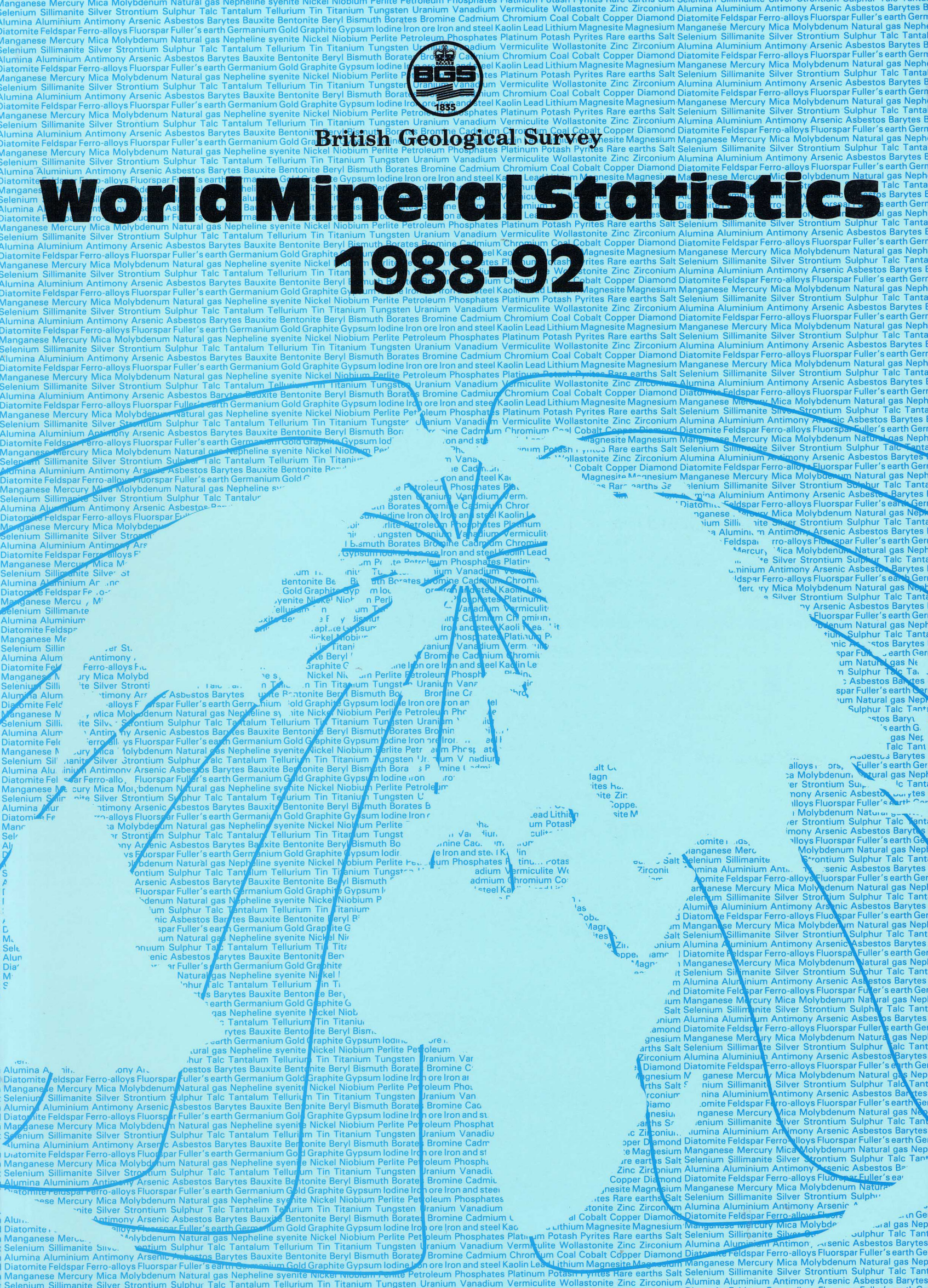




British Geological Survey

# World Mineral Statistics

## 1988-92





BRITISH GEOLOGICAL SURVEY

# WORLD MINERAL STATISTICS 1988–92

Production: Exports: Imports

Compiled by G J Lofty, J A Hillier, D G Bate, K A Linley and  
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BRITISH GEOLOGICAL SURVEY

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*The British Geological Survey carries 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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## PREFACE

This volume is the seventeenth in the series *World Mineral Statistics*.

The first volume in this series was published in 1978 but publication by the British Geological Survey, and its precursors, of descriptive statistics encompassing the mineral industry world-wide dates back to 1913 in the well-known *Statistical Summary of the Mineral Industry*. The current volume is therefore the latest in a continuous series encompassing 80 years.

This edition is reverting to the earlier format of a single volume containing all commodities, since it has been found that demand for separate volumes is not sufficient to justify the increased costs involved in their preparation.

Production data for 1993 will be made available on microfiche towards the end of 1994. Publication of the special preliminary production supplement, with data to 1993, will also be available towards the end of 1994. A dial-up subscription service, for accessing the World Mineral Statistics database on line, is now available and it is planned to make data available on disc in 1995.

Trends in mineral production were generally downwards from 1991 to 1992, reflecting the continued recession in most of the major economies.

World coal production recovered slightly in 1992 from the sharp drop in 1991 and other energy minerals at least maintained their level: petroleum production rose slightly in 1992, while natural gas remained steady.

In 1992, as in 1991, the production of almost all the industrial minerals declined. Salt and diamonds appear to have resisted this trend, and titanium and zirconium minerals, both of which are chiefly used in non-metallic applications, showed a slight increase over 1991.

The mine production of most metals fell in 1992, the third annual fall since the numerous all-time peaks of 1989 but gold, rare earths and the major base metals, copper, lead and zinc, showed increases. Worldwide consumption did not match these increases and the previous year's high stock levels were maintained, the position again exacerbated by large exports of zinc, copper, aluminium and nickel from the former Soviet Union. There was a further fall in reported production of base metals in the former Soviet Union, although not so severe as that from 1990 to 1991.

Many of the estimates shown in the trade tables are the result of reconstructing trade data, and research to elucidate trade patterns and tonnages is always on-going.

The reader should be aware that this publication is compiled from a more comprehensive data set maintained by the staff of the Minerals Group of the British Geological Survey. Additional data such as those for value of minerals produced, for country breakdown of trade, and for trade in other minerals, are available on enquiry. Although data on consumption is not compiled, it will be evident to the reader that it is possible to calculate approximate apparent consumption of many commodities from the published data, although stock changes have to be ignored unless such information is obtainable elsewhere.

In each new volume account is taken of revisions and information received after the publication of the previous issue, so that data for every year are as up-to-date as is practicable. The objective remains to present the latest complete information

from primary sources, that is from individual producing and trading countries, rather than to reproduce data from compilations made by other organisations working in the same field of world mineral statistics. However, such secondary sources have been fully consulted and the co-operation afforded to the British Geological Survey by numerous national and international organisations, in particular the International Consultative Group on Non-Ferrous Metal Statistics, is gratefully acknowledged.

This edition still lists 'Yugoslavia' and 'Soviet Union' as countries since for 1992 data this remains the only practicable way of handling the information available. However the 'new' countries that have emerged in those areas will be listed for the first time in the forthcoming preliminary production volume and in the next edition of *World Mineral Statistics*. Problems still attend the mineral production and trade statistics for countries of the former communist bloc, particularly where political revision has not yet been matched by re-organisation of the institutions responsible for the collection of statistics, but the compilers have attempted to ensure that figures truly refer to the countries indicated. Users of these volumes should take particular note of commentaries and footnotes in the cases of these countries.

The British Geological Survey continues to provide to customers a reliable, comprehensive and continuous set of data covering most of the minerals that enter international trade. In view of the political and economic changes that are taking place in several major mineral-producing countries, and the attention now given to sustainable development and other global environmental concerns, the availability of such a statistical series is vital for the intelligent analysis of the use of mineral resources. *World Mineral Statistics* is now available as an on-line subscriber service and will be available on disc in 1995. Continuation of this statistical compilation is now crucially dependent on the demand for its hard-copy and digital products from the commercial sector.

Criticisms and suggestions that might help us to meet your changing needs would be welcome.

Peter J Cook  
*Director*

British Geological Survey  
Keyworth  
Nottingham NG12 5GG

1 November 1994

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## EXPLANATORY NOTES

### Coverage

*World Mineral Statistics* covers the majority of economically important, and internationally traded, mineral commodities, and for the past two editions has been published in two volumes covering metallic and energy minerals, and non-metallic minerals. These two volumes have again been amalgamated into this edition. 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 in the Minerals Group files and is available for consultation. Historical data (1913–1970) can be obtained from the predecessor to this series entitled the *Statistical Summary of the Mineral Industry*.

