 649	...
Philippines	225 650	322 131	346 387	355 289	* 350 000
Sri Lanka	115 320	121 443	114 270	104 388	* 130 000
Syria	* 100 000	68 000	90 000	85 000	...
Taiwan	340 552	366 355	722 425	351 330	262 103
Thailand					
Rock salt	11 839	11 000	16 744	11 000	11 100
Other salt	* 160 000	* 160 000	* 160 000	* 160 000	...

Salt

Production of Salt

tonnes

Country	1978	1979	1980	1981	1982
Vietnam	* 530 000	* 530 000	* 520 000	* 500 000	...
Yemen Arab Republic	* 27 000	* 60 000	* 65 000	* 65 000	...
Yemen Democratic Republic	* 75 000	* 75 000	* 80 000	* 75 000	...
Australia	5 873 070	5 215 201	5 664 893	* 6 500 000	* 5 500 000
New Zealand	65 000	55 000	5 500	55 500	70 000
World total	168 400 000	174 300 000	169 100 000	169 800 000	170 500 000

Notes:

- 1 This table does not include production of refined salt
- 2 Salt is known to have been produced in many countries for which statistics are not available. Among these are Martinique, Mauritania and Nigeria

- (a) Used for purposes other than salt-making
- (b) Brine salt
- (c) Sea salt
- (d) Years ended 6 July of that stated
- (e) Including salt in brine
- (f) Sold or used by producers
- (g) Years ended 20 March following that stated
- (h) Years ended 31 March following that stated
- (i) Government licensed plants
- (j) Years ended 30 June of that stated

Exports of Salt

Country	1978	1979	1980	1981	1982
United Kingdom	404 744	424 187	393 425	426 479	631 353
Belgium-Luxembourg	139 470	144 225	115 384	107 219	124 875
Denmark	67 094	38 212	46 177	121 400	114 188
France	167 728	230 393	129 735	235 312	493 741
Germany, Federal Republic of	1 934 742	2 499 321	1 840 658	2 047 691	1 941 571
Italy	497 315	1 235 023	740 051	394 646	474 285
Netherlands	1 891 672	2 475 143	2 159 021	2 297 827	2 011 004
German Democratic Republic	1 213 000	1 232 000	1 210 000	1 272 000	1 387 000
Norway	1 863	1 594	1 576	2 982	5 173
Poland	307 848	253 056	296 711	240 966	337 396
Portugal	4 083	15 025	1 524	370	...
Romania	780 600	841 200	1 024 700	...	...
Soviet Union	402 720	402 660	480 865	452 843	460 815
Spain	816 355	782 339	479 691	335 600	...
Sweden	2 619	5 037	1 475	4 313	3 798
Switzerland	377	3 459	234	278	698
Algeria	4 000	3 480	2 000	...	...
Cape Verde Islands	14 501	16 301	...	...	...
Egypt	98 925	84 960	49 407	19 500	...
Ghana	13 781	...	...	...	...
Kenya	85	146	703	105	...
Madagascar	1 343	2 575	1 290	...	...
Senegal	128 116	95 923	125 448	154 034	...
South Africa	38 260	53 612	53 745	68 708	67 087
Sudan	241	148	157	4 002	...
Tanzania	6 816	13 751	11 511	19 316	...
Tunisia	382 618	352 050	272 972	368 823	...
Canada	1 608 583	1 822 240	1 655 768	1 507 780	1 734 068
El Salvador	20 817	21 703	24 980	10 733	...
Jamaica	3 302	1 294	3 902	2 405	3 969
Mexico	4 460 079	5 233 356	5 256 506	4 908 252	...
Netherlands Antilles	302 940	231 572	300 837	...	...
Nicaragua	3 594	4 905	320	...	...
USA	704 203	632 308	753 871	946 194	908 422
Argentina	23 590	27 665	13 370	...	...
Brazil	111 684	138 240	178 778	141 861	186 180
Chile	37 377	...	...	...	...
Colombia	—	189 757	151 470	5 250	7 500
China (e)	* 170 000	* 191 000	* 774 000	* 616 000	* 619 000
India (b)	29 377	45 794	56 533	...	...
Iran (c)	2 161	1 062	760	1 171	...
Israel (a)	3 136	4 328	19 227	...	...
Japan	2 934	2 774	2 299	1 173	1 609
Jordan	...	554	17 981	7 072	1 674
Korea, Republic of	1 111	1 827	99	11 711	172
Kuwait	1 510	745	1 854	2 064	...
Malaysia	472	540	411	...	...
Pakistan (d)	11 236	17 215	20 120	5 659	8 422
Saudi Arabia	3 597	1 970	3 357	6 646	3 818
Singapore	17 029	14 131	13 695	14 033	9 272
of which: Re-exports	15 270	13 371	13 109	13 473	8 937
Taiwan	12 377	16 106	13 950	3 065	1 000
Thailand	92 942	113 271	123 989	101 483	65 109
Australia	4 653 612	4 512 965	4 514 717	3 962 000	4 104 000

(a) Figures may be incomplete as value only given in Israeli trade return for exports to some countries

(b) Years ended 31 March following that stated

(c) Years ended 20 March following that stated

(d) Years ended 30 June of that stated

(e) BGS estimates, based on known imports into certain countries

Imports of Salt

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	235 235	748 017	363 535	97 923	220 105
Belgium-Luxembourg	805 395	1 218 636	988 386	1 168 848	1 073 256
Denmark	279 107	366 142	267 231	206 369	289 805
France	104 968	187 546	139 160	160 776	169 353
Germany, Federal Republic of	721 930	937 522	628 220	701 547	801 054
Greece	42 926	7 468	39 239	26 226	23 959
Irish Republic	77 248	87 656	87 333	74 849	88 964
Italy	195 252	240 246	195 538	176 485	313 431
Netherlands	39 567	313 733	71 173	66 711	86 813
Austria	63 418	49 453	1 277	116	164
Bulgaria (c)	* 24 000	* 49 800	* 56 400	* 50 100	* 42 400
Czechoslovakia	* 130 200	* 127 500	* 178 800	...	...
Faeroe Islands	20 106	18 102	15 977	36 413	...
Finland	547 251	659 660	726 593	721 283	639 386
Greenland	5 015	8 503	8 088	5 203	...
Hungary	659 959	683 251	820 520	768 006	755 482
Iceland	56 998	49 243	105 556	77 810	69 699
Malta	£85 000	£100 600	£136 900	£123 300	£102 100
Norway	340 717	455 230	453 607	518 189	518 177
Portugal	92 812	48 800	92 042	51 564	...
Soviet Union	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Spain	1 999	838	1 033	1 271	...
Sweden	1 239 766	1 195 040	1 158 073	1 055 539	946 692
Switzerland	1 840	1 967	1 994	1 755	1 775
Turkey	132 293	50 015	25	59	67
Yugoslavia	149 216	194 103	282 389	337 155	294 720
Burundi	11 385	13 167	14 370	12 904	...
Cameroon	27 264	32 017	18 618	...	...
Canary Islands	236	423	1 033	293	...
Central African Republic	3 573	4 204	5 716	...	...
Congo	3 837	32 636	2 688	3 317	...
Gabon	1 370	3 314	6 984	7 876	9 051
Ivory Coast	38 852	43 850	42 149	46 158	...
Kenya	35 354	27 981	17 914	28 476	...
Liberia	3 431	6 177	3 138	5 180	...
Libya	7 745	4 920	5 842	...	...
Malawi	3 434	15 931	12 970	...	...
Mali	20 186	...	...	...	...
Mauritius	941	672	1 115	804	...
Morocco	9 103	9 454	5	10 258	6
Niger	8 213	...	...	14 718	...
Nigeria	331 431	3 386 822	...	...	...
Reunion	...	2 680	2 170	2 690	...
Rwanda	20 115	10 747	12 530	...	...
Seychelles	252	275	288	309	392
Sierra Leone	5 773	9 276	9 821	10 428	...
South Africa	15 142	23 413	20 502	25 667	2 004
Togo	8 282	4 547	4 972	3 193	...
Uganda	4 066	6 789	2 793	...	...
Upper Volta	13 574	14 372	3 693	18 956	...
Zaire	* 1 000	* 3 000	* 2 300	...	...
Zambia	9 007	...	...	...	...
Zimbabwe	46 885	48 644	55 007	111 902	...

Imports of Salt

Country	1978	1979	1980	1981	1982
Barbados	2 003	...	...	...	...
Belize	320	1 032	395	518	575
Canada	1 330 475	1 275 627	1 151 203	1 254 992	1 526 881
Costa Rica	4 967	7 756	15 894	6 726	2 278
Dominica	549	...	...	...	...
Grenada	503	638	473	527	472
Guadeloupe	2 061	2 704	2 360	1 975	...
Guatemala	19 948	18 912	19 759	31 331	15 637
Honduras	208	...	881	811	...
Jamaica	9 308	27 904	28 702	41 269	45 387
Martinique	2 232	2 400	2 526	2 444	...
Mexico	1 378	864	1 339	...	...
Nicaragua	30 043	16 513	28 165	...	...
Panama	550	683	2 386	6 913	8 698
St Kitts-Nevis-Anguilla	182	208	228	197	288
St Lucia	572	1 053	644	875	605
St Vincent	476	502	537	446	...
Trinidad & Tobago	18 112	29 207	14 868	34 817	...
USA	5 001 808	4 868 002	4 806 336	4 512 676	4 944 627
French Guiana	234	...	458	442	...
Guyana	4 090	5 109	1 817	4 556	2 018
Paraguay	23 036	22 490	18 040	20 363	16 145
Peru	429	453	583	362	2 250
Uruguay	55 217	62 098	57 499	24 876	13 250
Venezuela	13 166	18 389	17 256	78	...
Abu Dhabi	883	6 806	7 883	3 074	...
Bahrain	...	1 092	1 415	1 886	1 589
Brunei	1 026	194	4 202	4 619	...
Cyprus	6 446	713	365	673	...
Dubai	8 540	10 563	9 023	12 741	...
Hong Kong	37 895	73 206	73 410	31 921	79 955
India	1 044	89	1 869	...	...
Indonesia	2 734	2 608	542	389	668
Iran (a)	5 339	168	55	130	...
Japan	6 436 106	6 817 626	7 477 049	6 509 749	6 269 116
Jordan	1 410	1 739	1 422	1 965	528
Korea, Republic of	387 391	489 880	716 288	970 242	662 062
Kuwait	5 674	5 701	37 134	13 606	...
Malaysia	144 509	203 910	154 531	...	...
Oman	2 381	1 831	2 335	7 042	8 883
Philippines	45 261	63 989	60 022	44 679	130 587
Qatar	1 666	1 406	1 039	3 232	...
Saudi Arabia	13 501	7 332	8 821	14 639	18 049
Singapore	50 993	47 139	48 064	41 477	41 704
Taiwan	492 751	677 456	563 710	481 271	382 147
Thailand	273	332	424	345	45 169
Australia	19 444	19 620	7 740	7 321	...
Fiji	2 984	3 043	1 732	3 821	2 598
New Caledonia	453	565	519	440	679
New Zealand (b)	58 737	32 610	62 761	65 209	98 042
Solomon Islands	501	897	1 206	...	...
Vanuatu	...	...	240	...	...
Western Samoa	702	581	793	591	...

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

(c) BGS estimates, based on known exports from certain countries

Sillimanite

Production of Sillimanite Minerals

tonnes

Country	1978	1979	1980	1981	1982
France					
Andalusite	32 572	28 982	* 30 000	40 000	36 600
Soviet Union					
Kyanite (a)	* 50 000	* 50 000	* 70 000	* 70 000	* 80 000
Spain					
Andalusite & kyanite	5 087	5 355	6 471	6 151	* 6 000
South Africa					
Andalusite	112 040	134 177	196 516	181 272	153 231
Sillimanite	9 540	19 574	16 194	15 504	10 060
Zimbabwe					
Kyanite	1 835	—	716	870	2 207
USA					
Kyanite (b)	* 100 000	* 100 000	* 125 000	* 115 000	* 100 000
Brazil					
Kyanite	1 773	1 750	4 270	1 590	* 1 600
India					
Andalusite	225	—	—	146	—
Kyanite	30 897	40 709	49 141	38 868	33 338
Sillimanite	13 471	16 108	14 488	12 335	13 712
Korea, Republic of					
Andalusite	61	60	82	90	33
Australia					
Sillimanite (c)	568	568	661	331	450
World total	358 000	397 000	514 000	482 000	437 000

Note: In addition to the countries listed above as producing sillimanite minerals, synthetic mullite is known to have been produced in Denmark, France, Hungary, Japan, Yugoslavia, United Kingdom and the USA

(a) May include other sillimanite minerals

(b) Includes related minerals

(c) Excluding sillimanite clay

Exports of Sillimanite Minerals

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Sillimanite minerals	4 959	4 889	5 037	2 809	2 326
Belgium-Luxembourg					
Sillimanite minerals—					
Crude	62	30	334	829	113
Other	405	162	68	135	66
Denmark					
Sillimanite minerals	298	328	46	529	1
France					
Sillimanite minerals—					
Crude	16	10	18	8	—
Other	2 074	163	419	310	78
Germany, Federal Republic of					
Sillimanite minerals—					
Crude	540	1 974	1 995	2 039	1 001
Calcined	5 659	7 538	7 495	11 534	7 789
Italy					
Sillimanite minerals—					
Crude & calcined	—	734	75	22	6
Other	—	273	75	155	58
Netherlands					
Sillimanite minerals—					
Crude	54	275	733	4	152
Other	207	244	1 163	543	789
South Africa					
Andalusite	54 457	69 810	106 786	60 047	76 714
Sillimanite	14 195	19 672	14 531	8 982	6 309
USA					
Kyanite & related minerals (a) (b)	* 51 000	* 58 000	* 64 000	* 65 000	* 58 500
Brazil					
Kyanite	1 874	3 379	2 629	50	3
India					
Kyanite	3 875	1 659	...	...	...
Sillimanite	151	25	...	...	...
Japan					
Sillimanite minerals, chamotte & dinas earth	16 470	22 721	21 460	15 281	12 400

Note: In this table 'Sillimanite minerals' is understood to include any or all of andalusite, kyanite, sillimanite and mullite

(a) May include some chamotte and dinas earth

(b) BGS estimates, based on known imports into certain countries

Sillimanite

Imports of Sillimanite Minerals

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Sillimanite minerals	37 480	35 524	46 248	35 098	35 141
Belgium-Luxembourg					
Sillimanite minerals—					
Crude	982	441	1 349	365	230
Other	1 331	1 572	1 729	516	3 561
Denmark					
Sillimanite minerals	77	276	1 134	136	422
France					
Sillimanite minerals—					
Crude	2 930	2 782	3 195	604	1 707
Other	3 266	2 344	8 458	1 284	1 480
Germany, Federal Republic of					
Sillimanite minerals—					
Crude	15 327	22 120	50 729	15 536	26 417
Calcined	41 931	43 192	51 095	54 936	55 636
Greece					
Sillimanite minerals	—	3 552	—	11	633
Italy					
Sillimanite minerals—					
Crude	6 851	10 277	11 711	7 011	18 639
Other	6 015	7 366	19 988	20 529	17 576
Netherlands					
Sillimanite minerals—					
Crude	1 726	1 114	1 693	1 514	3 038
Other	417	350	1 666	397	986
Austria					
Sillimanite minerals	70 380	82 043	90 394	90 975	78 793
Norway					
Sillimanite minerals, chamotte & dinas earth	1 538	1 127	1 097	1 090	526
Mexico					
Mullite	234	458	1 310	...	...
Argentina					
Sillimanite minerals	739	566	1 857	...	...
Japan					
Sillimanite minerals	22 987	22 801	26 682	28 280	26 627
Mullite, chamotte & dinas earth	50 534	77 961	66 849	47 371	34 613
Korea, Republic of					
Sillimanite minerals	...	1 070	2 015	1 581	1 007
Mullite	...	1 341	11 583	2 955	3 936
Australia					
Sillimanite minerals & dinas earth	385	3 033	7 966	...	...

Note: In this table 'Sillimanite minerals' is understood to include any or all of andalusite, kyanite, sillimanite and mullite

Mine Production of Silver

kilograms (metal content)

Country	1978	1979	1980	1981	1982
United Kingdom (b)	1 272	—	1 373	3 278	3 280
France	85 667	74 935	73 772	53 059	28 771
Germany, Federal Republic of	33 800	36 700	37 700	39 300	39 700
Greece	42 300	54 500	52 000	60 500	49 200
Irish Republic	19 600	32 900	24 000	28 000	3 600
Italy (a)	30 708	33 121	42 499	55 344	55 737
Bulgaria	* 28 000	* 25 000	* 24 000	* 23 000	* 25 000
Czechoslovakia	* 36 000	* 35 000	* 35 000	* 35 000	* 33 000
Finland	31 271	42 408	48 024	37 805	36 964
German Democratic Republic	* 50 000	* 48 000	* 47 000	* 45 000	* 45 000
Greenland	17 400	23 800	24 000	22 400	23 600
Poland	* 680 000	702 000	766 000	640 000	655 000
Portugal	703	1 095	861	714	500
Romania	* 32 000	* 30 000	* 28 000	* 25 000	* 25 000
Soviet Union	* 1 570 000	* 1 550 000	* 1 550 000	* 1 580 000	* 1 595 000
Spain	73 841	71 348	140 788	175 045	...
Sweden	263 556	175 699	165 988	184 504	175 000
Yugoslavia (a)	159 392	162 181	148 791	137 516	103 976
Algeria	* 2 500	* 3 100	* 3 100	* 3 400	* 3 400
Morocco	80 000	83 000	81 400	83 600	81 700
Namibia	46 100	53 500	51 300	58 700	49 900
South Africa	96 559	100 664	222 188	235 397	215 959
Tunisia	1 962	3 170	7 332	2 621	3 562
Zaire (b)	89 100	91 700	78 756	80 100	59 200
Zambia (b)	33 261	28 417	23 752	22 219	27 599
Zimbabwe	34 505	30 418	29 681	26 913	28 708
Canada	1 266 927	1 146 908	1 069 635	1 129 394	1 291 176
Dominican Republic	57 495	70 797	50 480	63 255	68 517
El Salvador	5 754	4 715	4 547	* 3 400	* 3 100
Honduras	84 236	64 569	54 935	56 697	52 221
Mexico	1 579 393	1 536 772	1 472 557	1 654 900	1 550 200
Nicaragua	15 000	12 143	5 100	4 359	* 4 400
USA	1 225 050	1 178 710	1 005 579	1 265 418	1 251 608
Argentina	63 466	68 714	73 309	77 400	82 700
Bolivia	200 284	178 592	189 715	205 332	170 200
Brazil	15 723	33 579	24 394	23 780	19 800
Chile	255 374	271 836	298 545	361 107	378 851
Colombia	2 388	3 090	4 714	4 147	3 864
Ecuador	900	1 100	900	1 000	* 300
Peru (c)	1 151 500	1 220 800	1 337 100	1 460 000	1 668 400
Burma	25 000	30 700	29 700	24 100	16 400
China	* 55 000	* 60 000	* 60 000	* 65 000	* 70 000
India	12 083	11 515	11 377	17 298	14 101
Indonesia	25 600	25 100	21 800	25 800	32 100
Japan	281 640	270 725	247 741	270 800	306 200
Korea, Dem. P.R. of	* 50 000	* 48 000	* 45 000	* 40 000	* 30 000
Korea, Republic of	43 073	70 848	71 301	95 214	100 683
Malaysia	14 266	13 453	13 604	14 708	16 202
Philippines	51 014	57 167	60 715	62 565	63 500
Taiwan	2 343	2 656	2 957	6 683	15 679
Australia	812 524	832 210	766 816	743 557	900 330
Fiji	323	324	214	260	596
Papua New Guinea	52 820	44 877	37 198	42 388	43 400
World total	10 889 000	10 753 000	10 667 000	11 377 000	11 698 000

(a) Smelter and/or refinery production

(b) Recovered as a byproduct of base metal refining

(c) Recoverable

Silver

Exports of Silver

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal	1 705 080	1 668 387	2 493 727	1 642 087	2 571 398
Waste & scrap	310 182	552 346	296 810	137 812	97 883
Belgium-Luxembourg					
Metal	639 178	661 338	1 511 492	883 939	947 881
Denmark					
Metal	27 232	45 919	57 193	33 595	49 949
France					
Metal	428 783	401 468	947 144	556 192	348 136
Waste & scrap	308 164	459 869	337 595	227 930	406 029
Germany, Federal Republic of					
Metal	1 032 626	1 157 614	1 731 216	1 115 685	1 364 636
Waste & scrap	90 135	162 526	185 435	366 738	396 058
Greece					
Metal	—	25 322	49 765	46 040	...
Italy					
Metal	33 831	28 723	231 627	95 232	56 200
Netherlands					
Metal	277 663	314 142	252 792	116 196	178 390
Austria					
Metal	60 200	81 934	44 660	31 008	58 478
Waste & scrap	1 000	15 038	8 352	2 478	693
Finland					
Metal	22 430	17 277	45 000	56 000	85 000
Norway					
Metal	24 160	23 306	26 574	32 950	29 973
Poland					
Metal	348 000	347 000	516 000	397 000	370 000
Spain					
Metal	52 000	103 000	5 722 040	304 000	...
Sweden					
Metal	245 000	227 000	241 000	197 000	181 000
Switzerland					
Metal	1 212 793	1 040 984	1 039 455	718 473	724 035
Yugoslavia					
Metal	67 369	91 082	59 183	48 000	77 000
Waste & scrap	2 657	4 604	830	...	...
Morocco					
Metal	18 036	39 150	24 176	31 361	52 029
South Africa					
Metal	(d)* 70 900	(d)* 94 200	(d)* 75 700	216 303	236 716
Tunisia					
Metal	—	—	4 143	...	...
Canada					
Ores & concentrates (b)	482 876	415 737	396 801	547 035	603 169
Metal	1 077 084	923 135	886 640	916 903	1 137 446
Dominican Republic					
Metal (c)	69 787	83 794	63 421	75 938	80 373
El Salvador					
Metal	4 893	4 722	5 042	4 324	...
Honduras					
Concentrates (b)	65 429	75 929	50 521	49 020	45 599
Metal	1 140	229	—	—	...
Mexico					
Ores & concentrates	29 285 168	15 327 057	...	...	...
Metal	823 371	941 341	1 051 294	...	...
Nicaragua					
Metal (a)	18 775	8 786	4 000	...	...
USA					
Ores & concentrates (b)	1 065	1 355	9 564	6 634	1 459
Metal	339 468	540 636	1 806 418	493 915	423 046
Waste & scrap	393 004	596 914	726 100	390 855	390 892
Argentina					
Metal	2 704	5 747	21 319	...	...
Bolivia					
Ores & concentrates (b)	197 746	181 399	176 464	203 660	...

Exports of Silver

kilograms

Country	1978	1979	1980	1981	1982
Chile					
Metal	209 226	...	...	218 165	...
Peru					
Metal	701 026	740 031	494 000	895 000	...
Hong Kong					
Metal	13 341	45 266	61 192	40 208	22 459
of which: Re-exports	13 341	45 266	57 424	39 879	21 183
Waste & scrap	—	26 817	222 871	311 596	95 220
of which: Re-exports	—	16 411	74 770	211 343	35 288
India					
Metal	675 486	118 611	...	...	...
Japan					
Metal	97 554	121 210	214 828	148 447	128 995
Waste & scrap	15 000	24 000	29 000	...	1 000
Korea, Republic of					
Ores & concentrates	2 130 000	2 000 000	3 400 000	2 652 000	3 149 000
Metal	...	46 956	34 660	15 302	49 332
Malaysia					
Metal	2 186	4 542	16 471	...	...
Philippines					
Metal	3 041	5 232	347	408	3 776
Singapore					
Metal	2 268	2 869	32 680	8 344	6 807
of which: Re-exports	2 214	1 748	18 481	5 521	2 873
Thailand					
Metal	11 487	113 151	166 230	31 410	62 436
Australia					
Silver-lead bullion	290 207	354 556	385 270	251 067	...
Silver in all ores, concentrates etc.	166 097	79 543	52 284	87 701	...
Metal	75 972	84 830	85 195	90 228	...
Fiji					
Metal	308	339	232	264	550
Papua New Guinea					
Metal	52 820	44 877	37 198	42 388	43 400

Notes:

- 1 This table excludes silver coin but includes silver shipped for minting
- 2 In this table the term 'metal' as used here includes both unwrought and partly worked silver and alloys

(a) Including waste and scrap

(b) Ag content

(c) Officially described as 'dore' (Au/Ag alloy), but contains a higher proportion of silver

(d) BGS estimates, based on known imports into certain countries

Silver

Imports of Silver

kilograms

Country	1978	1979	1980	1981	1982
United Kingdom					
Metal	1 450 508	1 220 010	3 791 483	1 941 051	1 433 971
Waste & scrap	364 756	701 254	584 952	982 040	1 360 722
Belgium-Luxembourg					
Metal	864 801	768 940	1 407 086	1 166 728	1 321 789
Denmark					
Metal	82 173	103 661	87 427	72 801	82 626
France					
Metal	1 343 305	931 601	832 048	663 630	630 123
Waste & scrap	192 624	76 389	148 431	33 937	31 651
Germany, Federal Republic of					
Metal	1 358 517	1 290 169	1 072 399	798 049	1 270 477
Waste & scrap	663 247	595 016	667 656	471 841	724 065
Greece					
Metal	139 000	131 578	34 936	14 204	7 000
Italy					
Metal	897 658	768 907	568 216	531 641	575 300
Netherlands					
Metal	251 933	146 279	216 149	143 676	144 859
Austria					
Metal	358 700	196 083	134 530	181 374	218 962
Waste & scrap	300	544	1 252	6 451	94
Finland					
Metal	48 557	47 622	112 000	86 000	67 000
Iceland					
Metal	1 700	853	920	1 007	707
Malta					
Metal	3 123	2 642	1 793	1 177	321
Norway					
Metal	109 842	82 884	60 385	70 120	83 527
Portugal					
Metal	38 979	44 236	11 264	35 000	...
Spain					
Metal	59 676	49 957	626 363	54 000	...
Sweden					
Metal	466 000	474 000	451 000	417 000	278 000
Switzerland					
Metal	1 120 040	789 323	1 577 818	901 160	1 139 623
Turkey					
Metal (b)	6 297	1 475	4 995	2 206	9 000
Yugoslavia					
Metal	39 917	20 746	510 504	9 000	19 000
Algeria					
Metal	8 068	5 940	1 389	...	...
Egypt					
Metal	11 305	4 359	667	1 846	...
Gabon					
Metal	...	...	833	899	578
Ivory Coast					
Metal	6 858	4 941	4 174	1 252	...
Kenya					
Metal	192	280	216	17	...
Libya					
Metal	15 401	14 215	9 571	...	...
Madagascar					
Metal	121	602	244	...	...
Morocco					
Metal	894	623	248	5 536	1 100
Nigeria					
Metal	191	14	...	...	...
Senegal					
Metal	9 384	3 203	31	209	...
South Africa					
Metal	29 983	23 052	23 607	25 689	41 319
Tunisia					
Metal	741	200	488	...	...

Imports of Silver

kilograms

Country	1978	1979	1980	1981	1982
Zaire					
Metal	135	98	108	...	...
Canada					
Metal	36 002	38 309	339 188	327 336	484 251
Costa Rica					
Metal	1 583	1 605	881	425	385
Guatemala					
Metal	64	152	2	734	131
Jamaica					
Metal	1 134	4 418	297	979	626
Mexico					
Metal	179	...	...	...	...
Nicaragua					
Metal (a)	417	329	1 000	...	...
Panama					
Metal (a)	560	1 226	772	866	755
Trinidad & Tobago					
Metal	2 379	2 331	1 090	775	...
USA					
Ores & concentrates (c)	670 328	588 442	534 474	713 690	753 350
Metal (e)	1 916 299	2 437 713	2 014 362	2 361 474	3 014 532
Waste & scrap	76 763	74 951	95 752	108 187	137 555
Argentina					
Metal	14 482	5 394	24 602	...	...
Brazil					
Metal	152 080	170 954	109 418	56 060	89 496
Chile					
Metal	3 251	...	...	...	...
Colombia					
Metal	511 524	329 004	2 629	9 415	6 028
Ecuador					
Metal	1 496	1 811	1 140	...	...
Peru					
Metal	97	4 180	494	581	1 638
Uruguay					
Metal	1 100	1 900	100	100	56
Venezuela					
Metal	38 812	48 207	...	...	...
Brunei					
Metal	11	544	27	344	...
Dubai					
Metal	98	25 804	43 072	30 839	...
Hong Kong					
Metal	18 538	26 437	32 465	15 304	24 009
Waste & scrap	2 944	8 816	2 812	812	5 925
India					
Metal	425	1 247	148	...	...
Indonesia					
Metal	506	2 296	145	44	48
Iran (d)					
Metal	39 063	16 436	6 942	10 644	...
Japan					
Ores & concentrates	4 109 000	4 113 000	3 400 000	—	—
Metal	535 253	731 613	593 694	440 385	517 605
Korea, Republic of					
Metal	36 796	21 780	71 980	4 955	5 132
Malaysia					
Metal	7 227	3 073	12 497	...	...
Philippines					
Metal	3 061	2 654	189	687	325
Saudi Arabia					
Metal	87 511	3 063	11 794	13 399	3 256
Singapore					
Metal	21 377	24 905	22 345	68 610	33 036
Taiwan					
Metal	59 118	118 209	20 521	21 858	26 446

Silver

Imports of Silver

kilograms

Country	1978	1979	1980	1981	1982
Thailand					
Metal	112 222	15 275	14 359	191 551	13 001
Australia					
Metal	1 115	405	7 050	1 306	...
New Zealand (f)					
Metal	(b) 42 766	54 393	47 795	43 046	41 971

Notes:

- 1 This table excludes silver coin but includes silver shipped for minting
- 2 In this table the term 'metal' as used here includes both unwrought and partly worked silver and alloys

- (a) Including waste and scrap
- (b) Including gilt
- (c) Ag content
- (d) Years ended 20 March following that stated
- (e) Refined only
- (f) Years ended 30 June of that stated

Production of Sulphur and Pyrites

thousand tonnes (sulphur content)

Country		1978	1979	1980	1981	1982
United Kingdom						
Recovered (a)(c)		53	57	66	42	48
Recovered (d)		80	80	80	75	59
Belgium						
Recovered (c)(d)		267	270	270	* 270	* 270
Denmark						
Recovered (d)		14	8	8	6	7
France						
Recovered (d)		2 075	2 120	2 059	1 932	1 816
Germany, Federal Republic of						
Pyrites (45%)		221	203	222	213	* 200
Recovered (c)		380	450	450	* 400	* 400
Recovered (d)		840	904	1 034	1 034	* 1 085
Recovered (e)		160	93	* 90	* 95	* 100
Greece						
Pyrites (45%)		62	75	67	74	52
Irish Republic						
Pyrites (47%)		20	14	12	11	6
Italy						
Pyrites (43%)		338	346	331	262	269
Recovered (d)		250	250	250	263	* 220
Sulphur ore		65	19	23	22	20
Netherlands						
Recovered (c)(d)		* 125	* 158	* 142	* 145	* 125
Austria						
Recovered		31	34	28	37	* 34
Anhydrite		27	27	24	25	* 25
Bulgaria						
Pyrites (42%)		* 310	* 315	* 300	* 300	* 300
Recovered		* 70	* 75	* 70	* 70	* 70
Czechoslovakia						
Pyrites (42%)		60	60	60	* 60	* 60
Recovered		10	10	10	* 10	* 10
Sulphur ore		5	5	5	* 5	* 5
Finland						
Pyrites (44%)		53	85	97	134	146
Recovered (c)		232	263	247	268	270
Recovered (d)		29	38	37	48	39
German Democratic Republic						
Pyrites (42%)		* 10	* 10	* 10	* 10	* 10
Recovered		* 350	* 350	* 350	* 350	* 350
Norway						
Pyrites (50%)		150	121	212	219	212
Recovered (c)(d)		* 43	* 46	* 46	* 49	* 46
Poland						
Frasch (g)		5 051	4 830	5 164	4 773	4 920
Recovered (c)		* 315	* 310	* 300	* 300	* 300
Recovered (d)		* 35	* 35	* 30	* 30	* 30
Anhydrite		* 20	* 20	* 20	* 20	* 20
Portugal						
Pyrites (44%)		139	152	168	125	* 120
Romania						
Pyrites (42%)		* 400	* 400	* 400	* 400	* 400
Recovered		* 120	* 130	* 140	* 150	* 150
Soviet Union						
Frasch		* 800	* 800	* 800	* 800	* 800
Pyrites (46%)		* 3 500	* 3 500	* 3 550	* 3 600	* 3 700
Recovered (c)		* 1 700	* 1 700	* 1 800	* 1 850	* 1 900
Recovered (d)		* 1 300	* 1 300	* 1 400	* 1 450	* 1 500
Recovered (e)		* 40	* 40	* 40	* 40	* 40
Sulphur ore		* 1 900	* 1 900	* 2 000	* 2 050	* 2 050
Spain						
Pyrites (47%)		1 046	1 091	1 152	1 118	991
Recovered (c)(d)		* 130	* 133	* 140	* 150	* 140

Production of Sulphur and Pyrites

thousand tonnes (sulphur content)

Country		1978	1979	1980	1981	1982
Sweden						
Pyrites	(48%)	232	215	190	201	204
Recovered (c)(d)		130	130	130	* 130	* 130
Sulphur ore		33	35	33	37	* 40
Turkey						
Pyrites	(45%)	18	16	35	29	2
Recovered		80	80	89	118	126
Sulphur ore		20	21	23	29	52
Yugoslavia						
Pyrites	(42%)	171	190	255	274	277
Recovered (c)(d)		* 205	* 205	* 205	* 174	* 173
Algeria						
Recovered (d)		15	15	14	* 15	* 10
Egypt						
Recovered (d)		3	3	3	24	* 30
Libya						
Recovered (d)		* 19	* 20	* 22	* 16	* 20
Morocco						
Pyrites	(48%)	61	63	36	38	15
South Africa						
Pyrites	(48%)	367	319	557	502	* 500
Recovered (d)		* 25	* 25	* 25	* 27	* 20
Recovered (c)		* 100	* 100	* 100	* 100	* 80
Zaire						
Recovered (c)		* 30	* 30	* 30	* 30	* 30
Zambia						
Recovered		109	74	92	* 90	* 90
Zimbabwe						
Pyrites	(42%)	23	28	29	27	24
Canada						
Pyrites	(45%)	5	14	14	5	* 10
Recovered (c)		676	667	895	783	579
Recovered (d)		6 311	6 282	6 183	5 614	5 231
Cuba						
Pyrites	(40%)	21	12	22	15	19
Mexico						
Frasch		1 650	1 773	1 700	1 652	1 390
Recovered (c)		* 100	* 100	* 115	* 100	* 100
Recovered (d)		168	252	402	426	425
Netherlands Antilles						
Recovered (d)		95	91	91	90	* 90
Trinidad & Tobago						
Recovered (d)		54	77	57	44	* 40
USA						
Frasch		5 648	6 357	6 390	6 348	4 210
Pyrites	(40%)	301	400	322	307	265
Recovered (c)		1 164	1 274	1 081	1 231	908
Recovered (d)		4 062	4 070	4 073	4 259	4 404
Argentina						
Recovered (c)(d)		* 20	* 20	...	...	...
Sulphur ore (f)		18	—	—	10	* 10
Bolivia (h)						
Sulphur ore		15	14	11	10	* 6
Brazil						
Recovered (d)		57	65	58	65	70
Chile						
Recovered (c)		21	27	33	* 35	* 30
Sulphur ore (b)		32	77	87	115	* 110
Colombia						
Recovered (d)		3	2	2	2	* 3
Sulphur ore		35	16	26	26	* 30
Ecuador						
Recovered (d)		* 10	* 10	* 10	* 10	* 10
Sulphur ore		3	3	4	20	...
Venezuela						
Recovered (d)		95	85	85	85	* 85