### Arrangement of countries

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

- European Union (EU)
- Europe other than EU; 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.

*German Democratic Republic* For 1991 and 1992, the data shown against Federal Republic of Germany includes data for the former German Democratic Republic, where available.

*Soviet Union* This country name has been retained for 1988–92 data pending clarification of statistical sources in the CIS.

*Yugoslavia* This refers to the former Socialist Federal Republic of Yugoslavia unless otherwise stated.

### 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, but exclude remelted material.

### Trade

*Federal Republic of Germany* Data up to 1990 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, Namibia, South Africa 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.

Export data are taken from returns furnished by producers to the Department of Mineral and Energy Affairs, and may be shipments rather than actual exports.

Estimates for other 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 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.

*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 3) 689.1, 8 & 9, and 699.8 & 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; Natural Resources Canada; the Australian Bureau of Agricultural and Resource Economics; the Department of Mineral and Energy Affairs 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 UK Iron and Steel Statistics Bureau, the International Fertilizer Industry Association Ltd, the UN Food and Agriculture Organization and the UNCTAD. 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*; Annales des Mines, *Realites Industrielles*; International Mining, *Yearbook*; Metaleurop, *Annuaire Statistique*; Metallgesellschaft AG, *Metallstatistik*; Mining Journal, *Mining Annual Review*; Enirisorse, *Metalli Non Ferrosi*; World Bureau of Metal Statistics, *World Metal Statistics*; 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  $\times$  0.9842 = long tons  
tonnes  $\times$  1.1023 = short tons  
kilograms  $\times$  2.2046 = pounds  
kilograms  $\times$  32.1507 = troy ounces  
cubic metres  $\times$  35.3147 = cubic feet  
1 tonne of crude petroleum equals on average 7 barrels of crude petroleum.  
1 flask mercury = 34.5 kilograms  
1 metric ton unit = 10 kilograms

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  
S.I.T.C. Standard International Trade Classification





## **STATISTICAL TABLES**

**Production of Bauxite**

tonnes

Country	1988	1989	1990	1991	1992
France	977 700	550 427	489 805	183 300	104 000
Greece	2 460 782	2 550 015	2 511 036	2 164 773	2 078 445
Italy	17 125	11 761	338	8 700	97 500
Spain	2 500	—	—	—	—
Albania	37 669	35 343	23 489	8 000	—
Hungary	2 593 000	2 644 000	2 559 100	2 036 700	1 721 100
Romania	356 000	313 000	247 400	200 500	176 100
Soviet Union (a)	9 248 000	8 993 000	9 246 000	7 870 000	7 614 000
Turkey	269 437	534 273	772 673	460 829	612 996
Yugoslavia	3 033 794	3 252 468	2 952 460	(f) 2 542 000	798 900
Ghana	287 300	347 100	382 100	485 100	338 200
Guinea	17 859 000	17 547 000	16 150 000	17 065 000	15 997 000
Mozambique	6 548	5 501	7 186	7 760	8 840
Sierra Leone	1 379 200	1 561 800	1 445 120	1 376 200	1 256 900
Dominican Republic	167 800	150 813	85 164	6 514	—
Jamaica	7 316 000	9 487 000	10 965 000	11 610 000	11 367 000
USA (b)	588 000	670 000	* 495 000	* 50 000	* 45 000
Brazil (c)	7 388 000	7 489 146	9 748 948	10 364 200	9 365 600
Guyana	1 773 900	1 321 081	1 423 978	2 145 907	2 373 759
Suriname	3 426 000	3 457 348	3 266 759	3 136 341	3 251 900
Venezuela	521 504	701 770	771 422	1 997 066	1 117 525
China	* 3 500 000	2 055 200	3 655 200	5 926 000	6 660 900
India	4 013 000	4 492 000	4 853 000	4 735 000	4 898 300
Indonesia	513 053	862 313	1 163 820	1 246 322	803 507
Iran (d) (e)	92 537	74 097	92 509	98 425	* 92 000
Malaysia	360 798	355 174	398 180	376 418	330 593
Pakistan	2 500	1 967	2 581	4 324	3 500
Australia	36 192 000	38 583 000	41 391 000	40 503 000	39 746 000
World total	104 400 000	108 000 000	115 100 000	116 600 000	110 900 000

(a) Including nepheline concentrates and alunite

(b) Dried bauxite equivalent

(c) Including beneficiated and direct shipping ore

(d) Alunite

(e) Years ended 20 March following that stated

(f) Excluding data from August to December for the Republic of Croatia

**Production of Alumina**

Country	1988	1989	1990	1991	1992
United Kingdom	114 000	116 200	120 000	120 000	* 120 000
France (a)	551 000	478 000	466 540	403 765	365 000
Germany, Federal Republic of	1 162 786	1 173 993	1 172 808	1 148 310	1 119 898
Greece	336 373	331 007	378 595	407 843	399 739
Irish Republic	842 800	864 510	926 500	980 392	972 549
Italy	460 500	472 000	491 400	525 800	498 300
Spain	576 000	620 000	655 000	656 200	626 800
Czechoslovakia	182 651	204 615	209 229	186 600	* 100 000
German Democratic Republic (a)	64 000	69 000	27 000	—	—
Hungary (a)	873 232	881 505	826 000	653 000	545 000
Romania (a)	458 000	426 000	440 000	310 000	280 000
Soviet Union (a)	* 5 800 000	5 980 000	5 639 000	5 276 000	5 240 000
Turkey	181 670	200 560	177 144	159 091	156 474
Yugoslavia	1 060 041	1 170 463	1 086 298	780 000	* 340 000
Guinea	593 000	627 000	642 100	650 900	603 200
Canada	992 576	1 048 432	1 087 029	1 131 000	1 104 000
Jamaica	1 520 000	2 221 070	2 868 844	3 014 585	2 917 162
USA	* 4 770 000	* 5 000 000	* 5 230 000	* 5 230 000	* 5 185 000
Brazil	1 487 850	1 632 000	1 654 800	1 742 500	1 833 000
Suriname	1 633 000	1 567 051	1 531 460	1 509 638	1 576 000
Venezuela	1 284 036	1 293 219	1 404 769	1 481 000	1 282 163
China	* 1 300 000	1 318 000	1 463 800	1 522 000	1 583 000
India	1 188 000	1 419 000	1 334 000	1 435 000	1 484 000
Japan	508 000	564 000	458 893	564 700	466 700
Australia	10 510 514	10 800 000	11 231 000	11 713 000	11 962 000
World total	38 500 000	40 500 000	41 500 000	41 600 000	40 800 000

## Note(s):

(1) Where possible figures in this table show the alumina equivalent ( $\text{Al}_2\text{O}_3$ ) of total hydrate produced, whether or not calcined

(a) Calcined

**Production of Primary Aluminium**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	300 166	297 313	289 796	293 512	244 163
France	327 856	329 253	330 824	346 194	423 000
Germany, Federal Republic of	752 927	733 703	714 946	705 033	626 491
Greece	148 253	144 833	152 362	150 878	150 850
Italy	226 300	219 500	231 800	218 000	160 700
Netherlands	278 198	279 243	(b) 257 884	(b) 253 563	(b) 227 328
Spain	293 900	352 400	355 300	355 200	359 000
Austria	95 494	92 933	89 434	80 384	32 866
Czechoslovakia	31 435	32 576	30 076	49 387	* 62 000
German Democratic Republic	* 61 200	* 53 900	* 21 000	—	—
Hungary	74 692	75 195	75 162	63 318	26 857
Iceland	82 034	88 477	86 773	88 768	89 478
Norway (a)	838 224	867 276	867 061	858 227	812 850
Poland	47 700	47 801	45 974	45 793	43 600
Romania	266 000	269 100	168 000	158 400	111 992
Soviet Union	* 3 500 000	* 3 433 000	3 513 000	3 252 000	* 3 190 000
Sweden	94 711	96 070	92 100	96 339	103 297
Switzerland	71 816	71 308	71 602	65 899	50 794
Turkey	56 500	58 564	60 902	55 817	58 581
Yugoslavia	321 900	331 011	349 087	* 314 000	* 177 700
Cameroon	80 000	87 300	87 500	85 600	82 500
Egypt (c)	173 460	180 931	141 081	177 707	177 838
Ghana	163 500	168 600	174 200	173 400	179 000
South Africa	170 400	165 900	157 500	169 390	172 795
Canada	1 534 499	1 554 753	1 567 395	1 821 642	1 971 843
Mexico	68 337	71 691	67 515	50 827	24 806
USA	3 944 000	4 030 000	4 048 000	4 121 000	4 042 000
Argentina	157 407	164 154	165 608	166 290	153 000
Brazil	873 500	887 432	930 585	1 139 600	1 193 300
Suriname	9 900	28 600	31 282	30 657	32 400
Venezuela	443 305	546 022	599 480	609 548	567 399
Bahrain	182 804	186 395	212 500	209 800	292 460
China	* 713 000	758 300	854 300	963 000	1 096 400
Dubai	162 500	168 250	174 300	239 030	244 600
India	334 861	423 250	433 200	504 284	496 300
Indonesia	185 112	196 869	192 100	174 773	188 772
Iran	28 183	44 019	94 647	107 743	117 230
Japan	35 347	35 014	34 224	32 400	18 884
Korea, Dem. P.R. of	* 10 000	* 10 000	—	—	—
Korea, Republic of	16 101	15 683	13 285	13 604	* 12 000
Australia	1 149 000	1 244 000	1 234 000	1 235 000	1 246 000
New Zealand	265 700	258 800	259 700	260 400	241 600
World total	18 600 000	19 100 000	19 300 000	19 700 000	19 500 000