Production of Sulphur and Pyrites

thousand tonnes (sulphur content)

Country		1978	1979	1980	1981	1982
China						
Pyrites (45%)		* 1 605	* 1 682	* 1 700	* 1 800	* 1 800
Recovered		* 200	* 300	* 300	* 300	* 300
Sulphur ore		* 200	* 200	* 200	* 200	* 200
Cyprus						
Pyrites (44%)		56	20	24	7	13
India						
Pyrites (37%)		24	25	31	21	28
Recovered (c)		115	* 115	* 115	* 92	* 100
Recovered (d)		8	4	5	4	5
Iran						
Recovered (d)		542	244	* 150	* 6	* 10
Sulphur ore		* 150	* 75	* 70	* 50	* 50
Iraq						
Frasch		600	550	700	145	* 100
Recovered (d)		* 40	* 40	* 40	* 40	* 40
Israel						
Recovered (d)		* 10	* 10	* 10	* 10	* 10
Japan						
Pyrites (49%)		327	300	311	293	276
Recovered (c)(g)		1 296	1 350	1 300	1 200	* 1 200
Recovered (d)		1 105	1 241	1 173	1 080	* 1 000
Korea, Dem. P.R. of						
Pyrites (40%)		* 255	* 255	* 250	* 255	* 200
Recovered (c)		* 10	* 10	* 10	* 10	* 10
Kuwait						
Recovered (d)		100	114	82	109	141
Pakistan						
Recovered		14	14	* 14	* 15	* 15
Philippines						
Pyrites (46%)		51	40	53	45	* 30
Saudi Arabia						
Recovered (d)		* 14	* 125	* 460	* 600	* 700
Singapore						
Recovered (d)		20	20	20	10	* 10
Taiwan						
Recovered		10	9	8	10	20
Australia						
Pyrites (48%)		93	29	—	—	—
Recovered (c)		327	366	350	356	439
Total Frasch		13 700	14 300	14 700	13 700	11 400
Total Pyrites		9 900	10 000	10 400	10 300	10 100
Total Recovered		26 100	26 500	27 000	26 400	25 800
Total Sulphur ore		2 500	2 400	2 500	2 600	2 600
World total (all forms)		52 200	53 200	54 600	53 000	49 900

Note: Pyrites: nominal sulphur content is shown in parentheses

(a) 'Spent Oxide'

(b) Includes 'caliche' at 45% S content

(c) From smelter gases

(d) From petroleum refining and/or natural gas

(e) Other

(f) Caliche

(g) Includes S content of 'sulphur ore'

(h) Exports

Exports of Sulphur and Pyrites

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Sulphur—					
Crude	1 421	1 344	1 116	1 095	1 201
Sublimed & precipitated	123	247	133	128	295
Belgium-Luxembourg					
Pyrites	53	522	32	193	1 223
Sulphur—					
Crude	10 026	11 578	14 032	9 129	7 136
Sublimed & precipitated	635	42	148	87	117
Denmark					
Sulphur	26	24	51	222	80
France					
Sulphur—					
Crude	1 154 784	1 245 258	1 099 266	889 321	685 985
Refined	194	361	378	309	1 789
Sublimed	3 605	2 843	2 210	2 000	2 192
Precipitated	7	157	124	115	78
Germany, Federal Republic of					
Pyrites	1 361	1 238	968	2 089	2 031
Sulphur—					
Crude	304 693	356 669	394 400	448 041	602 559
Sublimed & precipitated	1 568	1 238	952	454	280
Greece					
Sulphur	20 259	10 756	2 036	5 758	442
Italy					
Pyrites	3 189	3 379	3 797	30 521	3 733
Sulphur—					
Crude	3 612	5 449	3 817	3 073	4 913
Sublimed & precipitated	187	142	48	195	150
Netherlands					
Sulphur—					
Crude	9 648	10 997	16 002	13 689	13 650
Sublimed & precipitated	57	18	36	6	1
Norway					
Pyrites	63 139	27 256	190 107	210 459	171 883
Sulphur	2 298	3 283	1 842	4 405	2 753
Poland					
Sulphur	4 294 000	3 892 000	3 903 000	3 817 000	3 973 000
Portugal					
Pyrites	135	133	1	—	...
Sulphur	92	205	82	120	...
Soviet Union					
Pyrites	852 000	915 000	911 000	536 000	359 000
Sulphur	* 440 000	* 430 000	* 430 000	* 440 000	* 440 000
Spain					
Pyrites—					
Iron	228 372	118 953	234 477	378 678	...
Cupreous	13 930	8 010	410	—	...
Sulphur—					
Crude	17 445	14 629	6 264	2 143	...
Sublimed & precipitated	8 508	2 966	6 993	10 486	...
Sweden					
Pyrites	—	7 046	84 705	60 363	31 177
Sulphur	17 332	20 597	29 513	22 888	1 310
Switzerland					
Sulphur—					
Crude	13	15	20	19	8 249
Sublimed & precipitated	10	5	10	8	5
Yugoslavia					
Pyrites	93 421	75 828	67 942	14 428	20 953
Sulphur	3 560	5 335	1 138	2 039	...

Exports of Sulphur and Pyrites

tonnes

Country	1978	1979	1980	1981	1982
South Africa					
Pyrites (c)	17 236	2 463	47 181	66 091	31 867
Zimbabwe					
Pyrites	—	5 776	9 345	6 122	...
Canada					
Pyrites	£26 000	£113 000	£135 000	£45 000	£309 000
Sulphur	4 984 546	5 154 832	6 850 566	7 309 352	6 111 633
Mexico					
Sulphur	1 230 584	1 120 171	1 150 402	1 199 877	953 000
Netherlands Antilles					
Sulphur	56 603	105 602	49 593	...	...
USA					
Sulphur	832 581	1 962 851	1 681 189	1 392 169	993 992
Bolivia					
Sulphur	14 726	13 532	11 244	10 202	* 6 000
Colombia					
Sulphur	5	1 031	2 400	1 704	5 858
Venezuela					
Sulphur	28 074	42 832	8 645	...	...
Cyprus					
Pyrites	123 671	143 224	89 441	35 670	1 099
India					
Sulphur—					
Crude	791	271	...	...	...
Sublimed & precipitated	204	207	...	...	...
Iran (a)					
Sulphur	65 065	22 001	* 50 000	...	...
Japan					
Sulphur—					
Crude	320 986	414 884	364 268	231 326	299 451
Sublimed & precipitated	220	221	1 029	174	200
Kuwait					
Sulphur	164 257	72 531	240 380	127 285	...
Singapore					
Sulphur—					
Crude	14 137	5 190	3 130	9 006	12 999
Sublimed & precipitated	4 905	16 068	17 451	20 060	8 126
Taiwan					
Sulphur—					
Crude	2 252	3 695	1 310	817	1 553
Sublimed & precipitated	188	139	631	444	430
Australia					
Zinc concentrates (b)	119 800	96 500	134 100	...	...

(a) Years ended 20 March following that stated

(b) Recoverable sulphur

(c) S content

Imports of Sulphur and Pyrites

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Pyrites	)			13 273	15 690
Sulphur—	) 1 132 716	1 194 448	1 140 428		
Crude	)			886 018	849 549
Sublimed & precipitated	561	491	475	636	842
Belgium-Luxembourg					
Pyrites	202 917	195 210	189 433	207 379	235 540
Sulphur—					
Crude	482 732	549 346	481 737	444 699	358 718
Sublimed & precipitated	1 076	5 128	1 353	1 936	1 071
Denmark					
Pyrites	31	1	19	581	25
Sulphur—					
Crude	74 020	74 184	79 665	73 069	63 585
Sublimed & precipitated	126	115	114	119	143
France					
Pyrites	617	672	732	775	1 429
Sulphur—					
Crude	662 560	715 224	630 971	552 694	458 442
Refined	741	1 153	2 006	430	900
Sublimed & precipitated	415	412	586	254	111
Germany, Federal Republic of					
Pyrites	116 670	98 943	132 716	57 735	71 472
Sulphur—					
Crude	385 843	385 973	360 317	277 808	287 861
Sublimed & precipitated	572	732	661	507	645
Greece					
Pyrites	18 944	14 413	69 977	46 582	112 799
Sulphur—					
Crude	81 004	58 053	41 186	61 888	142 250
Sublimed & precipitated	112	339	48	102	58
Irish Republic					
Sulphur—					
Crude	8 592	534	528	473	443
Sublimed & precipitated	19	113	120	89	178
Italy					
Pyrites	247 158	286 351	291 010	252 991	109 155
Sulphur—					
Crude	606 052	754 861	609 564	476 015	375 588
Sublimed & precipitated	1 573	1 591	1 297	1 010	1 238
Netherlands					
Pyrites	103	169	153	164	163
Sulphur—					
Crude	452 920	455 504	467 883	456 933	383 418
Sublimed & precipitated	133	248	215	165	328
Austria					
Pyrites	5 856	3 264	3 834	582	650
Sulphur—					
Crude	101 332	112 019	124 693	102 818	84 658
Sublimed & precipitated	234	62	117	28	96
Bulgaria					
Sulphur (d)	* 6 000	* 3 500	* 59 000	* 76 900	* 67 900
Czechoslovakia					
Sulphur	456 000	501 000	485 000	537 000	503 000
Finland					
Sulphur—					
Crude	26 580	42 132	58 357	52 824	68 825
Sublimed & precipitated	1 859	3 205	16	19	12
German Democratic Republic					
Pyrites (a)	39 200	8 200	...	...	...
Sulphur	* 168 800	* 178 200	* 179 400	* 167 000	...
Hungary					
Pyrites	81 451	83 518	89 676	89 237	49 575
Sulphur	162 043	167 344	250 960	183 164	163 701
Malta					
Sulphur	39	95	170	93	220

Imports of Sulphur and Pyrites

tonnes

Country	1978	1979	1980	1981	1982
Norway					
Sulphur—					
Crude	6 014	2 583	2 853	3 002	2 570
Sublimed & precipitated	13	24	17	27	12
Portugal					
Sulphur	43 524	90 433	94 028	117 876	...
Romania					
Pyrites	* 74 700	* 75 800	* 144 200	...	...
Sulphur	* 173 000	* 224 300	* 81 400	* 375 300	...
Soviet Union					
Sulphur	* 600 000	* 600 000	* 700 000	* 800 000	* 800 000
Spain					
Sulphur—					
Crude	119 401	109 576	94 116	112 949	...
Sublimed & precipitated	133	6 230	265	537	...
Sweden					
Pyrites	60 372	26 441	79 938	21 578	85
Sulphur—					
Crude	58 377	48 332	41 423	23 250	8 645
Sublimed & precipitated	2	32	1 138	4 515	2 012
Switzerland					
Pyrites	164	16 020	10 556	4 924	118
Sulphur—					
Crude	46 656	46 560	48 188	29 735	36 391
Sublimed & precipitated	213	158	231	188	127
Turkey					
Pyrites	116	—	—	117 695	70 427
Sulphur—					
Crude	61 085	52 682	41 048	91 289	114 696
Sublimed & precipitated	115	77	42	121	90
Yugoslavia					
Pyrites	19 126	124 227	68 413	49 232	11 750
Sulphur—					
Crude	3 833	12 268	11 700	12 222	) 68 858
Refined	55 339	54 374	44 718	47 353)
Sublimed & precipitated	1 763	1 078	506	479	740
Algeria					
Sulphur—					
Crude	76 334	66 322	52 117	...	...
Sublimed & precipitated	8 000	5 926	6 990	...	...
Canary Islands					
Sulphur	5 250	—	—	—	...
Egypt					
Pyrites	23 000	—	—	55 155	...
Sulphur	83 170	46 177	70 595	59 428	...
Ethiopia					
Sulphur	1 325	761	—	1 159	...
Gabon					
Sulphur	...	...	1 857	4 937	7 849
Ivory Coast					
Sulphur	8 750	7 997	2 474	7 797	...
Kenya					
Sulphur—					
Crude	2 526	1 199	6 901	1 500	...
Sublimed & precipitated	—	—	516	1 374	...
Morocco					
Sulphur—					
Crude	77 136	517 145	702 271	810 257	1 026 563
Refined	297 400	45 407	115	178	188
Sublimed	3	7	3	1	0
Nigeria					
Sulphur	1 530	1 485	...	...	...
Senegal					
Sulphur—					
Crude	6	6	9	7	...
Sublimed	24 432	18 209	14 293	20 581	...

Imports of Sulphur and Pyrites

tonnes

Country	1978	1979	1980	1981	1982
South Africa					
Pyrites	53	904	10 772	5 090	171
Sulphur—					
Crude	638 411	811 730	913 609	764 885	590 202
Sublimed & precipitated	1 250	1 308	2 431	2 177	137
Tanzania					
Sulphur	10 677	10 636	12 146	38	...
Tunisia					
Sulphur	371 584	581 665	678 489	836 700	...
Zaire					
Sulphur	14 724	...	...	...	...
Zimbabwe					
Sulphur	20 527	18 440	15 705	25 529	...
Canada					
Sulphur	8 130	1 699	1 767	4 615	2 159
Cuba					
Sulphur	139 018	...	...	...	...
El Salvador					
Sulphur	40 577	14 781	—	0	...
Guatemala					
Sulphur	11 479	4 880	14 267	416	709
Jamaica					
Sulphur	10 818	5 766	5 516	8 542	24
Mexico					
Sulphur—					
Crude	866	771	761	...	...
Sublimed & precipitated	243	574	329	...	...
Nicaragua					
Sulphur	280	381	487	...	...
Trinidad & Tobago					
Sulphur	23	14 986	3 058	39	...
USA					
Pyrites	9 870	31 166	32 977	11 343	20 539
Sulphur	2 177 372	2 494 422	2 520 944	2 522 000	1 905 188
Argentina					
Sulphur	71 201	125 649	55 330	...	...
Brazil					
Sulphur—					
Crude	632 277	686 041	939 092	817 072	882 540
Sublimed & precipitated	277	317	657	472	479
Chile					
Sulphur—					
Crude	90 024	...	...	...	...
Sublimed & precipitated	90	...	...	...	...
Colombia					
Sulphur—					
Crude	55 770	35 262	46 662	21 907	31 783
Sublimed & precipitated	98	38	83	130	136
Peru					
Sulphur	9 039	14 575	9 926	8 672	920
Uruguay					
Sulphur	19	22 452	18 114	11 651	6 315
Venezuela					
Sulphur—					
Crude	115	115	139	155	...
Sublimed & precipitated	36	42	...	...	...
China					
Sulphur (d)	* 205 000	* 250 300	* 347 200	* 223 300	* 312 000
Cyprus					
Sulphur	1 442	1 547	2 857	1 583	...
Hong Kong					
Sulphur—					
Crude	264	344	1 104	1 218	1 189
Sublimed	1 360	779	109	1	13

Imports of Sulphur and Pyrites

tonnes

Country	1978	1979	1980	1981	1982
India					
Sulphur—					
Crude	820 625	959 152	677 685	...	...
Sublimed	2 066	470	2 355	...	...
Indonesia					
Sulphur—					
Crude	1 335	2 643	2 623	10 399	3 413
Sublimed & precipitated	45 155	29 367	50 609	89 527	82 805
Iran (c)					
Sulphur	405	411	359	243	...
Israel					
Sulphur	...	50 700	37 053	135 425	137 341
Japan					
Pyrites	30 000	7 300	—	—	—
Sulphur	563	582	818	467	5
Jordan					
Sulphur—					
Crude	1 430	758	1 144	990	31 595
Sublimed & precipitated	440	644	334	948	27 409
Korea, Republic of					
Sulphur—					
Crude	) 513 784	582 055	519 184	386 430	440 660
Sublimed & precipitated	)	673	343	321	368
Malaysia					
Sulphur—					
Crude	15 973	8 019	10 257	...	...
Sublimed & precipitated	737	4 578	5 430	...	...
Pakistan (b)					
Sulphur	8 355	5 942	22 366	20 857	29 458
Philippines					
Sulphur—					
Crude	7 587	5 466	4 808	497	1 564
Sublimed & precipitated	16 972	12 675	23 820	19 007	22 615
Singapore					
Sulphur—					
Crude	373	568	245	219	57
Sublimed & precipitated	315	168	596	3 273	262
Sri Lanka					
Sulphur—					
Crude	143	520	431	125	433
Sublimed & precipitated	586	317	642	335	115
Syria					
Sulphur—					
Crude	3 194	7 696	12 778	25 623	...
Sublimed & precipitated	338	84	55	97	...
Taiwan					
Sulphur—					
Crude	176 855	186 479	122 737	75 887	25 358
Sublimed & precipitated	187 499	130 629	250 497	264 015	156 287
Thailand					
Sulphur—					
Crude	31 718	13 878	37 750	12 333	18 745
Refined	11 682	13 185	1 964	12 195	12 997
Sublimed & precipitated	148	643	284	193	201
Australia					
Sulphur	496 804	436 221	686 851	556 517	458 933
New Zealand (b)					
Sulphur—					
Crude	234 899	257 986	249 187	247 597	179 494
Sublimed & precipitated	263	275	325	235	194

(a) S content

(b) Years ended 30 June of that stated

(c) Years ended 20 March following that stated

(d) BGS estimates, based on known exports from certain countries

Production of Talc

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	18 000	16 600	17 297	18 312	16 611
France	275 000	268 000	316 000	313 000	296 000
Germany, Federal Republic of	15 446	14 986	15 499	15 440	* 15 400
Greece	1 078	...	2 529	2 697	2 166
Italy	169 000	157 382	165 905	163 708	163 770
Austria	106 848	116 420	116 708	116 425	117 092
Finland	265 151	256 087	302 167	307 915	325 298
Hungary	4 053	2 932	3 492	4 409	...
Norway	96 716	87 485	87 635	86 376	* 85 000
Portugal	1 709	2 748	3 756	3 512	2 876
Romania	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Soviet Union	* 470 000	* 480 000	* 490 000	* 500 000	* 510 000
Spain	61 892	71 047	73 949	69 068	* 65 000
Sweden	21 322	17 746	15 856	15 581	* 16 000
Egypt	5 590	5 500	5 400	5 723	7 680
South Africa					
Talc	7 487	9 451	9 466	9 464	9 743
Wonderstone (pyrophyllite)	5 159	5 795	4 900	5 662	4 070
Zimbabwe	758	1 170	456	386	270
Canada	61 661	90 330	92 000	83 000	72 000
Mexico	2 639	7 835	10 088	11 169	* 10 000
USA					
Talc	1 150 000	1 150 000	1 022 000	1 121 000	952 000
Pyrophyllite	105 000	168 000	103 000	97 000	79 000
Argentina					
Talc	41 117	24 059	24 575	23 120)
Pyrophyllite	4 731	9 886	5 226	6 779	) 39 254
Steatite	964	882	2 930	3 120)
Brazil					
Talc (b)	190 674	310 397	338 450	325 191	* 300 000
Pyrophyllite (b)	69 846	55 081	74 606	178 464	* 100 000
Chile	432	850	1 139	665	635
Colombia	4 320	6 085	6 085	6 050	6 240
Paraguay	160	210	250	150	* 150
Peru	8 909	15 970	* 14 700	* 14 700	* 14 700
Uruguay	1 945	2 126	2 206	1 589	2 000
Afghanistan (a)	1 775	500	—	—	—
Burma (c)	228	191	219	128	* 130
China	* 150 000	* 150 000	* 915 000	* 900 000	* 900 000
India					
Steatite	327 000	373 000	349 000	336 000	311 000
Pyrophyllite	38 883	34 708	35 077	40 064	* 40 000
Japan					
Talc	95 834	122 987	147 916	119 931)
Pyrophyllite	1 016 095	933 790	1 126 359	1 025 721	) 1 486 092
Korea, Dem. P.R. of	* 150 000	* 160 000	* 170 000	* 170 000	* 170 000
Korea, Republic of					
Talc	202 078	236 824	204 662	169 401	124 793
Pyrophyllite	463 005	541 383	514 511	395 216	466 324
Pakistan	25 290	32 938	29 613	24 997	* 25 000
Philippines	4 061	3 570	863	446	* 500
Taiwan	9 946	11 194	9 911	24 774	30 661
Thailand	14 888	13 542	11 726	12 035	21 998
Australia					
Talc	137 553	138 266	159 962	74 840)
Pyrophyllite	9 401	19 209	11 002	8 146	) * 85 000
World total	5 900 000	6 200 000	7 100 000	6 900 000	6 900 000

(a) Years ended 20 March following that stated

(b) Includes beneficiated and direct shipping ore

(c) Years ended 31 March following that stated

Exports of Talc

Country	1978	1979	1980	1981	1982
United Kingdom	3 978	5 604	5 806	6 902	3 572
Belgium-Luxembourg	18 286	21 186	23 332	28 267	24 184
France	77 310	75 159	81 332	73 897	75 785
Germany, Federal Republic of	7 949	6 333	6 138	3 772	4 158
Greece	50	1 405	...	525	105
Italy	56 591	55 181	54 014	52 180	46 082
Netherlands	3 674	4 066	8 011	14 902	13 926
Austria	87 097	98 139	97 760	110 322	98 656
Czechoslovakia	* 6 670	7 000	7 000	* 6 400	...
Finland	27 509	59 317	54 044	60 314	53 099
Norway	59 166	52 446	55 729	53 203	50 032
Portugal	127	18	33	—	...
Spain	6 128	15 030	11 357	7 439	...
Sweden	4 703	3 776	5 850	6 378	8 288
Switzerland	71	71	97	152	113
Turkey	42	615	1 692	1 401	987
Yugoslavia	—	590	810	630	900
South Africa					
Wonderstone (pyrophyllite)	6 837	6 353	...	...	...
Other	—	69	500	—	—
Mexico	213	0	0	...	...
USA	242 047	287 034	274 946	282 330	210 110
Argentina	191	217	5	...	...
Brazil	159	320	495	419	175
China (a)	* 296 000	* 363 000	* 384 000	* 370 300	* 519 100
Hong Kong (Re-exports)	5 729	8 908	5 302	7 663	11 852
India	12 479	13 355	...	...	...
Japan	1 803	1 145	1 691	1 923	2 032
Korea, Dem. P.R. of	* 54 600	* 74 500	(a)* 45 200	(a)* 30 400	(a)* 39 300
Korea, Republic of	77 878	69 134	53 478	50 444	41 836
Malaysia	114	9	5	...	...
Singapore	735	807	554	1 222	909
of which: Re-exports	725	805	549	1 142	902
Taiwan	1 812	1 401	1 043	1 706	1 114
Australia	106 177	107 849	83 059	82 641	...

(a) BGS estimates, based on known imports into certain countries

Imports of Talc

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	62 576	65 757	62 367	55 838	58 508
Belgium-Luxembourg	22 758	36 915	52 903	45 491	58 750
Denmark	10 507	8 775	7 991	8 958	7 427
France	19 258	18 028	20 514	20 811	18 908
Germany, Federal Republic of	127 515	125 688	130 765	122 478	121 699
Greece	2 680	2 564	2 265	1 601	1 612
Irish Republic	1 988	2 016	2 569	2 492	2 538
Italy	18 892	21 791	24 066	25 810	20 479
Netherlands	21 192	23 404	32 827	37 771	39 015
Albania (d)	* 100	* 700	* 1 900	* 1 100	* 1 000
Austria	2 427	2 746	2 118	1 674	2 623
Finland	656	868	805	573	682
Hungary	2 977	2 699	5 572	4 162	...
Norway	3 419	6 654	6 878	5 608	4 549
Poland	25 540	26 043	23 180	12 818	15 226
Portugal	4 145	3 336	3 670	4 075	...
Soviet Union	* 120 000	* 120 000	* 120 000	* 120 000	* 120 000
Spain	11 948	10 945	15 163	10 300	...
Sweden	18 780	45 745	36 717	34 853	26 133
Switzerland	10 766	10 911	12 951	13 255	12 684
Turkey	189	235	115	248	227
Yugoslavia	5 127	4 611	5 121	3 642	3 616
Algeria	1 835	2 219	1 428	...	...
Cameroon	346	297	387	...	...
Egypt	380	628	140	526	...
Ghana	530	...	...	...	...
Ivory Coast	1 030	915	1 405	1 375	...
Kenya	3 572	2 556	2 986	...	...
Libya	362	497	823	...	...
Morocco	936	797	917	822	974
Senegal	229	180	115	152	...
South Africa	1 744	1 819	2 412	2 676	2 508
Tunisia	1 580	1 676	1 875	1 928	...
Zaire	174	183	* 50	* 150	...
Canada	33 350	50 350	50 774	30 322	34 522
Costa Rica	912	894	991	708	667
Dominican Republic	838	811	827	770	...
El Salvador	125	231	175	202	...
Guatemala	294	632	475	425	402
Honduras	152	...	134	229	...
Jamaica	431	18 482	210	286	287
Mexico					
Pyrophyllite	80	246	172	...	...
Other	129 786	159 845	150 138	...	...
Nicaragua	382	160	188	...	...
Panama	405	488	554	551	206
Trinidad & Tobago	789	3 642	618	1 785	...
USA	17 526	20 298	18 687	24 498	24 043
Argentina	245	550	510	...	...
Brazil	131	111	117	86	35
Chile	446	...	...	...	...
Colombia	1 803	2 559	2 377	2 128	2 732
Ecuador	943	618	556	...	...
Peru	644	485	551	783	715
Venezuela	9 236	7 729	8 379	8 034	...
Cyprus	281	517	790	144	...
Hong Kong	7 684	10 793	7 488	9 607	12 807
Indonesia	11 159	10 533	10 977	12 880	17 338
Iran (a)	694	387	407	606	...
Israel (c)	120	655	711	1 455	...
Japan	447 718	550 265	501 086	441 604	584 281
Malaysia	7 233	7 326	6 085	...	...

Imports of Talc

tonnes

Country	1978	1979	1980	1981	1982
Philippines	8 547	4 347	8 098	9 779	8 666
Singapore	6 054	4 885	5 143	9 000	7 659
Sri Lanka	1 310	1 585	1 215	1 069	1 297
Syria	3 892	745	2 191	3 602	...
Taiwan	3 943	5 297	4 775	4 694	6 356
Thailand	10 996	15 533	11 775	13 409	13 931
Australia	527	420	382	329	...
New Zealand (b)	3 623	3 181	3 161	2 047	3 523

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

(c) Figures may be incomplete as value only given in Israeli trade return for imports from some countries

(d) BGS estimates, based on known exports from certain countries

Production of Tantalum and Niobium (Columbium) Minerals

tonnes

Country		1978	1979	1980	1981	1982
Portugal						
Columbite-tantalite	(25%, 25%)	7	3	4	9	* 10
Spain						
Tantalite	(— , 25%)	45	34	51	58	* 60
Mozambique						
Tantalite	(14%, 42%)	39	* 34	...	...	...
Microlite	(4%, 55%)	40	* 32	...	...	...
Nigeria						
Columbite	(43%, 6%)	669	580	555	380	169
Tantalite	(30%, 30%)	1	1	1	1	—
Rwanda						
Columbite-tantalite	(30%, 23%)	54	47	60	57	62
Zaire						
Columbite-tantalite	(27%, 27%)	47	38	92	* 75	60
Zimbabwe						
Columbite-tantalite	(11%, 28%)	31	30	41	45	36
Canada						
Pyrochlore	(43%, —)	4 054	4 053	4 105	4 568	5 210
Tantalite	(3%, 44%)	295	295	214	193	111
Brazil						
Pyrochlore	(42%, —)	17 877	28 909	30 700	29 886	32 619
Columbite-tantalite	(20%, 30%)	203	374	538	299	200
Djalmaite	(1%, 50%)	19	10	18	13	* 15
Malaysia						
Columbite	(40%, 14%)	23	40	33	23	8
Thailand						
Columbite	(27%, 16%)	64	382	213	) 49	39
Tantalite	(20%, 30%)	—	25	143		
Struverite	(— , 6%)	—	231	301			44	10
Australia						
Columbite-tantalite	(20%, 33%)	139	147	202	264	* 200
World total concentrates		24 000	35 000	37 000	36 000	39 000
Nb content		* 10 000	* 14 000	* 15 000	* 15 000	* 16 000
Ta content		* 400	* 500	* 600	* 400	* 300

Notes:

- 1 Niobium and tantalum minerals are believed to have been produced also in the Soviet Union and China, and minor quantities in Argentina, Burundi, Namibia and Zambia
- 2 The figures in this table refer to gross tonnage of tantalum and niobium concentrates. Estimated average niobium and tantalum contents of these are given in the form (Nb%, Ta%) for each country and each mineral, relating where possible to the later years
- 3 Niobium and tantalum are also recovered from tin slags. This source is particularly important in the case of tantalum and in recent years is believed to have accounted for over 50% of all tantalum recovered. No detailed information on the production of tantalum bearing tin slags is available but the major producers are Thailand and Malaysia, with small amounts from Australia, Brazil, Nigeria, Portugal, South Africa and Zaire

Exports of Tantalum and Niobium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Niobium & tantalum ores & concentrates (a)	86	144	6	15	—
Tantalum	36	43	34	28	9
France					
Niobium & tantalum ores (a)	—	12	4	—	—
Tantalum	12	22	20	22	23
Germany, Federal Republic of					
Niobium & tantalum ores (a)	1 041	1 276	2 211	1 862	1 424
Tantalum	48	81	97	42	76
Niobium	19	41	90	50	45
Italy					
Tantalum	10	5	16	7	54
Netherlands					
Tantalum	7	8	182	4	4
Austria					
Tantalum	10	15	10	9	10
Nigeria					
Columbite	757	1 970	...	...	...
Rwanda					
Columbite-tantalite	28	75	76	...	...
Zaire					
Columbite-tantalite	98	51	9	...	...
Canada					
Pyrochlore	* 3 600	* 3 500	* 3 500	* 3 900	* 4 400
Tantalite	* 400	* 300	* 300	* 400	* 400
USA					
Tantalum ores & concentrates	29	149	212	45	111
Tantalum	411	334	362	208	238
Niobium	* 40	* 45	* 55	* 70	* 45
Brazil					
Pyrochlore	1 983	1 660	2 430	—	—
Columbite-tantalite	132	328	456	290	166
Japan					
Tantalum	42	30	40	27	9
Malaysia					
Columbite & tantalite	34	79	41	...	...
Tin slags	6 331	10 824	25 648	...	...
Singapore					
Tantalum ores & concentrates	21	31	187	123	58
of which: Re-exports	21	31	187	123	28
Tin slags	93	1 194	6 678	2 326	1 244
of which: Re-exports	10	24	6 164	2 111	970
Thailand					
Columbite & tantalite	112	432	496	134	93
Tin slags	2 736	3 507	3 306	2 043	2 444
Australia					
Tantalite-columbite	125	312	373	158	...

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Figures up to 1980 include vanadium ore, but this is thought to be negligible

Imports of Tantalum and Niobium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Niobium & tantalum ores & concentrates (a)	466	621	131	11	—
Tantalum	105	75	59	36	31
Niobium	7	36	23	13	12
Belgium-Luxembourg					
Niobium & tantalum ores (a)	1 952	2 245	2 537	2 679	1 685
Niobium	10	10	3	6	3
France					
Niobium & tantalum ores (a)	25	0	2	1	1
Tantalum	30	52	34	33	55
Niobium	11	5	3	3	20
Germany, Federal Republic of					
Niobium & tantalum ores (a)	870	1 458	1 341	553	185
Tantalum	251	252	255	115	102
Niobium	11	22	23	32	24
Italy					
Niobium & tantalum ores (a)	1 818	449	24	—	0
Tantalum	8	7	7	2	2
Niobium	1	1	1	1	1
Netherlands					
Tantalum	3	1	2	3	1
Austria					
Tantalum	15	43	37	19	29
USA					
Tantalum concentrates	677	695	1 139	885	588
Niobium concentrates	1 941	1 708	2 197	903	413
Tantalum	102	106	118	68	76
Niobium	0	3	54	4	4
Tin slags (b) —					
Ta content	307	517	602	422	...
Nb content	198	514	643	381	...
Japan					
Niobium minerals	1 858	1 659	1 764	1 367	2 050
Tantalum ores & concentrates	128	304	309	38	20
Tantalum	54	77	47	26	32
Malaysia					
Tantalum	41	—	0	...	...
Singapore					
Tantalum ores & concentrates	—	143	208	307	147
Tin slags	9 428	17 563	12 360	9 343	10 083

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Figures up to 1980 include vanadium ore, but this is thought to be negligible

(b) Ta and Nb content is approximately 10% and 7%, respectively, of gross weight

Mine Production of Tin

tonnes (metal content)

Country	1978	1979	1980	1981	1982
United Kingdom	3 132	2 708	3 291	3 729	4 208
Czechoslovakia	* 180	* 180	215	289	* 200
German Democratic Republic	* 1 500	* 1 600	* 1 800	* 1 600	* 1 700
Portugal	282	240	292	356	400
Soviet Union	* 18 000	* 18 000	* 17 000	* 16 000	* 16 000
Spain	711	496	437	564	451
Cameroon	11	18	* 24	* 24	* 24
Namibia	1 250	1 042	1 070	1 228	1 326
Niger	89	73	78	69	* 70
Nigeria	2 970	2 802	2 585	2 349	1 881
Rwanda	* 1 400	* 1 400	* 1 600	1 287	1 189
South Africa	2 887	2 697	2 913	2 811	3 035
Uganda	239	37	67	* 30	* 30
Zaire	3 376	2 464	3 159	2 346	2 174
Zimbabwe	945	969	934	1 157	1 196
Canada (a)	360	337	243	239	153
Mexico	73	23	60	28	27
USA	* 100	* 100	* 100	* 100	* 100
Argentina	362	386	351	* 460	* 340
Bolivia	30 881	27 648	27 271	29 801	26 773
Brazil	6 341	7 005	6 930	8 297	8 218
Peru (b)	458	870	1 077	1 519	1 672
Burma	* 800	* 1 000	1 295	1 396	1 624
China	* 14 000	* 14 000	* 14 600	* 15 000	* 15 000
Indonesia	27 437	29 436	32 527	35 238	33 786
Japan	599	661	549	562	533
Korea, Republic of	56	40	9	6	—
Laos	* 600	* 600	* 600	* 600	* 600
Malaysia	62 650	62 995	61 404	59 938	52 342
Thailand	30 186	33 962	33 685	31 474	26 109
Australia	11 864	12 571	11 588	12 267	12 126
World total	224 000	226 000	228 000	231 000	213 000