(a) May include some super purity aluminium

(b) Sales

(c) Years ended 30 June of that stated

## Exports of Bauxite, Alumina and Aluminium

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Bauxite	4 120	10 951	4 774	8 291	9 764
Alumina	7 453	9 614	11 735	11 033	12 762
Alumina hydrate	41 695	45 492	42 105	42 674	47 033
Unwrought	79 378	73 816	60 795	39 105	20 378
Unwrought alloys	75 672	95 379	95 804	91 217	114 782
Scrap	114 286	99 334	94 452	80 171	71 975
Belgium-Luxembourg					
Bauxite	3 648	1 713	1 725	1 236	992
Alumina	1 202	2 143	1 079	955	740
Unwrought	4 996	4 566	3 162	3 132	3 288
Unwrought alloys	27 922	30 785	29 735	50 594	71 298
Scrap	77 770	74 729	67 769	69 055	85 801
Denmark					
Unwrought	309	574	469	463	767
Unwrought alloys	10 703	7 629	9 045	7 760	13 637
Scrap	26 645	28 003	29 068	26 822	25 192
France					
Bauxite	13 487	28 916	13 143	17 450	12 723
Alumina	84 106	104 355	96 287	83 726	82 452
Alumina hydrate	127 969	138 981	131 590	94 769	99 969
Unwrought	36 704	49 703	53 067	40 220	132 185
Unwrought alloys	76 436	71 932	82 767	87 307	86 971
Scrap	160 811	155 886	150 037	141 033	137 326
Germany, Federal Republic of					
Bauxite	57 050	71 666	86 019	198 495	39 818
Alumina	330 355	287 282	239 600	238 977	203 344
Alumina hydrate	270 136	269 317	306 068	313 082	251 338
Unwrought	68 866	53 299	64 734	54 878	54 552
Unwrought alloys	254 938	272 717	254 705	235 549	269 988
Scrap	141 019	164 157	198 958	316 585	367 743
Greece					
Bauxite	416 811	518 723	401 648	824 573	965 679
Alumina	169 238	206 716	278 546	318 269	333 644
Alumina hydrate	9 524	15 734	7 500	14 831	16 432
Unwrought (a)	51 415	57 041	61 186	61 552	69 813
Scrap	3 625	4 130	2 378	2 080	5 091
Irish Republic					
Alumina	854 157	853 012	862 448	1 039 839	938 189
Alumina hydrate	46 936	62 337	53 440	37 877	48 323
Unwrought (a)	1 902	2 574	1 970	1 615	1 056
Scrap	11 147	11 028	12 210	11 278	13 203
Italy					
Bauxite	14 333	23 134	15 617	3 611	38 430
Alumina	388 535	410 382	412 368	389 418	465 075
Alumina hydrate	14 078	14 967	15 451	10 147	12 292
Unwrought	5 069	6 155	10 135	5 982	3 361
Unwrought alloys	33 341	23 660	18 150	11 548	23 032
Scrap	8 061	10 365	7 132	10 556	11 858
Netherlands					
Bauxite	17 913	22 351	25 048	21 909	23 677
Alumina	87 557	101 045	98 806	97 375	99 145
Alumina hydrate	1 497	2 379	2 441	4 066	9 542
Unwrought	90 836	101 842	119 967	99 846	88 245
Unwrought alloys	238 950	246 992	242 497	232 565	247 767
Scrap	138 871	149 824	132 672	129 089	145 123
Portugal					
Scrap	8 052	6 923	5 378	5 552	8 878
Spain					
Bauxite	2 066	2 987	1 182	627	540
Alumina	283 368	207 186	233 102	247 077	234 641
Alumina hydrate	26 863	48 521	48 559	56 504	75 935
Unwrought	31 666	14 348	8 515	19 576	15 672
Unwrought alloys	58 223	96 966	98 303	103 547	123 495
Scrap	2 807	3 348	3 736	7 588	14 117
Austria					
Unwrought (a)	44 894	42 985	52 057	64 680	65 917
Scrap	46 911	35 508	26 881	32 320	37 819
Bulgaria					
Unwrought (a) (f)	* 2 700	* 3 600	* 2 200	* 1 500	* 5 700
Scrap (f)	* 5 400	* 1 900	* 2 300	* 3 200	* 3 500

**Exports of Bauxite, Alumina and Aluminium**

tonnes

Country	1988	1989	1990	1991	1992
<b>Czechoslovakia</b>					
Unwrought (a) (f)	* 14 800	* 16 400	* 14 900	* 34 200	* 29 000
Scrap (f)	* 1 000	* 500	* 2 200	* 5 500	* 11 300
<b>Finland</b>					
Unwrought (a)	25 291	24 023	23 285	20 430	24 532
<b>German Democratic Republic</b>					
Unwrought (a) (f)	* 28 500	* 24 500	* 30 700	—	—
Scrap (f)	* 8 000	* 9 100	* 3 000	—	—
<b>Hungary</b>					
Bauxite	378 533	338 428	280 338	300 000	242 641
Alumina	716 727	676 892	613 163	460 000	449 167
Unwrought	59 135	76 479	121 761	100 000	48 675
Scrap	9 868	9 534	11 312	...	14 115
<b>Iceland</b>					
Unwrought (a)	81 071	89 657	86 392	86 267	90 497
<b>Norway</b>					
Alumina	16 241	27	104	36	8
Unwrought	241 612	240 743	211 412	241 677	239 544
Unwrought alloys	513 051	529 603	565 864	568 547	563 181
Scrap	50 536	52 079	28 678	28 407	20 301
<b>Poland</b>					
Unwrought (a)	2 647	2 638	16 690	15 291	15 430
<b>Romania</b>					
Unwrought	193 700	108 100	(f)* 44 000	(f)* 26 000	93 654
Scrap (f)	* 500	* 3 200	* 1 600	* 500	* 200
<b>Soviet Union</b>					
Unwrought (a)	(f)* 641 200	(f)* 709 900	(f)* 671 500	(f)* 759 500	(j) 964 162
Scrap (f)	* 43 200	* 33 100	* 16 000	* 39 400	* 67 400
<b>Sweden</b>					
Alumina	356	210	452	191	2 427
Unwrought	25 654	25 125	14 427	9 979	5 778
Unwrought alloys	34 233	33 689	49 713	47 823	48 330
Scrap	11 069	13 691	20 882	34 006	27 135
<b>Switzerland</b>					
Alumina	1 313	830	1 432	2 655	832
Unwrought (a)	32 872	32 476	30 618	32 928	13 971
Scrap	35 776	39 143	36 846	34 537	51 104
<b>Turkey</b>					
Bauxite	79 997	58 243	83 015	57 800	50 330
Alumina	66 450	77 483	63 016	34 048	41 641
Unwrought (a)	6 326	8 945	9 890	7 080	7 091
<b>Yugoslavia</b>					
Bauxite	639 528	600 084	506 966	(b) 241 280	...
Alumina	457 136	587 188	584 741	(b) —	...
Alumina hydrate	58 966	99 890	115 827	(b) —	...
Unwrought	129 829	144 122	196 275	(b) 49 365	...
Unwrought alloys	23 914	22 965	34 444	(b) 6 973	...
Scrap	1 594	1 427	591	(b) 370	...
<b>Cameroon</b>					
Unwrought & scrap	63 100	69 304	67 700	65 800	67 200
<b>Egypt</b>					
Unwrought (a)	67 600	102 000	107 600	89 700	125 700
<b>Ghana</b>					
Bauxite	299 939	374 646	368 659	324 313	399 155
Unwrought (a)	97 109	118 500	127 500	129 700	154 200
<b>Guinea</b>					
Bauxite (f)	* 13 700 000	* 14 200 000	* 13 200 000	* 12 700 000	* 11 100 000
Alumina	600 000	600 000	640 000	650 000	600 000
<b>Sierra Leone</b>					
Bauxite	1 428 000	1 557 000	1 430 000	1 176 800	1 365 100
<b>South Africa</b>					
Unwrought (a)	68 000	53 415	71 835	82 661	98 766
Scrap (f)	* 2 500	* 2 300	* 2 300	* 2 000	* 3 100
<b>Canada</b>					
Alumina	139 094	128 256	134 334	85 696	94 998
Unwrought	659 922	615 238	664 549	769 866	856 177
Unwrought alloys	495 096	544 445	617 647	703 317	749 098
Scrap	165 216	164 493	188 363	173 675	197 415