(a) Sn in concentrates exported and in tin-lead alloys produced

(b) Recoverable

Tin

Smelter Production of Tin

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	8 445	8 025	5 829	6 863	8 164
Belgium	3 295	2 165	2 822	65	—
Germany, Federal Republic of	3 241	2 488	638	562	—
Netherlands	1 625	* 1 720	* 1 148	* 3 500	* 2 757
Czechoslovakia	120	120	215	289	295
German Democratic Republic	* 1 500	* 1 600	* 1 800	* 1 500	* 2 000
Portugal	490	445	495	400	421
Soviet Union	* 18 000	* 18 000	* 17 000	* 16 000	* 16 000
Spain	3 255	3 529	3 369	3 200	2 500
Nigeria	2 984	2 858	2 684	2 489	2 754
South Africa	637	819	1 100	2 056	* 2 800
Zaire	496	458	213	450	352
Zimbabwe	912	949	918	1 139	1 197
Mexico	1 000	1 268	1 322	838	* 800
USA	5 900	4 600	3 000	2 000	3 500
Argentina	* 120	* 120	* 200	* 200	* 200
Bolivia (a)	16 181	15 696	17 533	19 937	18 980
Brazil	9 309	10 133	8 792	7 639	9 298
China	* 14 000	* 14 000	* 14 600	* 15 000	* 15 000
Indonesia	25 830	27 790	30 465	32 429	29 755
Japan	1 140	1 252	1 319	1 313	1 296
Malaysia	71 953	73 068	71 318	70 326	62 836
Thailand	28 945	33 058	34 689	32 636	25 479
Australia	5 129	5 423	4 819	4 286	3 105
World total	225 000	230 000	226 000	225 000	209 500

(a) Refined, including alloys

Exports of Tin

Country	1978	1979	1980	1981	1982
United Kingdom					
Concentrates	3 608	4 019	3 038	4 306	1 866
Unwrought	6 971	6 243	7 050	6 264	5 417
Unwrought alloys	1 529	1 214	1 184	1 436	1 193
Scrap	49	22	112	143	356
Belgium-Luxembourg					
Unwrought	2 343	2 301	2 834	781	306
Unwrought alloys	74	72	120	44	106
Scrap	149	92	208	102	86
Denmark					
Unwrought	37	28	13	17	133
Unwrought alloys	620	740	496	393	540
Scrap	3	546	244	0	21
France					
Concentrates	10	7	8	35	19
Unwrought	739	564	244	722	243
Unwrought alloys	129	102	399	124	192
Scrap	717	881	915	655	472
Germany, Federal Republic of					
Unwrought	4 353	5 350	2 706	3 659	2 179
Unwrought alloys	460	520	535	1 126	1 846
Scrap	88	52	107	106	133
Italy					
Unwrought	228	123	282	112	345
Scrap	24	131	35	121	51
Netherlands					
Unwrought	437	525	1 101	2 081	593
Unwrought alloys	837	750	844	867	863
Scrap	549	513	361	258	440
Austria					
Unwrought	38	10	19	17	20
Czechoslovakia					
Concentrates	111	123	106	...	...
Norway					
Unwrought (a)	59	21	7	6	13
Spain					
Unwrought	153	435	135	2	...
Unwrought alloys	178	132	94	245	...
Scrap	37	94	65	91	...
Sweden					
Unwrought	40	61	57	95	42
Unwrought alloys	14	2	1	81	18
Switzerland					
Unwrought	84	168	186	158	218
Scrap	68	90	117	72	110
Yugoslavia					
Unwrought (a)	64	114	49	56	18
Niger					
Concentrates	72	(b)* 25	(b)* 38	(b)* 37	—
Nigeria					
Unwrought (a)	2 093	2 581	2 719	2 517	1 870
Rwanda					
Concentrates	2 137	1 876	2 084	* 2 500	* 300
South Africa					
Concentrates (b)	2 212	1 487	754	546	671
Tanzania					
Concentrates	24	18	14	9	...
Zaire					
Concentrates (b)	2 766	1 647	2 020	1 605	1 672
Unwrought	776	263	446	179	248
Canada					
Concentrates (b)	943	713	883	517	609
Jamaica					
Scrap	472	327	85 398	535	414

Tin

Exports of Tin

tonnes

Country	1978	1979	1980	1981	1982
USA					
Unwrought (a)	4 693	3 418	4 294	6 081	9 357
of which: Re-exports	4 194	2 849	3 699	3 719	3 588
Scrap	6 349	6 068	7 519	3 901	4 838
Argentina					
Tin-silver ore	2 846	1 406	4 997	...	...
Bolivia					
Concentrates (b)	13 818	11 304	8 313	5 525	3 240
Unwrought	15 461	14 355	13 720	17 952	17 068
Brazil					
Unwrought	1 665	1 076	2 773	4 747	4 346
Peru					
Concentrates	1 786	2 355	2 213	...	...
Burma					
Concentrates (c)	1 447	1 766	1 426	2 436	...
China					
Unwrought (a)(d)	* 5 400	* 7 100	* 2 700	* 4 200	* 4 200
Hong Kong					
Unwrought	223	749	621	1 160	1 027
of which: Re-exports	223	680	472	934	787
Indonesia					
Concentrates	976	1 624	4 857	1 044	1 473
Unwrought (a)	22 859	26 274	26 169	32 128	28 610
Scrap	676	475	1 404	750	—
Japan					
Unwrought (a)	66	84	44	37	94
Laos					
Concentrates (b)	72	42	83	13	564
Malaysia					
Unwrought	70 189	72 113	69 498	66 443	48 584
Singapore					
Concentrates	8 271	6 382	5 351	3 318	4 048
of which: Re-exports	8 139	6 259	5 256	3 234	3 596
Unwrought	7 096	9 835	13 885	15 335	17 909
of which: Re-exports	6 869	7 823	10 901	13 239	15 871
Unwrought alloys	751	781	755	877	708
of which: Re-exports	63	94	131	289	282
Thailand					
Unwrought	28 944	31 309	33 955	30 074	24 889
Unwrought alloys	1 307	40	25	204	654
Australia					
Concentrates (b)	7 015	6 435	7 423	7 305	7 075
Unwrought (a)	2 146	2 108	1 625	1 458	677

Note: In this table the term 'unwrought' tin corresponds to item 687.1 of the Standard International Trade Classification (Revision 2) and comprises ingots, pigs, unwrought bars, sticks, etc

(a) Including alloys

(b) Sn content

(c) Years ended 31 March following that stated

(d) BGS estimates, based on known imports into certain countries

Imports of Tin

Country	1978	1979	1980	1981	1982
United Kingdom					
Concentrates	39 105	35 987	36 656	38 407	20 290
Unwrought	7 834	7 747	5 157	6 354	5 184
Unwrought alloys	518	783	1 972	1 798	2 446
Scrap	1 355	1 314	913	1 006	1 533
Belgium-Luxembourg					
Concentrates	4 718	2 912	3 151	126	151
Unwrought	2 105	2 606	2 627	2 550	2 195
Unwrought alloys	128	188	361	194	201
Scrap	131	175	182	187	62
Denmark					
Unwrought	226	252	123	90	69
Unwrought alloys	122	71	124	20	195
Scrap	201	285	250	143	68
France					
Concentrates	504	941	—	0	—
Unwrought	10 650	10 348	10 362	8 852	8 356
Unwrought alloys	178	217	162	58	201
Scrap	136	99	194	23	29
Germany, Federal Republic of					
Concentrates	7 989	7 158	3 343	3 229	1 766
Unwrought	14 700	15 773	17 132	15 925	15 016
Unwrought alloys	781	1 325	1 172	1 127	1 325
Scrap	624	340	324	344	448
Greece					
Unwrought	320	799	468	417	298
Irish Republic					
Unwrought (a)	50	25	22	21	9
Italy					
Unwrought	5 899	6 732	6 336	4 507	4 657
Unwrought alloys	527	380	471	319	410
Netherlands					
Concentrates	2 820	3 437	3 338	6 053	4 738
Unwrought	4 616	4 728	5 233	5 330	3 772
Unwrought alloys	814	811	528	1 023	1 250
Scrap	971	470	402	242	215
Austria					
Unwrought	469	497	557	410	455
Czechoslovakia					
Unwrought (a)	3 894	3 940	4 085	3 646	3 088
Finland					
Unwrought (a)	211	302	267	191	194
Hungary					
Unwrought & semi-manufactures	1 739	1 724	1 662	1 369	1 772
Norway					
Unwrought	547	500	524	500	381
Unwrought alloys	97	83	91	57	79
Poland					
Unwrought	4 616	3 879	3 318	2 223	4 629
Portugal					
Concentrates	332	226	308	63	...
Unwrought	464	529	572	422	...
Soviet Union					
Concentrates	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
Unwrought	* 7 000	* 10 000	* 15 300	* 17 000	* 17 000
Spain					
Concentrates	5 083	3 263	4 363	4 070	...
Sweden					
Unwrought	336	530	414	268	264
Unwrought alloys	79	98	61	45	60
Switzerland					
Unwrought	932	868	1 026	926	866
Turkey					
Unwrought	744	321	341	713	657

Tin

Imports of Tin

tonnes

Country	1978	1979	1980	1981	1982
Yugoslavia					
Unwrought (a)	1 833	1 604	1 032	959	1 188
Algeria					
Unwrought (a)	94	92	121	...	...
Egypt					
Unwrought & scrap	361	241	35	53	220
Kenya					
Unwrought (a)	22	17	22	1	...
Morocco					
Unwrought (a)	148	167	185	189	176
Nigeria					
Unwrought (a)	992	6	...	...	...
South Africa					
Unwrought	450	386	225	276	41
Tunisia					
Unwrought & scrap	51	74	92	32	...
Canada					
Unwrought	4 809	4 689	4 527	3 811	3 235
Mexico					
Concentrates	2 940	2 016	2 482	...	...
Unwrought	275	609	566	528	379
USA					
Concentrates (b)	3 873	4 529	841	232	1 962
Unwrought	46 776	48 355	45 982	45 874	27 939
Unwrought alloys	770	990	865	805	1 421
Scrap	498	628	870	2 430	2 786
Argentina					
Unwrought	664	980	674	1 231	1 229
Brazil					
Concentrates	4 074	7 542	3 605	301	—
Chile					
Unwrought	546	273	199	307	151
Colombia					
Unwrought (a)	476	353	430	378	375
Peru					
Unwrought (a)	514	430	631	68	154
Uruguay					
Unwrought	38	69	21	39	15
Venezuela					
Unwrought (a)	339	511	187	262	...
Hong Kong					
Unwrought	1 445	2 042	1 694	1 769	1 452
India					
Unwrought (a)	2 570	1 879	1 708	...	...
Scrap	4 553	7 466	2 621	...	...
Iran (d)					
Unwrought	401	409	1 019	755	...
Japan					
Unwrought	28 563	30 478	31 068	30 223	26 185
Korea, Republic of					
Concentrates	693	543	331	151	17
Unwrought (a)	...	6 426	1 234	2 056	2 093
Malaysia					
Concentrates	17 245	18 863	16 771	19 800	23 100
Unwrought (a)	407	323	296	...	...
Philippines					
Unwrought (a)	767	422	437	6 339	429
Singapore					
Concentrates	3 118	4 227	3 370	1 996	3 041
Unwrought	1 174	1 015	2 089	1 380	1 062
Unwrought alloys	498	537	503	358	406
Scrap	60	156	1 032	1 503	627

Imports of Tin

Tin
tonnes

Country	1978	1979	1980	1981	1982
Syria					
Unwrought & scrap	242	4 132	79	73	...
Taiwan					
Unwrought	3 199	703	615	1 062	945
Australia					
Unwrought	204	5	44	102	64
New Zealand (c)					
Unwrought (a)	249	236	263	205	194

Note: In this table the term 'unwrought' tin corresponds to item 687.1 of the Standard International Trade Classification (Revision 2) and comprises ingots, pigs, unwrought bars, sticks, etc

- (a) Including alloys
- (b) Sn content
- (c) Years ended 30 June of that stated
- (d) Years ended 20 March following that stated

Production of Titanium Minerals

tonnes

Country	1978	1979	1980	1981	1982
Finland					
Ilmenite	131 900	131 500	149 700	161 500	167 800
Norway					
Ilmenite	766 990	819 815	827 827	657 625	551 764
Portugal					
Ilmenite	251	268	232	334	* 300
Soviet Union					
Ilmenite	* 410 000	* 410 000	* 420 000	* 430 000	* 430 000
Rutile	* 9 000	* 9 000	* 9 000	* 9 000	* 9 000
Sierra Leone					
Rutile	—	7 500	45 440	50 795	46 576
South Africa					
Ilmenite (d)	* 154 000	* 487 300	* 584 500	* 629 200	* 647 700
Rutile	* 18 000	* 42 000	* 48 000	* 49 900	* 47 000
Canada (a)					
Ilmenite (d)	1 809 990	1 004 260	1 853 270	2 008 117	1 735 000
USA					
Ilmenite (b)	535 013	579 956	497 937	462 067	206 697
Brazil					
Ilmenite	20 077	13 191	16 839	15 087	11 322
Rutile	365	439	428	172	234
India					
Ilmenite	172 541	162 909	184 556	188 828	* 190 000
Rutile	7 107	6 642	7 192	8 752	* 8 000
Malaysia (c)					
Ilmenite	165 984	212 837	199 486	172 757	106 937
Sri Lanka					
Ilmenite	35 904	55 370	33 956	80 011	68 282
Rutile	11 497	14 675	12 789	13 301	7 212
Australia					
Ilmenite	1 254 994	1 181 010	1 384 563	1 321 137	1 149 212
Rutile	257 075	274 533	311 744	230 817	220 697
Leucoxene	16 103	22 470	23 943	19 261	19 739
World total					
Ilmenite (Wt. of concs)	5 500 000	5 100 000	6 200 000	6 100 000	5 300 000
Rutile (Wt. of concs)	303 000	355 000	435 000	363 000	339 000
All forms (TiO ₂ content)	* 3 031 000	* 2 886 000	* 3 512 000	* 3 425 000	* 3 000 000

Note: The figures in this table refer to gross tonnage of titanium concentrates

(a) Canada produces some ilmenite which is sold as such and not processed into slag, but tonnages are small

(b) Includes a mixed product containing ilmenite, leucoxene and rutile

(c) Exports

(d) Processed into slag. In 1982, Canada produced 669 000 tonnes (70–72% TiO₂) and South Africa produced 381 000 tonnes (85% TiO₂)

Exports of Titanium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Titanium minerals	3 081	1 551	645	344	970
Oxides	94 888	94 602	108 149	89 409	96 549
Belgium-Luxembourg					
Titanium minerals	3	3 426	2 814	0	24
Metal	164	191	110	103	113
Oxides	57 964	58 418	56 755	66 727	55 834
France					
Titanium minerals	331	715	2 160	1 070	105
Metal	530	604	734	1 185	700
Oxides	110 843	126 370	107 461	126 407	118 413
Germany, Federal Republic of					
Ilmenite	639	1 535	3 149	5 186	2 026
Other titanium minerals	5 556	4 067	6 114	3 545	3 351
Metal	1 905	1 866	2 234	2 132	1 817
Oxides	198 127	210 947	185 349	215 703	208 495
Italy					
Metal	137	131	103	63	134
Oxides	25 648	24 579	19 733	31 895	(c) 1 597
Netherlands					
Ilmenite	563	2 457	4 174	1 919	657
Other titanium minerals	377	142	22 212	19 827	21 520
Metal	135	114	77	154	101
Oxides	28 283	28 446	25 300	31 776	26 584
Finland					
Oxides	50 511	(b)* 42 600	(b)* 36 100	(b)* 32 000	(b)* 30 000
Norway					
Titanium minerals	714 108	741 430	779 741	619 329	470 223
Oxides	1 133	1 227	1 137	1 110	1 179
Soviet Union					
Metal (b)	* 2 400	* 3 500	* 2 800	* 1 600	* 1 200
Spain					
Oxides	27 260	38 974	25 745	21 991	...
Sweden					
Titanium minerals	—	388	23	47	—
Metal	520	420	506	603	428
Yugoslavia					
Oxides	13 453	12 132	11 353	12 560	12 847
South Africa					
Titanium minerals (b)	* 15 000	* 53 000	* 57 600	* 151 200	* 127 000
Titanium slag (b)	...	* 50 300	* 108 300	* 86 700	* 98 800
Canada					
Titanium slag (a)	...	...	...	...	...
Metal (d)	774	728	698	1 899	643
Oxides (d)	15 642	17 970	9 367	14 252	19 878
Mexico					
Oxides	11 094	...	...	...	...
USA					
Titanium minerals	5 070	9 780	16 567	7 004	19 724
Metal	7 086	7 903	8 094	8 816	7 432
Oxides	35 696	46 680	41 562	56 661	61 910
China					
Oxides (b)	* 1 300	* 1 500	* 1 700	* 1 900	* 2 200
Hong Kong					
Oxides (Re-exports)	3 036	1 878	2 529	2 554	1 814
India					
Ilmenite	96 728	53 043	...	...	...
Oxides (e)	290	45	242	...	...
Japan					
Metal	5 741	7 113	8 065	10 005	7 503
Oxides	34 602	41 163	46 343	45 491	58 241
Malaysia					
Ilmenite	165 984	212 837	199 486	172 757	106 937
Sri Lanka					
Ilmenite	40 700	32 640	23 970	32 816	14 144

Exports of Titanium

tonnes

Country	1978	1979	1980	1981	1982
Taiwan					
Oxides	468	961	789	113	234
Australia					
Ilmenite	993 636	906 779	1 058 712	907 810	803 732
Rutile	371 317	317 780	315 314	216 048	198 526
Leucoxene	6 516	24 926	24 207	15 055	14 016
Oxides (b)	* 13 500	* 16 800	* 14 300	* 15 900	* 16 200

Notes:

- 1 So far as possible, the term 'oxides', as used in this table, includes oxides and oxide based pigments classified under Standard International Trade Classification (Revision 2) items 522.46 and 533.1
 - 2 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) Sorelslag (70–72% TiO₂): estimated at 700 000 tonnes per year
 (b) BGS estimates, based on known imports into certain countries
 (c) Excluding oxide based pigments
 (d) Exports to the USA only
 (e) Years ended 31 March following that stated

Imports of Titanium

Country	1978	1979	1980	1981	1982
United Kingdom (a)					
Ilmenite	261 405	302 444	261 615	225 772	258 955
Other titanium minerals	45 302	80 546	50 809	62 929	95 918
Metal	7 981	(b)* 7 000	(b)* 8 000	(b)* 6 200	(b)* 7 100
Oxides	32 180	34 996	28 221	36 685	36 072
Belgium-Luxembourg					
Ilmenite	63 641	75 517	33 088	78 510	37 020
Other titanium minerals	36 979	26 577	45 020	41 435	34 281
Metal	1 463	4 097	1 420	914	1 015
Oxides	23 193	24 888	21 642	21 146	22 530
Denmark					
Oxides	7 559	7 898	7 421	8 338	7 453
France					
Ilmenite	146 577	119 708	85 377	90 755	80 118
Other titanium minerals	7 900	9 700	25 953	70 072	73 741
Metal	965	1 786	2 809	3 348	2 896
Oxides	45 576	45 211	43 885	44 860	43 707
Germany, Federal Republic of					
Ilmenite	406 992	521 534	451 088	516 503	379 513
Other titanium minerals	112 570	52 471	33 814	22 465	29 899
Metal	3 871	3 836	4 878	4 843	3 189
Oxides	69 603	73 206	70 834	70 260	67 402
Greece					
Oxides	2 179	17 122	8 691	663	...
Irish Republic					
Oxides	3 644	3 464	2 880	3 655	3 017
Italy					
Ilmenite	121 897	76 629	25	43	1 199
Other titanium minerals	4 531	5 538	5 425	3 874	5 206
Metal	2 770	2 856	1 539	1 965	1 840
Oxides	45 791	45 976	43 678	49 987	48 299
Netherlands					
Ilmenite	412	2 885	3 312	3 628	200
Other titanium minerals	934	1 372	33 826	20 658	22 048
Metal	240	260	239	394	171
Oxides	23 068	27 723	20 127	24 467	21 116
Austria					
Oxides	10 557	9 195	8 967	8 894	9 001
Bulgaria					
Titanium minerals (b)	* 2 800	* 1 800	* 5 600	* 5 200	* 3 600
Oxides (b)	* 2 300	* 2 700	* 2 300	* 2 700	* 1 700
Finland					
Titanium minerals	6 399	5 535	37 602	10 375	20 961
German Democratic Republic					
Oxides	* 16 750	* 21 500	* 23 000	...	...
Norway					
Oxides	3 168	4 582	4 490	4 189	4 373
Portugal					
Rutile	476	—	...	...	...
Oxides	7 834	8 278	8 840	8 937	...
Spain					
Ilmenite	106 200	162 977	134 920	146 798	...
Oxides	4 586	6 774	7 902	10 128	...
Sweden					
Titanium minerals	1 448	2 393	3 592	2 050	3 730
Metal	1 169	1 025	1 401	1 717	1 032
Oxides	17 819	18 419	16 406	17 374	18 213
Switzerland					
Oxides	7 194	6 141	3 773	1 826	2 020
Turkey					
Titanium minerals	700	1 930	2 111	2 996	...
Oxides	1 000	3 321	1 681	1 173	1 746
Yugoslavia					
Rutile	45 980	23 742	52 142	47 232	...
Oxides	6 686	6 876	5 397	5 686	1 266

Titanium

Imports of Titanium

tonnes

Country	1978	1979	1980	1981	1982
Algeria					
Titanium minerals	288	433	451	...	...
Oxides	2 902	4 561	7 775	...	...
Egypt					
Oxides	1 116	1 218	1 905	1 995	...
Morocco					
Oxides	2 624	3 245	2 333	2 538	3 200
South Africa					
Oxides	805	544	1 655	2 830	1 447
Canada					
Metal	641	731	616	552	504
Oxides	7 095	11 330	6 283	7 299	6 106
Mexico					
Ilmenite	63 572	59 724	63 588	...	...
Rutile sand (f)	1 944	2 692	2 938	...	...
USA					
Ilmenite	280 022	167 356	324 308	214 292	316 032
Titanium slag	135 327	100 888	176 896	243 874	224 841
Rutile (c)	262 736	257 168	255 468	183 590	148 166
Metal	5 975	8 930	9 179	10 794	3 400
Oxides	106 529	95 203	88 532	113 367	126 039
Argentina					
Titanium minerals	2 493	2 142	2 034	...	...
Brazil					
Ilmenite	56 335	56 437	55 016	69 408	59 510
Rutile	4 070	2 942	4 964	2 421	3 052
Oxides	13 926	27 929	26 262	24 067	14 918
Chile					
Oxides	3 160	...	...	...	...
Colombia					
Oxides	5 343	7 108	5 241	4 967	7 397
Uruguay					
Oxides	1 972	3 404	1 745	2 210	1 532
Venezuela					
Oxides	10 203	9 897	...	...	...
China					
Oxides (b)	* 3 500	* 5 300	* 7 600	* 12 000	* 21 400
Hong Kong					
Oxides	6 968	6 077	5 406	6 246	5 103
India					
Oxides (d)	7 313	8 460	6 497	...	...
Indonesia					
Oxides	9 734	11 840	10 192	12 021	14 343
Japan					
Titanium minerals	399 131	420 433	409 080	323 057	367 500
Titanium slag	61 942	75 864	152 663	66 086	91 625
Oxides	13 416	20 486	21 011	27 230	30 018
Korea, Republic of					
Titanium minerals	31 963	12 314	31 150	21 376	29 080
Rutile sand	4 138	4 631	3 740	4 652	4 375
Metal	3	82	124	936	391
Oxides	...	15 113	10 099	14 235	15 502
Malaysia					
Oxides	4 444	5 327	4 999	...	...
Philippines					
Titanium minerals	726	493	922	676	1 099
Oxides	6 443	6 802	4 393	5 448	6 338
Saudi Arabia					
Oxides	358	1 480	1 948	2 876	3 184
Singapore					
Titanium minerals	655	1 177	541	85	779
Oxides	3 420	4 338	3 768	4 099	4 636
Taiwan					
Oxides	16 334	18 933	18 099	17 292	21 406
Thailand					
Rutile	618	799	930	955	1 225
Oxides	1 442	1 458	555	602	757

Imports of Titanium

tonnes

Country	1978	1979	1980	1981	1982
Australia					
Oxides	1 162	807	802	682	1 094
New Zealand					
Oxides (e)	5 091	6 806	5 708	2 777	2 399

Notes:

- 1 Significant quantities of titanium Sorelslag are believed to be imported into various Western European countries, but details are not available
 - 2 So far as possible, the term 'oxides', as used in this table, includes oxides and oxide based pigments classified under Standard International Trade Classification (Revision 2) items 522.46 and 533.1
 - 3 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) United Kingdom is known to import about 70 000 tonnes per annum of Sorelslag (70–72% TiO₂)
- (b) BGS estimates, based on known exports from certain countries
- (c) Includes synthetic rutile
- (d) Years ended 31 March following that stated
- (e) Years ended 30 June of that stated
- (f) Micronised for use as an opacifier

Mine Production of Tungsten

tonnes (metal content)

Country	1978	1979	1980	1981	1982
United Kingdom	65	66	(e)* 40	(e)* 40	—
France	608	500	577	591	727
Austria	1 550	1 669	2 150	1 322	1 359
Czechoslovakia	* 80	* 80	* 80	* 80	* 80
Portugal (c)	1 104	1 387	1 580	1 395	1 343
Soviet Union	* 8 500	* 8 700	* 8 700	* 8 850	* 9 000
Spain	358	394	446	437	557
Sweden	381	402	364	394	275
Turkey	—	224	219	284	404
Namibia (d)	93	45	* 50	—	—
Rwanda	339	348	323	248	322
Uganda	110	* 20	* 20	* 20	* 20
Zaire (d)	148	112	72	136	136
Zimbabwe	130	110	90	60	35
Canada (a)	2 289	2 581	3 178	1 995	2 925
Mexico	234	252	266	263	99
USA (b)	3 128	3 013	2 754	3 605	1 521
Argentina	97	59	35	60	* 40
Bolivia	2 514	2 470	2 664	2 735	2 534
Brazil (a)	1 165	1 177	1 104	1 574	1 524
Peru	582	564	549	521	633
Burma (d)	486	719	848	845	971
China	* 12 000	* 13 000	* 15 000	* 13 500	* 12 500
Hong Kong	* 5	* 5	—	—	—
India	21	20	23	20	28
Japan	748	1 023	700	548	635
Korea, Dem. P.R. of	* 2 150	* 2 150	* 2 200	* 2 200	* 2 200
Korea, Republic of	2 681	2 713	2 737	2 739	2 421
Malaysia	71	52	35	35	37
Thailand	3 186	1 826	1 615	1 210	856
Australia (c)	2 707	3 193	3 575	3 517	2 589
New Zealand	8	8	4	10	7
World total	48 000	49 000	52 000	49 000	46 000

(a) Mainly scheelite

(b) Shipments from mine

(c) Wolframite and scheelite

(d) Including tin-wolframite concentrates

(e) BGS estimates

Exports of Tungsten

Country	1978	1979	1980	1981	1982
United Kingdom					
Tungsten ore	135	30	222	662	1 364
Metal	336	227	333	436	410
Carbide	302	397	541	739	708
Belgium-Luxembourg					
Tungsten ore	45	9	—	0	10
Metal	217	159	165	142	128
France					
Tungsten ore	1 613	1 082	846	760	930
Metal	297	363	267	432	291
Germany, Federal Republic of					
Tungsten ore	87	174	139	182	—
Metal	541	606	704	1 038	712
Italy					
Metal	34	99	65	93	65
Netherlands					
Tungsten ore	1 260	1 161	1 656	344	793
Metal	243	202	202	300	269
Austria					
Tungsten ore	130	25	—	—	0
Metal	581	848	1 111	1 243	663
Portugal					
Tungsten ore	1 692	1 704	2 093	2 402	* 1 700
Spain					
Scheelite ore	174	256	3 903	) 601	* 690
Other tungsten ore	213	359	313)	...
Metal	22	28	49	22	...
Sweden					
Tungsten ore	103	431	330	691	404
Metal	49	54	50	46	99
Carbide	147	195	185	172	158
Switzerland					
Metal	23	24	51	49	68
Rwanda					
Tungsten ores & concentrates	665	744	715	* 580	* 640
South Africa					
Tungsten ore (c)	* 450	* 50	* 20	* 20	—
Uganda					
Wolframite ore	* 200	* 200	* 200	* 100	...
Zaire					
Tungsten ore	255	160	157	* 160	...
Zimbabwe					
Tungsten ore	260	225	201	130	52
Canada (a)	* 2 200	* 2 300	* 2 900	* 1 800	...
Mexico					
Tungsten ores & concentrates	726	310	396	* 250	* 150
USA					
Tungsten ores & concentrates	1 639	1 749	1 834	281	643
Metal	1 191	1 130	1 481	1 921	1 310
Ammonium paratungstate (a)	99	2	3	1	11
Carbide	664	635	662	550	552
Bolivia					
Tungsten ore (a)	2 852	2 647	3 435	3 091	...
Brazil					
Tungsten ore	992	538	782	1 691	1 860
Peru					
Tungsten ores & concentrates	1 024	1 131	996	930	1 110
Burma (b)					
Tungsten ores & concentrates	1 175	1 052	1 278	767	..

Exports of Tungsten

tonnes

Country	1978	1979	1980	1981	1982
China					
Tungsten ores & concentrates (a)	9 387	10 999	10 490	10 379	5 303
Hong Kong					
Tungsten ore (Re-exports)	—	—	425	2 197	4 740
Japan					
Metal	172	209	216	242	286
Korea, Dem. P.R. of (a)	* 1 000	* 1 000	* 1 000	* 800	...
Korea, Republic of					
Tungsten ore	2 361	1 915	1 721	6 360	1 005
Malaysia					
Wolframite ore	59	128	109	...	...
Singapore					
Tungsten ore	440	396	848	971	630
of which: Re-exports	341	396	800	775	629
Metal	57	84	119	173	72
of which: Re-exports	4	1	40	103	1
Thailand					
Tungsten ore	5 799	3 608	3 638	1 991	1 463
Australia					
Wolframite ores & concentrates	1 068	1 624	2 311	2 093	1 856
Scheelite ores & concentrates	3 936	3 442	3 715	4 254	3 215

Notes:

- 1 Significant, and possibly increasing, amounts of tungsten are traded in the forms of ammonium paratungstate (APT) and carbide. Though statistics are included where available, most countries do not separately distinguish these forms in their trade accounts
 - 2 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) W content
(b) Years ended 31 March following that stated
(c) BGS estimates, based on known imports into certain countries

Imports of Tungsten

Country	1978	1979	1980	1981	1982
United Kingdom					
Tungsten ore	3 655	2 996	2 622	3 309	1 768
Metal	567	245	298	162	242
Carbide	338	344	407	448	510
Belgium-Luxembourg					
Metal	199	300	224	253	155
Carbide	...	...	...	176	257
Denmark					
Carbide	...	...	...	186	268
France					
Tungsten ore	2 468	1 586	1 438	1 159	818
Metal	251	307	241	258	365
Carbide	...	...	...	224	189
Germany, Federal Republic of					
Tungsten ore	3 422	4 097	2 931	2 698	2 855
Metal	1 150	831	970	1 132	841
Carbide	...	...	...	280	317
Italy					
Tungsten ore	126	181	173	83	36
Metal	124	134	102	84	100
Netherlands					
Tungsten ore	1 699	99	232	121	739
Metal	205	123	142	428	307
Austria					
Tungsten ore	4 533	4 835	4 297	3 425	2 413
Metal	492	728	418	357	316
Finland					
Metal	29	20	83	27	17
Poland					
Tungsten concentrates	4 103	2 898	1 662	806	2 461
Soviet Union					
Tungsten concentrates	* 5 000	* 5 000	* 9 000	* 9 500	* 9 500
Sweden					
Tungsten ore	2 420	2 180	3 709	2 417	1 700
Metal	43	28	130	29	84
Carbide	310	260	334	327	361
Switzerland					
Metal	92	39	113	79	40
Yugoslavia					
Metal	23	24	25	13	7
South Africa					
Tungsten ores & concentrates	508	333	2 504	400	2 942
Metal	142	201	176	39	11
Carbide	66	53	101	64	65
Mexico					
Metal	37	113	117	...	...
USA					
Tungsten ore	9 512	11 448	10 890	10 999	8 170
Metal	350	788	531	4 429	1 275
Ammonium paratungstate (a)	240	198	215	461	759
Carbide	182	293	256	367	390
Venezuela					
Metal	11	140	24	23	...
India					
Tungsten ore	397	255	483	* 400	...
Metal	26	21	26	...	...
Japan					
Tungsten ore	2 264	3 133	3 480	2 256	2 297
Metal	126	162	159	187	143
Singapore					
Tungsten ore	417	487	1 347	1 925	971
Metal	54	3	23	23	28
Taiwan					
Metal	23	39	56	37	17

Tungsten

Imports of Tungsten

tonnes

Country	1978	1979	1980	1981	1982
Australia (b)					
Metal	6	0	8	5	...

Notes:

- 1 Significant, and possibly increasing, amounts of tungsten are traded in the forms of ammonium paratungstate (APT) and carbide. Though statistics are included where available, most countries do not separately distinguish these forms in their trade accounts
- 2 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) W content

(b) Years ended 30 June of that stated

Mine Production of Vanadium

tonnes (metal content)

Country	1978	1979	1980	1981	1982
Finland	3 431	3 632	3 009	3 279	3 315
Norway	* 460	* 570	* 490	* 260	* 100
Soviet Union	* 9 100	* 9 100	* 9 500	* 9 500	* 9 500
Namibia	462	—	—	—	—
South Africa	* 11 250	* 12 300	* 12 700	* 12 800	* 12 000
USA	3 875	5 008	4 360	4 650	3 718
Chile	* 690	* 460	* 270	* 130	—
China	* 2 000	* 3 600	* 4 500	* 4 500	* 4 500
World total	31 300	34 700	34 800	35 100	33 100

Note: This table includes vanadium in slag products but excludes vanadium recovered as a byproduct of the refining and burning of heavy oils

Exports of Vanadium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Pentoxide	158	55	15	102	56
Metal	0	0	2	0	17
Belgium-Luxembourg					
Vanadiferous residues	260	1 423	—	4 775	1 884
Pentoxide	105	212	143	134	35
Vanadium-titanium pig-iron	4	2	24	23	8
Metal	—	—	—	32	186
Denmark					
Vanadium-titanium pig-iron	—	—	12	49	39
France					
Vanadiferous residues	422	1 563	168	112	56
Pentoxide	2	6	39	52	26
Germany, Federal Republic of					
Vanadiferous residues	1 137	904	705	2 175	889
Metal	55	109	124	193	135
Italy					
Vanadiferous residues	24	226	—	1 726	1 484
Netherlands					
Vanadiferous residues	107	199	17	8	51
Vanadium-titanium pig-iron	95	3	9	6	—
Finland					
Pentoxide	4 931	4 928	(a)* 3 000	(a)* 2 000	(a)* 1 500
Soviet Union					
Vanadiferous residues	* 12 000	* 12 000	* 12 000	* 12 000	* 12 500
South Africa					
Pentoxide (a)	* 6 100	* 7 900	* 6 300	* 4 300	* 4 700
Vanadiferous residues (a)	* 18 500	* 12 000	* 10 400	* 11 200	* 3 600
Lead vanadium concentrates (b)	* 4 500	—	—	—	—
USA					
Ores & concentrates (c)	309	163	74	90	92
Pentoxide	1 128	1 057	662	318	1 509
China					
Vanadiferous residues (a)	—	—	* 700	* 5 000	* 2 600
Pentoxide (a)	—	* 50	* 600	* 2 000	* 3 000

Notes:

- 1 In this table the term 'pentoxide' also includes vanadium oxides and hydroxides, if any
 - 2 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) BGS estimates, based on known imports into certain countries
(b) Output from the South West Africa Co Ltd, years ended 30 June of that stated
(c) V₂O₅ content