## Exports of Bauxite, Alumina and Aluminium

tonnes

Country	1988	1989	1990	1991	1992
Cuba					
Scrap (e)	2 498	1 524	412	970	419
Dominican Republic					
Bauxite (h)	199 933	174 871	76 529	30 337	—
Jamaica					
Bauxite	3 494 440	4 189 739	3 885 758	4 260 881	4 128 330
Alumina	1 561 349	2 140 885	2 885 131	3 037 461	2 951 068
Mexico					
Unwrought & scrap	19 126	11 860	18 061	18 751	40 705
USA					
Bauxite	68 252	65 022	90 723	75 178	70 816
of which: Re-exports	5 321	21 278	17 214	8 669	7 846
Alumina	1 021 372	1 295 075	1 216 084	1 431 849	1 162 495
Alumina hydrate	24 160	51 404	52 664	54 145	48 355
Unwrought	362 559	481 293	510 513	633 392	469 594
Unwrought alloys	40 111	112 116	173 557	158 489	134 370
Scrap	487 714	575 890	537 994	461 521	298 231
Argentina					
Unwrought	83 473	81 802	136 184	92 400	67 589
Brazil					
Bauxite	4 660 509	4 636 700	5 463 921	5 823 521	4 362 391
Alumina	70 429	175 995	172 114	120 440	149 415
Unwrought (a)	514 898	470 266	591 982	751 607	816 537
Guyana					
Bauxite	1 297 000	1 311 000	1 389 000	1 328 000	895 000
Suriname					
Bauxite	7 460	—	—	—	—
Alumina	1 629 980	1 445 088	1 448 158	1 382 000	1 510 000
Unwrought	8 000	26 111	27 416	21 000	32 000
Venezuela					
Alumina	366 856	152 932	102 869	231 822	226 984
Unwrought	287 925	379 641	452 178	445 529	487 794
Bahrain					
Unwrought (a)	94 817	96 043	112 711	101 351	149 500
China					
Bauxite	(i) 1 250 502	(i) 1 491 702	680 315	541 554	864 363
Alumina	...	...	556 149	646 294	148 682
Unwrought (a)	130 378	13 411	65 125	68 556	55 803
Scrap	(f)* 7 200	(f)* 5 000	1 715	2 706	14 962
Dubai					
Unwrought (a)	154 000	165 100	171 000	235 800	248 600
Hong Kong					
Bauxite (g)	15 010	16 654	14 461	10 561	3 915
Alumina (g)	20 137	133 729	38	17	24 316
Unwrought	77 616	26 412	17 381	21 955	(a) 79 912
of which: Re-exports	77 252	26 291	17 281	21 857	(a) 79 720
Scrap	31 929	30 240	32 999	31 895	51 287
India (c)					
Bauxite	93 547	219 916	187 782	121 618	247 238
Alumina	404 170	418 411	317 218	334 442	347 123
Unwrought (a)	13 830	28 170	26 940	68 094	102 441
Indonesia					
Bauxite	466 517	843 476	813 637	1 077 036	596 830
Unwrought (a)	125 628	142 885	125 162	123 016	147 311
Israel					
Unwrought (a) (f)	* 4 500	* 5 900	* 6 800	* 2 100	* 2 900
Scrap (f)	* 2 800	* 2 400	* 2 200	* 4 000	* 6 400
Japan					
Alumina	126 353	151 192	158 656	121 012	48 519
Alumina hydrate	71 917	98 273	119 991	131 084	147 994
Unwrought	665	307	547	1 338	1 948
Unwrought alloys	2 768	2 640	4 267	3 311	3 206
Scrap	7 334	9 893	7 751	6 874	5 359
Jordan					
Scrap	7 162	4 241	1 207	1 440	2 370
Korea, Dem. P.R. of					
Unwrought (a) (f)	* 5 800	* 5 800	* 3 900	* 3 000	* 3 300
Korea, Republic of					
Unwrought (a)	7 643	3 819	6 307	1 810	15 889

**Exports of Bauxite, Alumina and Aluminium**

tonnes

Country	1988	1989	1990	1991	1992
Malaysia					
Bauxite	222 100	321 750	407 670	302 048	198 200
Scrap	11 249	5 127	...	4 826	6 416
Saudi Arabia					
Scrap	52 266	54 544	49 826	23 052	...
Singapore					
Alumina	32 414	29 300	20 581	11 788	14 369
of which: Re-exports	32 297	28 617	20 468	11 659	14 325
Unwrought	106 582	65 907	21 890	43 205	57 385
of which: Re-exports	104 842	63 571	19 362	39 311	55 173
Scrap	20 386	21 779	20 591	19 067	20 806
Taiwan					
Alumina	562	3 459	3 833	959	167
Unwrought (a)	34 753	30 204	47 687	52 867	72 224
Scrap	5 211	4 412	5 577	5 275	7 907
Australia					
Bauxite	* 4 800 000	* 5 000 000	* 5 700 000	* 5 450 000	* 3 800 000
Alumina	8 558 000	8 426 000	8 785 000	9 274 000	9 604 000
Unwrought (a)	815 600	921 800	936 400	953 400	930 000
Scrap (d)	44 205	48 777	50 046	62 793	52 506
New Zealand (d)					
Unwrought (a)	227 259	243 992	230 556	240 941	249 667
Scrap	10 013	8 299	9 207	9 602	9 273

## Note(s):

- (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 3) 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) Data for the Federal Republic of Yugoslavia only
- (c) Years ended 31 March following that stated
- (d) Years ended 30 June of that stated
- (e) Imports into the Netherlands
- (f) BGS estimates, based on known imports into certain countries
- (g) Re-exports
- (h) Some material believed to come from stocks
- (i) Including alumina
- (j) Data for the Russian Federation only



## Imports of Bauxite, Alumina and Aluminium

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Bauxite	491 480	443 537	440 915	387 027	386 252
Alumina	601 850	655 396	625 284	586 109	513 295
Alumina hydrate	17 646	21 409	17 204	23 513	48 683
Unwrought	119 757	129 134	130 688	122 361	241 472
Unwrought alloys	115 263	106 317	110 318	99 403	126 397
Scrap	18 664	24 138	16 864	29 040	40 330
Belgium-Luxembourg					
Bauxite	37 841	25 077	37 310	44 774	70 494
Alumina	9 032	10 650	11 025	10 383	9 871
Alumina hydrate	23 858	30 841	47 101	53 027	74 669
Unwrought	208 265	196 711	225 569	251 813	229 896
Unwrought alloys	146 873	161 407	141 923	118 815	116 966
Scrap	112 805	120 849	117 184	140 597	173 607
Denmark					
Bauxite	1 414	1 675	2 667	2 185	2 139
Alumina	688	648	814	544	554
Alumina hydrate	4 866	5 196	4 515	4 929	5 527
Unwrought	914	984	1 926	427	675
Unwrought alloys	29 235	28 202	28 046	29 788	27 615
Scrap	8 790	4 575	6 082	9 637	15 938
France					
Bauxite	1 069 102	1 348 886	1 388 476	1 239 070	1 342 577
Alumina	230 645	371 255	373 484	355 082	578 636
Alumina hydrate	36 502	38 924	78 103	36 737	33 248
Unwrought	203 915	208 744	248 642	254 583	250 189
Unwrought alloys	257 960	275 506	292 455	296 966	268 270
Scrap	96 994	122 986	137 528	203 559	215 863
Germany, Federal Republic of					
Bauxite	2 576 992	2 879 675	3 076 544	2 549 118	2 616 678
Alumina	851 658	1 033 220	970 227	877 748	689 469
Alumina hydrate	106 588	22 865	35 750	69 750	74 813
Unwrought	467 538	569 135	545 143	666 475	795 465
Unwrought alloys	339 184	374 056	355 557	340 544	366 921
Scrap	283 217	271 198	229 002	195 137	204 621
Greece					
Bauxite	—	5 028	800	200	160
Alumina	235	381	419	620	811
Unwrought (a)	5 506	13 180	11 843	26 627	47 400
Scrap	1 734	1 898	1 258	1 444	961
Irish Republic					
Bauxite	1 746 828	1 606 158	1 746 337	1 976 987	1 984 334
Alumina	4 355	5 142	3 852	4 362	30 840
Unwrought (a)	2 812	3 711	7 705	7 720	7 598
Italy					
Bauxite	1 394 092	1 465 981	1 680 619	1 667 669	1 708 486
Alumina	240 880	243 024	210 232	196 319	153 655
Alumina hydrate	88 875	148 762	146 823	128 488	106 075
Unwrought	270 397	306 670	339 639	298 966	312 022
Unwrought alloys	147 721	154 334	198 994	212 679	217 196
Scrap	184 202	207 982	174 198	168 084	182 458
Netherlands					
Bauxite	160 273	142 971	142 916	133 475	124 534
Alumina	642 945	530 875	459 077	567 626	541 830
Alumina hydrate	44 301	40 697	43 689	57 017	69 163
Unwrought	105 308	114 755	138 298	134 939	140 195
Unwrought alloys	62 423	62 563	51 926	48 161	54 873
Scrap	105 655	138 241	126 757	118 272	134 476
Portugal					
Bauxite	1 836	1 658	1 786	1 971	324
Alumina	8 066	7 557	7 943	7 690	6 667
Unwrought	(a) 45 127	(a) 47 105	15 320	14 232	15 033
Unwrought alloys	...	...	34 157	35 935	45 054
Spain					
Bauxite	1 389 690	1 725 327	1 922 855	1 935 071	1 812 749
Alumina	19 658	22 338	24 718	21 879	23 806
Alumina hydrate	11 227	13 222	13 809	15 380	14 605
Unwrought	38 638	6 629	15 400	35 910	43 477
Unwrought alloys	11 235	7 378	15 771	26 033	28 284
Scrap	16 088	22 339	24 198	15 080	16 949