Imports of Vanadium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Vanadiferous residues	960	596	751	8	—
Pentoxide	875	937	925	1 075	745
Vanadium-titanium pig-iron	100	49	—	—	75
Metal	103	100	93	133	41
Belgium-Luxembourg					
Vanadiferous residues	5 085	6 272	7 001	9 350	6 905
Pentoxide	1 771	1 169	1 535	1 542	2 964
Metal	20	—	1	64	69
Denmark					
Vanadium-titanium pig-iron	60	401	5	111	306
France					
Pentoxide	1 444	1 315	1 207	1 513	1 223
Vanadium-titanium pig-iron	51	50	49	77	25
Metal	1	19	19	45	85
Germany, Federal Republic of					
Vanadiferous residues	26 903	31 766	44 422	36 685	29 878
Pentoxide	1 851	710	1 383	2 223	2 360
Vanadium-titanium pig-iron	342	410	485	625	250
Metal	27	42	—	2	1
Italy					
Vanadiferous residues	3 611	4 891	3 462	2 747	2 646
Pentoxide	1 009	864	490	194	123
Vanadium-titanium pig-iron	225	250	252	242	266
Netherlands					
Vanadiferous residues	8 802	737	—	308	1
Pentoxide	8	8	14	33	321
Vanadium-titanium pig-iron	100	75	50	25	125
Sweden					
Pentoxide	1 016	990	517	141	16
Mexico					
Pentoxide	118	278	250	...	...
USA					
Vanadiferous residues (a)	3 635	3 954	4 389	3 740	1 802
Pentoxide	1 062	1 469	1 386	573	209
Brazil					
Pentoxide	796	1 215	1 042	578	487
Japan					
Pentoxide	2 656	4 633	3 404	3 943	4 846

Notes:

- 1 In this table the term 'pentoxide' also includes vanadium oxides and hydroxides, if any
- 2 Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) V₂O₅ content

Mine Production of Zinc

tonnes (metal content)

Country	1978	1979	1980	1981	1982
United Kingdom (a)	2 718	572	4 444	10 855	10 186
France	39 900	36 583	36 810	37 430	37 021
Germany, Federal Republic of	88 863	117 100	120 800	110 700	105 782
Greece	25 600	24 102	24 367	25 369	20 459
Irish Republic	176 029	205 000	223 000	117 000	352 000
Italy	74 000	66 300	58 400	42 400	38 600
Austria	24 821	22 849	21 690	20 544	21 938
Bulgaria	78 000	75 000	70 000	65 000	66 000
Czechoslovakia	8 800	9 100	9 636	6 614	6 555
Finland	58 861	58 316	59 421	52 200	54 665
Greenland	82 200	86 600	85 700	79 800	79 900
Hungary	2 827	3 074	2 807	2 693	2 900
Norway	29 592	28 361	27 484	29 742	31 816
Poland	231 000	237 000	216 700	201 500	183 500
Romania	* 51 000	* 45 000	* 40 000	* 40 000	* 35 000
Soviet Union	* 1 030 000	* 1 020 000	* 1 000 000	* 1 010 000	* 1 020 000
Spain	146 844	142 745	183 120	182 045	161 616
Sweden	167 373	169 854	175 758	192 069	185 400
Turkey	39 996	24 894	35 820	30 769	30 296
Yugoslavia	103 794	101 699	95 253	88 640	83 800
Algeria	4 100	9 200	7 600	20 000	22 000
Congo	4 800	—	—	—	—
Morocco	5 100	6 300	6 071	7 900	12 300
Namibia	36 600	29 000	25 400	36 400	35 700
South Africa	68 700	56 500	87 777	87 172	91 516
Tunisia	7 400	8 700	9 100	7 800	8 400
Zaire	88 533	76 244	67 000	75 600	82 100
Zambia	50 409	46 492	37 076	42 170	51 117
Canada	1 245 248	1 204 401	1 058 714	1 095 958	1 189 129
Honduras	27 177	22 834	19 559	19 065	24 381
Mexico	244 892	245 477	238 231	211 629	231 910
Nicaragua	3 600	—	—	—	—
USA (b)	302 669	267 341	317 103	312 418	300 274
Argentina	36 585	37 509	33 681	34 900	36 700
Bolivia	59 323	44 141	50 260	47 029	45 700
Brazil	60 200	68 500	70 000	71 000	86 700
Chile	1 814	1 847	1 134	1 516	5 505
Ecuador	1 342	1 027	629	742	100
Peru (b)	402 600	432 000	487 596	496 707	540 900
Burma	2 645	3 028	4 079	3 556	5 382
China	* 150 000	* 155 000	* 150 000	* 160 000	* 160 000
India	39 300	42 951	32 229	34 200	32 000
Iran	45 000	25 000	30 000	35 000	40 000
Japan	274 629	245 320	238 108	242 042	250 079
Korea, Dem. P.R. of	* 145 000	* 135 000	* 130 000	* 130 000	* 120 000
Korea, Republic of	66 440	62 477	56 787	56 198	58 175
Philippines	9 468	9 670	6 845	5 289	3 000
Vietnam	10 000	10 000	10 000	10 000	10 000
Australia	473 293	529 157	495 312	518 297	662 941
World total	6 300 000	6 200 000	6 200 000	6 100 000	6 600 000

(a) In a mixed copper-zinc concentrate

(b) Recoverable

Production of Slab Zinc

Country	1978	1979	1980	1981	1982
United Kingdom	73 575	76 686	86 682	81 651	79 278
Belgium (a)	240 516	261 720	249 214	250 406	240 851
France	231 197	248 977	252 769	257 131	243 781
Germany, Federal Republic of	306 836	355 500	365 200	366 100	333 600
Italy	177 552	202 658	206 355	180 904	158 248
Netherlands	135 399	153 982	169 539	177 363	186 022
Austria	21 655	23 238	22 102	22 674	20 079
Bulgaria	91 000	89 000	91 000	90 000	90 000
Finland	132 900	146 564	146 719	139 835	143 882
German Democratic Republic	* 16 000	* 17 000	* 16 000	* 16 000	* 17 000
Norway	71 628	77 763	79 416	80 279	78 734
Poland	222 041	209 246	217 485	167 118	165 352
Romania	49 790	46 486	45 906	45 200	* 46 000
Soviet Union	* 1 055 000	* 1 085 000	* 1 060 000	* 1 060 000	* 1 050 000
Spain	177 000	186 000	151 700	179 500	181 800
Turkey	17 300	17 200	12 600	18 100	14 900
Yugoslavia	95 232	98 906	84 537	96 370	86 767
Algeria	25 700	27 300	30 000	31 000	31 000
South Africa	79 100	75 400	81 400	80 941	79 700
Zaire	43 508	43 693	43 848	57 600	64 400
Zambia	42 493	38 163	33 970	33 298	39 186
Canada	495 243	580 449	591 565	618 650	511 870
Mexico	173 793	162 354	144 550	126 890	127 000
USA	406 698	472 481	340 456	346 563	228 176
Argentina	23 900	38 700	25 400	25 900	30 000
Brazil	56 097	63 494	78 303	91 944	95 528
Peru	62 900	68 400	63 800	128 600	160 700
China	* 160 000	* 160 000	* 155 000	* 160 000	* 175 000
India	59 388	63 323	43 627	57 434	52 600
Japan	767 949	789 352	735 187	670 162	662 380
Korea, Dem. P.R. of	* 130 000	* 120 000	* 105 000	* 105 000	* 90 000
Korea, Republic of	58 970	83 014	79 150	83 915	99 211
Vietnam	10 000	10 000	10 000	10 000	10 000
Australia	294 766	310 150	305 959	300 352	295 069
World total	6 000 000	6 400 000	6 100 000	6 200 000	5 900 000

(a) Including alloys

Exports of Zinc

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates	9 443	—	7 695	26 297	18 576
Unwrought	15 032	12 178	27 378	24 168	10 777
Unwrought alloys	6 576	6 942	7 387	9 009	6 730
Scrap	6 018	4 818	5 422	8 441	11 034
Belgium-Luxembourg					
Ore	11 676	60 645	25 108	41 367	18 409
Unwrought	160 350	165 586	140 932	123 458	126 231
Unwrought alloys	26 752	28 040	27 246	25 094	24 962
Scrap	4 147	5 369	6 202	11 500	12 471
Denmark					
Unwrought	110	201	103	2	99
Unwrought alloys	22	72	823	163	144
Scrap	4 440	3 210	3 387	3 772	3 635
France					
Ore	54 588	46 530	43 979	50 642	58 633
Unwrought	51 974	44 533	32 913	56 554	48 994
Unwrought alloys	4 258	2 953	2 591	5 555	2 369
Scrap	1 786	4 280	3 209	7 861	11 407
Germany, Federal Republic of					
Ore	72 494	* 110 000	* 131 500	* 103 000	* 141 500
Unwrought	76 031	88 500	101 527	112 956	103 663
Unwrought alloys	11 507	12 942	9 991	13 049	9 797
Scrap	7 254	8 824	10 595	7 502	8 623
Greece					
Ores & concentrates	45 005	47 489	44 740	42 100	35 700
Irish Republic					
Ores & concentrates	344 426	413 872	462 096	254 132	343 770
Italy					
Ore	32	2 365	2 907	579	7 866
Unwrought	27 879	14 050	17 588	14 292	20 712
Unwrought alloys	1 507	2 503	2 752	6 279	4 743
Scrap	1 445	1 418	2 138	3 432	2 927
Netherlands					
Ore	3 200	11 501	7 306	15	22
Unwrought	115 465	129 044	156 103	152 920	160 187
Unwrought alloys	7 740	7 763	7 098	9 947	8 015
Scrap	6 352	4 419	6 576	14 840	10 603
Austria					
Unwrought	656	904	1 354	2 193	2 835
Scrap	75	217	70	703	558
Bulgaria					
Unwrought (a)(b)	* 20 900	* 12 600	* 10 400	* 10 600	* 12 300
Finland					
Unwrought	109 752	124 030	116 622	113 807	110 967
Unwrought alloys	3 853	5 535	3 991	2 262	7 842
Scrap	6	501	1 185	2 427	1 498
Greenland					
Ores & concentrates	138 737	128 911	168 818	147 790	140 000
Norway					
Ore	12 242	13 241	6 395	18 349	23 627
Unwrought	48 228	56 778	60 302	57 742	54 040
Unwrought alloys	8 801	5 155	5 436	7 965	9 593
Scrap	871	1 089	1 353	525	410
Poland					
Unwrought	43 161	33 162	41 408	22 161	22 494
Soviet Union					
Unwrought	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Spain					
Ore	7 515	13 891	54 795	44 375	27 084
Unwrought (a)	81 838	84 078	93 834	88 203	95 600
Sweden					
Ore	293 044	347 574	351 941	360 489	362 276
Unwrought (a)	167	249	342	1 113	900
Scrap	5 241	3 347	3 325	3 653	3 543

Exports of Zinc

Country	1978	1979	1980	1981	1982
Switzerland					
Unwrought	207	151	84	9	12
Scrap	757	1 242	892	1 264	983
Yugoslavia					
Concentrates	2 271	6 600	8 831	6 047	1 181
Unwrought (a)	45 241	31 579	19 565	21 905	22 809
Algeria					
Unwrought	17 749	17 112	24 182	...	...
Morocco					
Ore	15 409	16 317	12 948	16 476	15 862
South Africa					
Ores & concentrates	41 600	37 367	* 34 000	* 35 500	* 62 000
Unwrought (b)	* 8 100	...	* 1 000	* 1 700	* 1 000
Tunisia					
Ore	3 525	6 421	20 309	17 073	...
Zaire					
Unwrought	28 020	21 359	5 229	69 900	55 700
Zambia					
Unwrought	35 437	42 086	30 787	32 100	39 900
Canada					
Ore (c)	688 187	598 279	435 831	516 210	457 751
Unwrought	443 468	433 009	475 793	459 182	472 725
Scrap	19 174	15 443	22 195	28 962	73 610
Honduras					
Ores & concentrates (c)	23 356	16 630	14 672	15 049	20 794
Mexico					
Ores & concentrates	126 190	123 947	141 140	140 000	146 000
Unwrought	105 509	74 224	59 724	28 200	34 900
Nicaragua					
Ores & concentrates	11 040	—	...	...	...
USA					
Ore (c)	10 973	20 095	51 432	46 539	77 289
Unwrought (a)	1 386	917	787	756	1 541
Scrap (c)	14 985	28 149	29 542	30 361	17 086
Argentina					
Ores & concentrates	0	19 009	35 798	...	...
Unwrought	6 495	481	—	2 100	4 500
Bolivia					
Ores (c)	51 621	53 923	46 236	44 681	42 000
Brazil					
Ore	5 688	9 108	—	—	—
Peru					
Concentrates	704 828	664 611	754 348	594 000	620 000
Unwrought (a)	64 935	56 697	37 813	104 000	144 500
Burma (e)					
Concentrates	6 821	3 681	8 128	7 867	...
China					
Unwrought (a)(b)	* 10 800	* 8 500	* 11 000	* 14 500	* 11 000
Hong Kong					
Unwrought (a) (Re-exports)	3 152	2 962	6 821	3 154	1 954
Iran (d)					
Ore	55 160	40 585	4 076	2 063	...
Japan					
Unwrought	57 857	37 294	41 700	51 278	40 767
Unwrought alloys	1 372	928	1 236	1 909	2 546
Scrap	4 245	2 640	664	821	938
Korea, Dem. P.R. of					
Ores & concentrates	* 21 500	* 64 700	(b)* 54 500	(b)* 64 000	(b)* 50 000
Unwrought (a) (b)	* 40 000	* 51 000	* 48 300	* 25 000	* 29 000

Zinc

Exports of Zinc

tonnes

Country	1978	1979	1980	1981	1982
Korea, Republic of					
Ore	8 118	—	—	—	—
Unwrought (a)	...	8 885	11 612	8 393	6 250
Philippines					
Concentrates	16 126	22 295	14 859	11 873	3 989
Scrap	—	305	184	370	115
Singapore					
Unwrought	8 137	2 945	4 776	4 699	4 139
of which: Re-exports	5 725	2 027	4 612	4 519	4 085
Scrap	698	1 018	1 281	1 344	886
Australia					
Ores & concentrates	467 718	376 806	524 274	461 032	550 735
Unwrought (a)	221 688	197 950	219 068	176 091	223 182

Note: In this table the term 'unwrought' zinc corresponds to item 686.1 of the Standard International Trade Classification (Revision 2) and comprises blocks, pigs, slabs, etc

- (a) Including alloys
- (b) BGS estimates, based on known imports into certain countries
- (c) Zn content
- (d) Years ended 20 March following that stated
- (e) Years ended 31 March following that stated

Imports of Zinc

Country	1978	1979	1980	1981	1982
United Kingdom					
Ores & concentrates	160 201	182 067	211 561	131 799	166 084
Unwrought	181 527	176 173	130 549	112 509	119 945
Unwrought alloys	7 117	1 973	3 918	7 433	8 723
Scrap	1 036	1 431	1 156	524	2 065
Belgium-Luxembourg					
Ore	532 471	554 133	429 909	420 328	422 736
Unwrought (a)	24 927	51 484	45 577	45 598	42 604
Scrap	5 551	6 648	6 618	6 756	7 150
Denmark					
Unwrought	13 614	16 003	14 972	12 031	10 192
Unwrought alloys	1 773	1 832	2 039	2 247	1 960
Scrap	270	233	128	128	73
France					
Ore	454 582	494 334	469 945	459 981	476 239
Unwrought	76 451	79 860	105 189	62 466	58 406
Unwrought alloys	17 281	21 393	18 930	22 393	20 398
Scrap	8 028	4 600	4 981	8 876	5 433
Germany, Federal Republic of					
Ore	498 930	502 951	618 984	506 148	556 903
Unwrought	139 880	151 729	148 021	125 541	145 757
Unwrought alloys	12 415	12 821	13 760	12 422	10 619
Scrap	9 637	12 609	10 969	23 968	16 552
Greece					
Unwrought	15 886	20 941	18 811	18 330	14 248
Irish Republic					
Unwrought (a)	2 184	2 810	2 349	2 098	1 814
Scrap	147	334	205	365	251
Italy					
Ore	206 600	232 587	357 062	264 585	234 872
Unwrought	43 097	44 845	46 605	46 042	70 668
Unwrought alloys	10 945	11 651	8 644	4 050	8 675
Scrap	1 710	4 022	3 358	6 520	6 883
Netherlands					
Ore	307 817	340 492	346 655	348 713	452 439
Unwrought	21 803	22 375	24 937	19 285	18 459
Unwrought alloys	423	324	584	1 961	697
Scrap	7 191	9 447	9 805	6 398	10 401
Austria					
Ore	1	5 621	8 594	7 721	9 323
Unwrought	4 080	4 469	4 074	4 461	4 114
Scrap	322	579	339	251	291
Bulgaria					
Ore (i)	* 12 400	* 18 700	* 30 000	* 25 600	* 29 600
Czechoslovakia					
Unwrought	68 000	67 000	67 000	63 000	57 000
Finland					
Ore	169 199	146 816	189 488	135 547	207 835
Unwrought (a)	197	1 310	1 085	453	462
Hungary					
Unwrought (g)	22 820	22 471	24 319	26 660	19 291
Iceland					
Unwrought (a)	143	72	87	84	89
Norway					
Ore	74 386	73 102	81 839	109 986	93 619
Unwrought (a)	733	884	1 051	448	1 123
Scrap	1 713	2 629	2 414	3 123	4 540
Poland					
Concentrates	28 640	27 979	27 053	—	...
Unwrought	2 520	2 627	2 398	4 116	...
Portugal					
Unwrought	17 139	14 524	16 781	11 661	...
Scrap	98	781	1 138	51	...