**Imports of Bauxite, Alumina and Aluminium**

tonnes

Country	1988	1989	1990	1991	1992
<b>Austria</b>					
Bauxite	49 223	54 922	34 466	48 763	40 540
Alumina	298 833	224 419	222 498	176 497	82 439
Alumina hydrate	8 139	8 226	8 552	8 715	6 667
Unwrought	44 118	50 211	52 372	53 384	96 694
Unwrought alloys	64 148	80 217	97 725	96 813	103 877
Scrap	56 043	47 231	41 628	51 683	52 210
<b>Bulgaria</b>					
Unwrought (a) (f)	* 29 600	* 11 000	* 8 000	* 8 900	* 4 600
<b>Czechoslovakia</b>					
Bauxite	445 000	478 000	581 000	400 000	...
Alumina (f)	* 3 200	* 400	* 700	* 3 400	* 1 700
Unwrought (a)	108 000	106 000	102 000	50 000	...
<b>Finland</b>					
Bauxite	2 043	236	7 070	8 037	6 982
Alumina	1 447	1 717	3 317	1 134	1 524
Alumina hydrate	26 207	32 296	21 513	27 166	28 059
Unwrought	18 127	17 528	20 754	15 585	15 445
Unwrought alloys	5 452	6 208	5 382	3 859	5 392
Scrap	69 811	70 477	27 004	37 758	55 318
<b>German Democratic Republic</b>					
Bauxite	148 300	152 900	...	—	—
Alumina (f)	* 83 000	* 56 900	* 25 500	—	—
Unwrought (a) (f)	* 119 200	* 113 900	* 102 000	—	—
<b>Hungary</b>					
Unwrought	197 577	204 974	204 070	94 200	...
<b>Iceland</b>					
Alumina	140 525	160 763	160 290	185 459	204 448
<b>Norway</b>					
Bauxite	14 746	9 463	14 185	19 010	32 392
Alumina	1 287 319	1 334 530	1 861 687	1 697 538	1 691 213
Alumina hydrate	277 169	232 489	35 809	33 442	32 009
Unwrought	71 541	86 300	71 411	67 715	81 901
Unwrought alloys	18 654	15 804	9 548	13 323	23 584
Scrap	2 085	4 371	23 732	28 246	38 893
<b>Poland</b>					
Bauxite	51 891	44 236	29 099	17 866	63 369
Alumina	193 457	185 179	130 046	112 506	(f)* 93 000
Unwrought	88 755	96 415	44 961	17 300	26 544
<b>Romania</b>					
Bauxite	(f)* 463 300	1 067 000	(f)* 398 200	(f)* 572 000	487 862
Alumina	(f)* 16 800	(f)* 10 000	(f)* 28 200	(f)* 32 100	8 269
<b>Soviet Union</b>					
Bauxite	(f)* 4 563 600	(f)* 5 300 700	(f)* 3 813 900	(b) 1 851 000	(b) 2 848 000
Alumina (f)	* 736 800	* 1 394 400	* 1 558 800	* 783 300	* 806 700
<b>Sweden</b>					
Bauxite	51 108	56 593	48 816	65 879	50 741
Alumina	189 820	189 798	165 454	445 735	163 780
Alumina hydrate	63 896	63 709	53 972	59 921	50 928
Unwrought	28 191	27 030	15 607	21 073	26 429
Unwrought alloys	30 628	29 111	31 110	27 896	24 074
Scrap	3 592	5 223	6 808	4 593	4 619
<b>Switzerland</b>					
Bauxite	3 852	1 747	691	1 051	1 688
Alumina	140 614	146 529	150 483	144 331	107 945
Unwrought	59 738	78 598	63 586	64 597	61 456
Unwrought alloys	35 088	39 003	41 010	28 793	33 615
Scrap	4 042	5 734	4 110	6 191	4 339
<b>Turkey</b>					
Bauxite	55 684	51 367	44 790	36 129	34 864
Alumina	2 293	1 165	1 851	2 958	1 966
Unwrought	24 765	26 342	63 568	26 286	34 493
Unwrought alloys	34 428	21 901	37 393	36 696	47 326
<b>Yugoslavia</b>					
Bauxite	364 761	691 925	439 702	(g) 22 545	...
Alumina	128 230	264 843	245 465	(g) 434	...
Unwrought	17 587	14 945	18 180	(g) 11 595	...
Unwrought alloys	3 253	1 376	4 564	(g) 416	...

## Imports of Bauxite, Alumina and Aluminium

tonnes

Country	1988	1989	1990	1991	1992
Algeria					
Alumina	290	352	15	2 092	...
Unwrought (a)	7 946	8 061	8 475	5 574	...
Cameroon					
Alumina	160 000	164 675	170 000	170 000	...
Ghana					
Alumina	158 087	170 000	165 000	175 000	...
Kenya					
Alumina	3 926	* 3 700	* 3 700	* 3 200	...
Morocco					
Bauxite	5 118	10 651	9 102	6 351	10 898
Alumina	3 029	2 798	4 761	4 091	4 403
Unwrought (a)	1 717	2 151	2 461	2 039	2 143
Nigeria					
Unwrought (a)	5 000	5 000	3 000	2 500	...
South Africa					
Bauxite	4 983	5 587	7 294	11 094	22 058
Alumina	329 569	338 314	310 779	303 872	288 737
Alumina hydrate	9 695	13 101	10 954	11 597	10 691
Scrap	273	312	1 699	5 863	1 942
Tanzania					
Unwrought (a)	1 061	1 023	...	...	...
Tunisia					
Bauxite	1 403	1 838	3 053	2 015	1 510
Alumina	24 904	33 333	24 560	28 195	26 916
Alumina hydrate	3 803	4 440	5 562	4 131	6 982
Unwrought	1 296	2 189	(a) 1 583	(a) 2 610	(a) 1 483
Canada					
Bauxite	2 351 595	2 540 694	2 310 461	2 773 509	2 799 415
Alumina	1 875 546	2 040 947	1 982 952	2 456 234	2 558 970
Unwrought	23 973	20 037	27 300	27 676	22 887
Unwrought alloys	35 342	44 941	57 358	46 201	62 583
Scrap	62 161	58 203	52 603	46 339	52 524
Costa Rica					
Unwrought (a)	3 436	3 496	7 707	4 235	6 235
Mexico					
Bauxite	53 040	51 247	46 028	44 051	37 242
Alumina	150 178	147 089	141 745	96 180	...
Alumina hydrate	44 441	47 512	40 320	45 786	46 152
Unwrought & scrap (a)	48 155	49 912	47 494	71 234	92 508
Panama					
Unwrought (a)	546	1 013	761	1 167	1 281
USA					
Bauxite, crude dried	10 502 783	11 346 182	12 628 163	11 174 990	11 111 732
Bauxite, calcined	393 699	531 000	558 000	298 000	346 000
Alumina	4 647 390	4 330 405	4 087 503	4 622 317	4 761 504
Unwrought	514 037	422 416	438 543	517 338	610 755
Unwrought alloys	512 786	502 970	523 194	510 797	553 049
Scrap	200 498	206 380	214 853	208 423	263 838
Argentina					
Bauxite	20 457	25 696	19 911	20 000	26 235
Alumina	261 862	292 403	207 153	347 064	248 171
Alumina hydrate	9 137	8 008	9 211	...	8 724
Brazil					
Bauxite	2 028	129 259	207 360	356 707	182 741
Alumina	378 243	372 956	423 308	662 845	728 543
Unwrought	33	1 287	354	1 028	180
Unwrought alloys	67	1 239	2 222	1 163	1 134
Scrap	759	2 621	4 956	4 440	1 154
Chile					
Bauxite	3 339	4 399	4 152	3 576	4 427
Unwrought	3 728	3 834	6 371	7 644	12 302
Colombia					
Bauxite	6 733	8 384	6 201	5 906	8 844
Alumina	3 908	5 039	5 202	5 066	7 049
Unwrought (a)	8 690	13 791	21 221	22 923	31 242
Ecuador					
Unwrought	4 947	4 256	3 428	4 453	2 193