Imports of Zinc

tonnes

Country	1978	1979	1980	1981	1982
Soviet Union					
Ore	78 241	5 914	* 60 000	* 60 000	* 60 000
Unwrought	* 60 000	* 45 000	* 65 000	* 60 000	* 60 000
Unwrought alloys	* 4 000	* 4 000	* 5 000	* 5 000	* 5 000
Spain					
Ore	78 451	111 703	40 191	54 275	67 532
Unwrought (a)	997	830	1 743	753	3 312
Sweden					
Unwrought	35 519	36 241	30 450	26 218	33 138
Unwrought alloys	3 920	5 377	7 336	4 291	2 654
Scrap	16	71	31	—	—
Switzerland					
Unwrought	25 855	21 605	25 242	21 316	18 243
Turkey					
Unwrought	1 515	475	726	5 231	6 184
Yugoslavia					
Concentrates	33 465	55 760	65 227	56 385	58 597
Unwrought	4 794	4 779	7 209	15 818	13 865
Algeria					
Ores & concentrates	27 976	55 474	30 491	...	...
Egypt					
Unwrought	2 597	2 865	2 731	7 545	...
Ivory Coast					
Unwrought (b)	3 800	5 188	3 989	5 244	...
Kenya					
Unwrought (a)	8 000	4 735	7 231	5 146	...
Libya					
Unwrought	151	55	7	...	...
Morocco					
Unwrought	2 785	2 948	2 958	2 294	2 357
Mozambique					
Unwrought	...	...	1 251	...	...
Nigeria					
Unwrought (a)	9 654	9 071	...	...	...
South Africa					
Ores & concentrates	4 196	2	0	—	—
Unwrought	11	0	1 825	8 287	3 851
Scrap	167	218	132	1 160	520
Sudan					
Unwrought	600	200	99	98	...
Tanzania					
Unwrought (a)	30 266	6 548	3 169	2 568	...
Tunisia					
Unwrought (b)	1 018	887	1 531	871	...
Canada					
Ores & concentrates (b)(c)	6 145	11 660	59 542	71 316	40 214
Unwrought	2 677	2 877	958	8 473	1 304
Costa Rica					
Unwrought (a)	4 085	4 958	5 447	3 670	1 304
Dominican Republic					
Unwrought	926	1 838	1 863	1 400	...
Guatemala					
Unwrought (a)	3 926	4 530	4 995	4 198	3 221
Honduras					
Unwrought (a)	1 631	1 020	665	717	...
Jamaica					
Unwrought	1 269	1 210	458	373	935
Nicaragua					
Unwrought (a)	555	236	980	...	...
Panama					
Unwrought (a)	426	521	319	370	398
Trinidad & Tobago					
Unwrought	1 096	171	330	296	...

Imports of Zinc

Country	1978	1979	1980	1981	1982
USA					
Ore (c)	188 003	224 952	129 922	117 737	49 344
Unwrought (a)	617 863	527 213	410 642	602 695	447 443
Scrap	3 310	3 259	3 470	5 782	2 653
Argentina					
Unwrought	499	2 388	2 953	1 600	...
Brazil					
Ores & concentrates	—	11	36 215	49 578	55 672
Unwrought	67 122	60 010	59 520	27 303	7 403
Unwrought alloys	189	48	50	61	59
Chile					
Unwrought (a)	5 560	5 200	5 800	7 100	...
Colombia					
Unwrought (a)	12 979	13 359	14 598	13 654	15 180
Uruguay					
Unwrought	1 965	2 952	1 645	1 122	959
Venezuela					
Unwrought	16 273	14 950	) 25 515	18 669	...
Unwrought alloys	1 696	2 143)		
Burma (d)					
Unwrought (a)	5	355	591	466	...
Cyprus					
Unwrought (a)	52	217	110	50	...
Hong Kong					
Unwrought (a)	25 838	27 319	29 361	35 593	22 983
Scrap	87	150	—	19	39
India					
Ores & concentrates	83 212	39 580	40 862	...	...
Unwrought (d)	39 789	37 119	48 016	...	...
Unwrought alloys (d)	19 228	29 285	15 410	...	...
Scrap	1 015	846	4 836	...	...
Indonesia					
Unwrought (a)	44 617	46 149	51 430	65 376	65 626
Scrap	—	0	662	1 050	167
Iran (e)					
Unwrought	9 211	2 440	1 862	3 649	...
Israel (h)					
Unwrought	8 103	6 549	2 230	5 269	3 735
Japan					
Ore	936 586	959 229	804 851	877 995	813 408
Unwrought	32 088	36 702	41 896	31 133	45 002
Unwrought alloys	1 395	3 792	3 233	1 797	1 136
Scrap	149	243	508	1 562	253
Korea, Republic of					
Ores & concentrates	31 123	42 601	43 760	90 323	79 176
Unwrought	11 900	2 830	36 279	2 072	1 568
Scrap	...	11 060	9 191	10 146	9 252
Malaysia					
Unwrought	10 631	11 267	10 703	...	...
Unwrought alloys	1 542	2 911	5 395	...	...
Pakistan (f)					
Unwrought	9 982	7 193	7 822	12 805	8 637
Philippines					
Unwrought (a)	27 095	26 549	16 175	19 476	21 704
Singapore					
Unwrought	17 877	17 388	18 693	16 738	20 409
Scrap	403	445	351	530	292
Sri Lanka					
Unwrought (a)	386	551	672	375	249
Syria					
Unwrought (b)	326	343	479	622	...
Taiwan					
Unwrought	50 868	37 350	38 382	43 394	45 424
Scrap	7 826	15 756	28 823	33 397	29 654
Thailand					
Unwrought	32 472	32 967	33 387	37 598	33 272
Unwrought alloys	1 108	955	1 036	1 098	586

Imports of Zinc

tonnes

Country	1978	1979	1980	1981	1982
New Zealand (f)					
Unwrought (a)	17 311	20 255	22 594	19 296	22 265

Note: In this table the term 'unwrought' zinc corresponds to item 686.1 of the Standard International Trade Classification (Revision 2) and comprises blocks, pigs, slabs, etc

- (a) Including alloys
- (b) Including scrap
- (c) Zn content
- (d) Years ended 31 March following that stated
- (e) Years ended 20 March following that stated
- (f) Years ended 30 June of that stated
- (g) Including semi-manufactures
- (h) Figures may be incomplete as value only given in Israeli trade return for imports from some countries
- (i) BGS estimates, based on known exports from certain countries

Production of Zirconium Minerals

Country	1978	1979	1980	1981	1982
Soviet Union	* 68 000	* 72 600	* 72 600	* 72 600	* 72 600
South Africa (a)	* 36 000	* 82 000	* 79 800	* 99 800	* 125 200
USA	* 80 000	* 60 000	* 60 000	* 50 000	* 50 000
Brazil (b)	4 301	2 623	3 410	6 000	* 5 500
India	* 11 200	* 12 200	* 14 800	* 12 400	* 12 000
Malaysia (c)	902	1 372	552	1 307	2 147
Sri Lanka	3 194	1 510	3 031	3 266	* 3 300
Thailand	25	116	61	104	196
Australia	391 606	444 975	491 547	434 246	452 765
World total	595 000	677 000	726 000	680 000	724 000

(a) Baddeleyite concentrates

(b) Zircon and baddeleyite

(c) Exports

Zirconium

Exports of Zirconium

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom					
Concentrates	602	1 569	1 811	748	539
France					
Concentrates	742	326	260	97	18
Metal	584	940	888	—	—
Germany, Federal Republic of					
Concentrates	6 885	8 205	11 487	12 372	16 379
Metal	97	128	50	64	64
Italy					
Concentrates	2 750	3 873	461	2 925	5 305
Netherlands					
Concentrates	859	270	24 840	24 414	23 690
South Africa					
Concentrates (a)	* 16 700	* 55 800	* 83 600	* 89 700	* 100 900
USA					
Concentrates	7 505	9 039	7 258	10 603	10 031
Metal	1 010	1 043	776	667	812
of which: Re-exports	76	205	145	49	15
Malaysia					
Concentrates	902	1 372	552	1 307	2 147
Australia					
Concentrates	390 043	479 440	501 812	444 186	405 203

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) BGS estimates, based on known imports into certain countries

Imports of Zirconium

Country	1978	1979	1980	1981	1982
United Kingdom					
Concentrates	43 015	33 667	32 426	27 615	36 792
Metal	150	227	205	113	81
Belgium-Luxembourg					
Concentrates	1 729	2 228	2 431	4 793	6 039
Metal	182	108	125	191	169
France					
Concentrates	38 787	41 904	39 618	44 762	32 115
Metal	496	985	687	174	65
Germany, Federal Republic of					
Concentrates	36 817	50 185	56 086	69 444	67 648
Metal	348	218	279	169	399
Italy					
Concentrates	42 209	67 273	65 697	55 853	66 919
Netherlands					
Concentrates	230	214	27 011	34 108	23 149
Bulgaria					
Concentrates (a)	* 5 200	* 1 500	* 2 100	* 1 800	* 2 000
Spain					
Concentrates	20 991	26 526	45 230	37 585	...
Sweden					
Concentrates	981	1 129	1 592	1 151	888
Metal	148	196	174	200	224
Turkey					
Concentrates	60	42	169	119	...
South Africa					
Concentrates	91	33	49	140	—
Canada					
Metal	326	312	229	289	243
Mexico					
Zirconium sand (b)	4 719	6 286	6 880	...	...
USA					
Concentrates	82 562	100 555	103 223	82 652	62 110
Metal	899	831	655	507	384
Argentina					
Concentrates	1 500	1 454	1 328	...	...
Brazil					
Concentrates	11 193	1 249	2 792	5 146	5 420
Zirconium sand (b)	150	1 730	9 124	10 151	1 754
Japan					
Concentrates	89 729	161 505	190 109	157 793	196 941
Korea, Republic of					
Concentrates	972	1 274	1 208	3 123	2 370
Malaysia					
Concentrates	16	28	88	...	...
Singapore					
Concentrates	155	377	1 102	2 081	2 931

Note: Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) BGS estimates, based on known exports from certain countries

(b) Micronised for use as an opacifier

Production of Beryl

tonnes

Country	1978	1979	1980	1981	1982
Portugal	5	12	20	18	* 15
Soviet Union	* 1 750	* 1 800	* 1 800	* 1 800	* 1 850
Madagascar	11	5	6	7	* 10
Mozambique	...	27	20	* 18	* 15
Rwanda	80	86	108	59	* 90
South Africa	4	1	0	122	58
Uganda	40	—	—	—	—
Zimbabwe	35	28	9	42	52
Argentina	22	12	31	30	26
Brazil (a)	739	453	500	811	1 063

Note: In addition to the countries listed, China and Namibia are also believed to produce beryl

(a) Exports

Production of Borates

tonnes

Country	1978	1979	1980	1981	1982
Finland	4 615	3 168	2 465	...	...
Soviet Union	* 200 000	* 200 000	* 200 000	* 200 000	* 200 000
Turkey	1 319 575	1 171 679	1 333 563	1 528 477	1 399 172
USA (a)	1 410 000	1 442 000	1 402 000	1 344 000	1 119 000
Argentina	127 187	132 655	155 849	126 000	138 000
Chile	26 544	3 049	3 275	3 277	* 3 000
Peru	* 6 000	* 12 000	* 21 000	* 16 000	* 14 000
China	* 27 000	* 27 000	* 27 000	* 27 000	* 27 000

Note: In addition to the countries listed, the Federal Republic of Germany and Iran are also believed to produce borates

(a) Sold or used by producers

Production of Germanium

tonnes (metal content)

Country	1978	1979	1980	1981	1982
France	...	...	10	13	...
Austria	4	5	5	4	...
Soviet Union	* 14	* 14	* 14	* 15	* 17
USA (a)	* 19	* 23	* 27	* 28	* 26
Japan	11	10	13	11	...

Note: Significant quantities of germanium are also believed to be recovered from imported or domestic material in Belgium, China, Federal Republic of Germany and to a lesser extent in Italy

(a) Includes production of secondary metal

Production of Primary Magnesium Metal

tonnes

Country	1978	1979	1980	1981	1982
France	8 500	9 043	9 328	7 263	9 610
Italy	9 678	8 757	9 676	10 800	9 943
Norway	39 160	44 177	44 352	47 455	35 923
Soviet Union	* 70 000	* 72 000	* 75 000	* 76 000	* 77 000
Yugoslavia	—	500	* 2 500	3 859	4 200
Canada	8 309	9 015	9 252	8 500	7 900
USA	135 591	147 385	153 747	129 936	89 902
China	* 6 000	* 6 000	* 7 000	* 7 000	* 7 000
Japan	11 200	11 400	9 300	5 700	5 600

Production of Nepheline Syenite

tonnes

Country	1978	1979	1980	1981	1982
Norway	231 273	241 131	231 339	216 885	212 510
Soviet Union	* 2 500 000	* 2 500 000	* 2 500 000	* 2 500 000	* 2 500 000
Canada	599 121	605 699	600 000	588 000	518 000

Production of Perlite

tonnes

Country	1978	1979	1980	1981	1982
Greece	354 115	377 104	403 330	412 110	397 609
Italy	* 90 000	* 90 000	* 90 000	* 85 000	* 80 000
Czechoslovakia (a)	40 037	38 853	40 302	42 336	45 667
Hungary	92 630	97 895	99 270	95 190	89 975
Soviet Union	* 360 000	* 360 000	* 360 000	* 360 000	* 360 000
Turkey	36 612	44 084	25 879	5 650	19 229
Mexico	24 517	41 988	44 379	56 731	55 000
USA	852 000	768 000	748 000	644 000	565 000
Japan	* 72 500	* 75 000	* 80 000	* 75 000	* 80 000
Philippines	3 168	3 806	7 973	7 530	* 7 500
Australia	1 417	2 063	2 249	1 476	* 1 800
New Zealand	558	2 209	999	999	2 163

Note: In addition to the countries listed, Algeria, Bulgaria, China, Iceland, Mozambique, South Africa and Yugoslavia are also believed to produce perlite

(a) Expanded

Production of Selenium Metal

tonnes

Country	1978	1979	1980	1981	1982
Belgium	* 60	* 60	* 60	* 60	* 60
Finland	24	22	30	19	10
Sweden	56	57	51	44	* 65
Yugoslavia	53	46	45	36	* 35
Zambia	28	20	23	22	23
Canada (a)	393	512	377	350	273
Mexico	80	75	46	12	* 10
USA	231	266	141	252	243
Chile	8	28	17	15	* 14
Peru	13	18	23	22	* 20
Japan	481	510	471	* 430	* 450

Note: In addition to the countries listed, Australia, Federal Republic of Germany and Soviet Union are also believed to produce selenium metal

(a) Includes production of secondary metal

Production of Strontium Minerals

tonnes

Country	1978	1979	1980	1981	1982
United Kingdom	4 324	6 078	6 700	14 545	17 955
Italy	365	1 693	1 053	6 697	3 272
Spain	12 320	16 560	17 480	33 120	* 24 000
Turkey	14 550	20 529	20 000	25 000	* 18 000
Algeria	5 822	* 5 400	* 5 400	* 5 400	* 5 400
Mexico	34 224	39 519	40 761	41 344	* 30 000
Argentina (a)	1 195	122	268	* 270	* 270
Iran (b)	* 15 000	* 8 000	* 5 000	* 5 000	* 4 500
Pakistan	402	620	270	288	* 470

Note: In addition to the countries listed, China, Federal Republic of Germany, Poland and Soviet Union are also believed to produce strontium minerals

(a) May contain unbeneficiated material

(b) Years ended 20 March following that stated

Production of Tellurium Metal

tonnes

Country	1978	1979	1980	1981	1982
Canada (a)	45	47	9	21	16
USA	* 70	* 70	* 50	* 70	* 70
Peru	15	21	21	22	* 22
Japan	69	56	69	* 60	* 60
Fiji	* 23	* 23	* 11	—	...

Note: In addition to the countries listed, Australia, Belgium, Federal Republic of Germany and Soviet Union are also believed to produce tellurium metal

(a) Includes production of secondary metal

Mine Production of Uranium

tonnes (metal content)

Country	1978	1979	1980	1981	1982
France	2 911	3 332	2 845	2 554	2 872
Germany, Federal Republic of	41	29	41	36	40
Portugal	86	102	68	91	* 100
Spain	153	162	167	151	154
Gabon	1 022	1 100	1 034	1 023	976
Namibia	2 693	3 831	4 036	3 970	3 777
Niger	2 062	3 616	4 129	4 364	4 273
South Africa	3 975	4 780	6 186	6 135	5 794
Canada	* 6 800	6 530	6 739	7 507	8 189
USA	14 250	14 400	16 800	14 800	10 385
Argentina	143	745	242	187	534
Brazil	—	—	—	5	243
Australia	516	706	1 561	2 922	4 453
World total	34 700	39 300	43 800	43 700	41 800
World total (U ₃ O ₈ equivalent)	40 900	46 400	51 700	51 600	49 300

Note: In addition to the countries listed, China, Czechoslovakia, Israel and Soviet Union are also believed to produce uranium

Production of Vermiculite

tonnes

Country	1978	1979	1980	1981	1982
Egypt	593	700	* 725	* 725	* 725
Kenya	1 893	2 261	2 558	2 353	1 556
South Africa	209 093	191 573	185 699	190 601	182 641
USA (a)	306 000	314 000	306 000	290 000	280 000
Argentina	4 426	5 877	9 907	7 306	...
Brazil	4 031	7 382	12 181	14 307	* 11 000
India	1 886	3 109	3 678	3 624	...
Australia	244	—	—	—	...

(a) Sold or used by producers

Production of Wollastonite

tonnes

Country	1978	1979	1980	1981	1982
Finland	7 688	10 576	8 782	13 690	14 962
Kenya	102	200	—	950	1 100
Mexico	10 956	11 892	20 146	14 602	...
USA	* 72 000	* 68 000	* 82 000	* 90 000	...
India	1 928	3 794	5 790	15 940	20 272

Note: In addition to the countries listed, Japan, Namibia and Turkey are also believed to produce wollastonite

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