**Imports of Bauxite, Alumina and Aluminium**

tonnes

Country	1988	1989	1990	1991	1992
Peru					
Bauxite	2 504	3 021	2 949	1 266	...
Alumina	2 301	735	1 918	646	...
Unwrought	4 190	759	1 046	3 408	...
Uruguay					
Bauxite	4 071	4 400	3 400	3 990	4 106
Alumina	1 120	1 661	1 335	1 205	1 545
Unwrought	2 306	1 439	2 090	1 900	1 884
Venezuela					
Bauxite	3 086 130	3 158 812	2 422 895	3 082 470	1 460 237
Alumina	7 818	6 435	5 638	13 568	4 677
Alumina hydrate	2 167	798	1 862	1 600	1 377
Unwrought	3	106	258	187	2 739
Abu Dhabi					
Scrap	9 197	...	8 625	6 461	11 375
Bahrain					
Alumina	363 151	351 694	436 867	404 931	...
China					
Alumina	159 535	298 006	583 012	686 178	800 697
Unwrought (a)	75 381	175 510	71 771	43 711	229 626
Scrap	(f)* 4 100	(f)* 8 000	5 490	6 149	44 578
Dubai					
Alumina	315 000	320 000	300 000	425 000	419 282
Hong Kong					
Bauxite	16 471	17 289	12 497	9 850	6 658
Alumina	84 029	182 850	60	60	25 479
Unwrought	111 187	52 889	46 208	58 666	(a) 125 773
Scrap	5 512	5 660	5 693	8 460	24 977
India (c)					
Alumina	4 321	7 159	6 682	3 890	4 663
Unwrought (a)	12 145	51 100	16 148	14 712	3 748
Indonesia					
Alumina	287 585	372 591	303 594	225 280	291 763
Alumina hydrate	44 590	59 238	54 469	63 958	85 345
Unwrought	(a) 6 818	1 657	11 522	35 549	28 535
Unwrought alloys	...	5 667	13 255	20 089	19 724
Iran (e)					
Alumina	27 100	43 275	40 000	50 000	...
Unwrought	3 532	1 005	...	...	...
Israel					
Alumina (f)	* 1 100	* 1 100	* 900	* 900	* 2 500
Unwrought (a)	17 698	15 932	18 244	...	22 704
Japan					
Bauxite	2 148 590	2 269 477	2 302 206	2 048 992	1 820 974
Alumina	44 092	28 294	19 008	33 489	20 182
Alumina hydrate	27 956	48 667	54 448	70 874	63 123
Unwrought	1 716 070	1 745 362	1 983 773	2 057 144	1 892 543
Unwrought alloys	575 926	617 828	669 290	773 874	648 570
Scrap	399 154	400 226	352 699	291 742	243 004
Jordan					
Alumina	22 174	20 820	22 871	31 498	23 620
Unwrought	3 883	3 651	3 588	4 799	2 997
Korea, Dem. P.R. of					
Alumina (f)	* 30 600	* 27 100	* 9 400	* 12 100	* 37 800
Unwrought (a) (f)	* 400	* 1 800	* 700	* 6 500	* 4 000
Korea, Republic of					
Bauxite	24 733	31 320	34 536	37 396	42 908
Alumina	43 242	42 144	14 328	13 191	19 790
Alumina hydrate	75 233	96 032	100 765	120 263	137 142
Unwrought	217 744	442 379	301 611	300 104	297 813
Unwrought alloys	48 831	43 179	60 315	91 690	127 665
Scrap	27 840	55 601	39 576	57 805	53 957
Malaysia					
Alumina	18 661	16 298	...	19 867	19 240
Unwrought	15 072	19 700	217 130	28 326	32 449
Unwrought alloys	18 636	22 410	31 452	38 611	43 509
Scrap	3 462	2 448	...	3 045	2 727
Pakistan (d)					
Alumina	2 500	...	2 360	3 046	4 276
Unwrought (a)	14 471	...	8 630	4 553	12 286
Scrap	26 451	...	27 017	33 294	58 272

**Imports of Bauxite, Alumina and Aluminium**

Country	1988	1989	1990	1991	1992
Philippines					
Bauxite	4 637	7 669	1 962	7 105	9 479
Alumina	5 775	7 798	7 155	8 478	6 897
Unwrought (a)	10 222	13 771	14 631	17 617	26 067
Saudi Arabia					
Bauxite	147 531	214 534	182 905	126 428	...
Unwrought (a)	14 405	14 662	22 273	16 196	...
Singapore					
Alumina	1 215	1 064	1 426	1 901	1 718
Alumina hydrate	84 780	69 124	62 258	76 948	85 957
Unwrought	125 646	38 576	46 158	55 067	86 093
Scrap	3 101	4 452	3 357	3 989	2 892
Taiwan					
Bauxite	39 635	31 297	48 025	45 321	48 092
Alumina	9 097	23 065	33 085	22 725	28 475
Alumina hydrate	11 685	13 579	22 191	28 254	38 683
Unwrought	136 553	162 521	170 088	214 008	203 991
Unwrought alloys	56 851	60 304	75 269	101 596	132 350
Scrap	64 115	71 711	70 265	128 649	110 110
Thailand					
Bauxite	30 426	32 131	25 102	32 076	32 929
Alumina	6 151	9 853	10 008	8 339	8 517
Alumina hydrate	19 592	26 570	17 800	9 051	18 087
Unwrought	1 036 106	66 030	75 581	83 911	81 403
Unwrought alloys	26 601	32 234	52 555	62 836	67 103
Scrap	4 716	4 570	2 012	709	869
Australia					
Bauxite	21 429	35 000	19 000	20 000	29 000
Alumina	10 939	12 000	10 000	10 000	—
Unwrought (a)	2 800	3 400	1 600	2 400	5 000
Scrap (d)	1 834	2 552	2 574	2 752	2 901
New Zealand (d)					
Alumina	520 223	471 467	511 261	493 688	567 235
Unwrought (a)	6 942	5 172	8 341	5 839	1 790

## Note(s):

- (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 3) 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) Data for the Russian Federation only  
(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  
(g) Data for the Federal Republic of Yugoslavia only

## Antimony

**Mine Production of Antimony**

tonnes (metal content)

Country	1988	1989	1990	1991	1992
Italy	119	—	—	—	—
Austria	270	412	469	—	—
Czechoslovakia	947	839	917	297	240
Romania	* 350	* 300	* 400	* 300	* 400
Soviet Union	* 18 000	* 18 000	* 18 000	* 16 000	* 13 500
Turkey	1 876	1 465	552	338	258
Yugoslavia	725	798	409	* 400	* 300
Morocco	226	133	172	157	184
South Africa	5 917	4 401	5 258	4 176	3 951
Zimbabwe	89	113	55	86	137
Canada	3 387	2 821	658	469	948
Guatemala	1 226	1 222	840	557	323
Honduras	19	44	—	—	—
Mexico	2 185	1 906	2 614	2 753	1 064
USA	* 150	* 500	* 500	* 500	* 500
Bolivia	9 943	9 189	8 454	7 287	6 022
Peru (a)	420	519	560	400	* 400
China	* 67 600	62 800	60 000	58 000	59 400
Pakistan	—	33	38	—	—
Thailand	445	496	326	60	269
Australia (b)	1 377	1 419	1 300	1 500	1 701
World total	115 300	107 400	101 500	93 300	89 600

## Note(s):

- (1) This table includes antimony content of antimonial lead alloys
- (2) In addition to the countries listed, Afghanistan, Hungary and Iran are believed to produce antimony
- (a) Including Sb content of antimonial lead plus Sb content of ores for export
- (b) Including Sb content of lead and zinc concentrates

## Exports of Antimony

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Metal	33	167	115	273	305
Oxide (a)	* 4 500	* 5 300	* 4 900	* 5 500	* 5 400
Belgium-Luxembourg					
Oxide (a)	* 3 800	* 4 000	* 3 800	* 3 400	* 3 500
France					
Metal	158	69	72	206	97
Oxide	5 458	5 479	5 007	4 408	4 363
Germany, Federal Republic of					
Metal	237	289	76	144	53
Oxide	822	689	675	653	725
Italy					
Metal	9	13	46	2	19
Oxide	36	52	24	22	63
Netherlands					
Metal	45	—	—	—	—
Oxide	467	527	495	304	389
Austria					
Sulphide (b)	24	58	67	3	0
Soviet Union					
Metal (a)	* 400	* 600	* 1 000	* 2 000	* 2 300
Oxide (a)	* 300	* 200	* 100	* 100	* 300
Turkey					
Ore	1 644	...	...	...	...
Metal	12 384	494	293	105	10
Morocco					
Ore	465	41	377	60	...
South Africa					
Ore (c)	76	100	92	96	90
Oxide	4 802	4 802	4 764	(a)* 2 500	(a)* 2 100
Canada					
Ores & concentrates	3 833	2 371	463	81	893
Mexico					
Ores & concentrates	3 980	3 857	819	773	656
Metal	109	67	250	494	275
USA					
Ores & concentrates	...	366	417	715	48
Metal	626	311	736	806	1 052
Oxide	1 478	2 268	8 608	4 551	5 798
Bolivia					
Ore	11 891	13 037	11 686	6 029	2 224
Metal	469	404	453	458	* 300
Oxide	672	853	762	3 915	* 6 600
China					
Ores & concentrates	(a)* 6 500	(a)* 11 100	10 241	5 087	4 518
Metal	29 276	32 993	33 368	29 373	33 322
Oxide	(a)* 11 300	(a)* 13 200	13 014	14 429	16 905
Sulphide	(a)* 260	...	10 040	4 064	...
Thailand					
Ore	3 617	2 480	302	—	84
Metal	—	—	1 132	1 263	1 470
Australia					
Ores & concentrates (d)	1 769	2 305	1 622	3 114	3 028

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

(b) Believed to be crude liquated sulphide

(c) Sb content

(d) Years ended 30 June of that stated

## Antimony

**Imports of Antimony**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ore (b)	* 2 900	* 1 800	* 800	* 500	* 200
Metal	410	558	604	1 184	3 193
Oxide	1 637	1 890	2 172	2 154	1 897
Belgium-Luxembourg					
Ore	5 341	6 048	3 863	1 855	486
Metal	1 260	2 435	2 953	1 983	3 479
Oxide	945	665	1 299	654	956
Denmark					
Oxide	79	104	83	76	56
France					
Ore	9 269	12 806	9 620	7 183	2 631
Metal	1 046	2 729	2 977	3 768	4 494
Oxide	989	772	1 080	911	953
Germany, Federal Republic of					
Metal	1 727	1 386	3 145	3 426	1 286
Oxide	4 922	5 411	5 517	4 853	5 657
Greece					
Metal	35	24	...	—	—
Italy					
Metal	581	845	1 247	1 405	1 308
Oxide	2 069	2 116	2 682	2 698	3 069
Netherlands					
Metal	111	82	51	72	31
Oxide	1 805	1 807	1 531	1 426	1 405
Portugal					
Metal	84	134	98	107	193
Spain					
Metal	171	203	683	959	924
Oxide	596	456	508	486	602
Austria					
Metal	45	64	49	68	101
Oxide	115	200	220	193	220
Sulphide	203	—	—	—	—
Finland					
Oxide	231	255	229	141	150
German Democratic Republic					
Oxide (b)	* 60	* 70	* 10	—	—
Norway					
Metal	10	12	45	40	13
Oxide	155	163	168	139	175
Sweden					
Metal	112	65	59	29	97
Oxide	652	561	563	502	446
Switzerland					
Metal	65	30	79	67	86
Oxide	464	316	390	408	534
Yugoslavia					
Metal	66	66	135	(d) 10	...
South Africa					
Metal	55	122	221	210	246
Canada					
Metal	123	243	182	110	149
Oxide	1 760	1 322	1 277	1 165	1 106
Mexico					
Metal	60	168	495	450	485
USA					
Ore	8 109	8 613	5 681	4 395	3 029
Liquated	163	...	...	...	...
Metal	17 733	10 557	13 940	13 502	15 100
Oxide	11 548	12 041	14 472	14 347	17 085
Argentina					
Ore	743	550	...	...	...
Brazil					
Ore	765	464	196	131	...
Metal	730	1 155	732	511	481
Oxide	71	85	102	116	...
Sulphide	24	53	60	65	...



**Imports of Antimony**

Country	1988	1989	1990	1991	1992
Colombia					
Metal	88	50	102	189	157
Venezuela					
Metal	103	172	39	35	84
India (a)					
Metal	1 283	933	1 505	907	682
Oxide	149	210	184	140	54
Japan					
Ores & concentrates	6 376	4 978	5 997	6 051	5 270
Metal	5 817	6 225	6 316	6 172	5 707
Oxide	6 202	7 268	6 299	8 645	8 623
Sulphide	134	208	184	219	274
Korea, Republic of					
Ores & concentrates	3 780	2 238	2 326	100	—
Metal	416	645	2 178	2 976	4 756
Oxide	416	527	505	958	690
Malaysia					
Metal	152	221	224	138	294
Pakistan (c)					
Metal	92	...	110	110	67
Taiwan					
Metal	580	1 242	1 954	2 443	1 866
Oxide	1 197	987	1 075	1 753	2 069
Thailand					
Ores & concentrates	6 045	5 167	7 956	2 665	2 238
Oxide	120	470	427	393	4 337
Australia					
Metal (c)	139	198	66	98	284
Oxide (c)	416	377	449	444	363

(a) Years ended 31 March following that stated

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

(c) Years ended 30 June of that stated

(d) Data for the Federal Republic of Yugoslavia only

## Arsenic

**Production of White Arsenic**

tonnes

Country	1988	1989	1990	1991	1992
Belgium	* 3 500	* 3 500	* 3 000	* 2 500	* 2 000
France	7 000	7 000	6 500	2 309	—
Germany, Federal Republic of	* 360	* 360	* 360	* 300	* 300
Portugal	214	199	247	256	* 150
Soviet Union	* 8 100	* 8 100	* 7 800	* 7 000	* 5 000
Sweden	* 10 000	* 10 000	* 7 000	* 2 500	—
Namibia (a)	2 984	2 399	1 637	1 804	2 300
Canada	2 825	1 825	485	236	* 250
Mexico (b)	6 816	7 327	6 348	6 497	5 667
Bolivia	191	338	300	463	633
Chile (c)	7 292	4 596	5 831	6 822	6 016
Peru	828	597	643	661	607
China	* 7 000	* 7 000	* 9 000	* 10 000	* 14 000
Japan	* 500	* 500	* 500	* 500	* 500
Philippines	5 046	4 652	5 092	* 5 000	* 5 000

## Note(s):

- (1) This table includes calculated trioxide equivalent of arsenic metal produced except where this would involve double counting
  - (2) In addition to the countries listed, Argentina, Austria, Czechoslovakia, Finland, Hungary, Spain, United Kingdom and Yugoslavia are believed to produce arsenic
- (a) Output of Tsumeb Corp. only, trioxide equivalent of reported black arsenic
- (b) Including trioxide equivalent of black arsenic
- (c) Exports

**Exports of Arsenic**

Country	1988	1989	1990	1991	1992
United Kingdom					
Metallic arsenic	29	30	92	38	112
Belgium-Luxembourg					
Metallic arsenic	0	7	4	...	96
France					
Metallic arsenic	128	1 058	784	1 576	1 375
Germany, Federal Republic of					
Metallic arsenic	9	2	2	74	9
Italy					
Metallic arsenic	91	...	...	12	11
Netherlands					
Metallic arsenic	24	—	27	12	25
Namibia					
White arsenic	2 890	2 331	2 055	1 785	2 419
Mexico					
White arsenic	* 3 500	...	...	...	...
USA					
Metallic arsenic	...	144	219	261	106
Bolivia					
White arsenic	191	338	300	463	633
Chile					
White arsenic	7 292	4 596	5 831	6 822	6 016
China					
White arsenic (b)	* 700	* 400	* 2 000	* 12 000	* 13 400
Metallic arsenic	(b)* 620	(b)* 880	(b)* 1 200	(b)* 1 200	1 760
Hong Kong					
White arsenic (a)	554	208	763	4 264	...
Korea, Republic of					
White arsenic	133	125	187	34	136

## Note(s):

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

(a) Re-exports

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

## Arsenic

**Imports of Arsenic**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Metallic arsenic	58	70	80	268	89
Belgium-Luxembourg					
Metallic arsenic	100	107	97	93	95
France					
Metallic arsenic	71	250	260	289	374
Germany, Federal Republic of					
Metallic arsenic	34	11	29	68	92
Italy					
Metallic arsenic	71	144	208	164	129
Netherlands					
Metallic arsenic	38	—	30	—	—
Spain					
Metallic arsenic	12	33	30	35	100
Austria					
Metallic arsenic	11	21	22	17	22
Norway					
Metallic arsenic	20	31	19	32	24
Sweden					
Metallic arsenic	143	5	29	7	11
Turkey					
White arsenic	95	...	...	...	...
Yugoslavia					
Metallic arsenic	39	67	27	(a) —	...
South Africa					
Metallic arsenic	28	28	31	44	...
USA					
White arsenic	28 056	28 347	26 257	27 142	30 672
Metallic arsenic	600	928	796	1 018	730
Argentina					
White arsenic	94	...	...	...	...
Brazil					
White arsenic	314	393	453	396	...
Uruguay					
White arsenic	51	...	...	42	—
Hong Kong					
White arsenic	348	326	658	4 676	...
India (b)					
White arsenic	527	266	211	504	690
Metallic arsenic	312	78	41	103	257
Indonesia					
White arsenic	93	43	2	160	139
Japan					
White arsenic	104	315	362	234	—
Metallic arsenic	9	30	95	336	12
Philippines					
White arsenic (d)	65	108	25	54	—
Taiwan					
White arsenic	511	165	245	223	411
Thailand					
White arsenic (d)	51	56	97	99	100
Australia					
White arsenic (c)	724	1 174	966	962	1 066
New Zealand (c)					
White arsenic (d)	1 242	857	1 215	1 073	1 009

## Note(s):

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

(a) Data for the Federal Republic of Yugoslavia only

(b) Years ended 31 March following that stated

(c) Years ended 30 June of that stated

(d) Including pentoxide and/or arsenic acid

## Production of Asbestos

Country	1988	1989	1990	1991	1992
Greece	71 114	73 300	65 993	4 788	28 592
Italy	94 549	44 348	3 800	—	—
Bulgaria	300	300	500	400	* 400
Czechoslovakia	196	147	...	...	...
Soviet Union	* 2 600 000	* 2 600 000	* 2 400 000	* 2 000 000	* 1 800 000
Turkey	500	—	—	—	—
Yugoslavia	17 030	9 111	6 578	(d) 5 289	* 1 700
Egypt (e)	166	312	367	450	375
South Africa					
Amosite	20 325	26 124	26 566	27 383	5 132
Crocidolite	11 885	23 689	31 521	31 551	24 476
Chrysotile	113 468	115 452	103 407	101 563	103 660
Swaziland					
Chrysotile	22 804	27 291	35 938	13 888	32 301
Zimbabwe					
Chrysotile	186 581	187 066	160 500	141 697	150 158
Canada					
Chrysotile	664 464	732 192	724 620	639 008	590 641
USA (a)	18 233	17 427	* 20 000	20 061	15 573
Argentina	2 328	225	275	270	215
Brazil	227 118	206 296	205 220	237 000	170 451
Colombia (c)	152 896	159 149	159 600	164 825	170 221
China	157 478	181 500	191 800	213 000	229 600
Cyprus					
Chrysotile	14 586	—	—	—	—
India					
Amphibole	31 123	36 502	26 053	24 094	* 25 000
Iran (b)	3 410	* 3 300	* 2 800	* 3 000	* 4 300
Japan					
Chrysotile	* 3 000	21 727	5 184	4 395	4 281
Korea, Republic of	2 428	2 361	1 534	—	2 308
World total	4 400 000	4 500 000	4 200 000	3 600 000	3 400 000

## Note(s):

- (1) In addition to the countries listed, Democratic P.R. of Korea and Romania are believed to produce asbestos
- (a) Sold or used by producers
- (b) Years ended 20 March following that stated
- (c) Crude
- (d) Excluding data from August to December for the Republic of Croatia
- (e) Years ended 30 June of that stated

**Exports of Unmanufactured Asbestos**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	289	274	291	111	118
Belgium-Luxembourg	551	222	310	103	57
France	557	411	101	386	535
Germany, Federal Republic of	1 193	293	608	2 184	523
Greece	53 906	57 465	56 963	27 728	22 554
Italy	50 936	37 302	4 893	1 156	1 686
Spain	302	76	127	86	187
Austria	28	247	675	48	35
Hungary	(a)* 1 800	1 934	5 784	(a)* 2 300	...
Soviet Union	(a)* 275 500	(a)* 257 400	(a)* 245 100	(c) 194 540	(c) 87 299
Yugoslavia	204	1 119	73	(b) 1	...
South Africa	169 091	171 892	178 750	147 504	131 109
Swaziland	22 565	...	19 292	...	...
Zimbabwe	197 597	...	172 206	138 838	...
Canada	684 905	707 816	649 485	686 053	600 577
USA	31 545	27 096	28 875	25 694	25 463
Brazil	41 568	58 711	53 142	67 765	67 428
China	571	1 889	7 135	612	2 303
Cyprus	15 776	56	—	—	1
Japan	72	50	142	147	116
Saudi Arabia	9 829	1 586	422	47	...
Singapore	263	250	2 181	700	387
of which: Re-exports	263	250	2 180	692	365

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

(b) Data for the Federal Republic of Yugoslavia only

(c) Data for the Russian Federation only

## Imports of Unmanufactured Asbestos

Country	1988	1989	1990	1991	1992
United Kingdom	24 266	19 702	16 022	11 248	10 269
Belgium-Luxembourg	20 507	24 139	26 514	24 601	13 364
Denmark	1 078	1 109	800	802	671
France	76 365	66 556	63 672	67 373	35 860
Germany, Federal Republic of	44 585	37 161	15 692	4 431	2 717
Greece	1 773	1 393	2 299	2 417	4 595
Irish Republic	5 752	4 529	5 533	4 590	3 841
Italy	46 315	60 594	63 438	58 906	36 205
Netherlands	6 594	9 148	6 252	6 263	2 663
Portugal	14 742	13 575	12 284	10 550	11 278
Spain	47 408	48 509	39 609	37 112	25 428
Albania (d)	* 600	* 1 200	* 250	...	...
Austria	14 858	15 750	6 167	1 613	3 836
Czechoslovakia	43 664	40 360	32 776	16 974	...
German Democratic Republic	55 200	41 200	...	—	—
Hungary	27 681	29 663	33 375	...	...
Poland	63 366	56 026	65 621	658	34 432
Romania (d)	* 3 100	* 4 400	* 3 000	* 1 500	* 1 800
Sweden	972	967	595	420	462
Switzerland	5 894	2 877	1 341	576	645
Turkey	38 058	35 581	26 259	31 392	25 072
Yugoslavia	38 456	36 613	28 323	(c) 2 091	...
Algeria	17 047	31 181	17 382	15 726	...
Burundi	285	342	68	383	...
Egypt	12 230	17 033	...	...	13 435
Ghana	3 750	...	...	...	...
Kenya	713	...	...	...	...
Morocco	5 691	3 944	7 157	7 411	5 310
Senegal	573	584	646	...	...
South Africa	12 903	12 150	12 354	14 934	9 699
Tunisia	5 825	6 181	7 179	6 695	8 925
Zambia	1 595	...	2 472	29 022	...
Canada	365	1 174	879	867	1 230
Cuba (d)	* 1 000	* 2 000	* 1 500	...	...
El Salvador	2 805	1 135	904	121	...
Guatemala	725	504	24	40	51
Honduras	2 277	1 375	416	...	...
Mexico	34 055	35 428	39 316	50 401	32 849
Panama	121	210	352	279	700
USA					
Crocidolite	1 252	593	835	282	472
Chrysotile	78 967	51 514	34 308	28 807	26 844
Other unmanufactured	5 108	3 199	6 188	5 676	4 286
Argentina	8 109	7 093	6 588	9 000	7 988
Bolivia	377	1 121	1 297	1 691	1 570
Brazil	5 566	6 570	11 160	12 476	15 837
Chile	10 557	8 831	7 749	9 567	13 364
Colombia	16 392	14 370	13 437	14 977	19 771
Ecuador	7 036	3 000	1 151	515	648
Peru	3 506	1 172	1 060	3 079	...
Uruguay	1 320	1 509	1 794	855	905
Venezuela	8 572	1 505	1 417	3 196	938
China	466	500	1 083	2 249	5 067
India (e)	104 033	91 062	93 165	77 773	49 999
Indonesia	18 698	20 986	28 599	32 213	30 604
Iran (a)	13 285	32 238	69 446	...	...
Israel	2 889	3 214	2 955	3 510	3 867
Japan	320 393	295 168	287 659	272 088	242 279
Korea, Republic of	87 470	77 475	74 549	88 753	95 476
Kuwait	...	1 597	1 140	...	...
Malaysia	21 050	28 276	...	27 798	25 964
Pakistan (b)	7 258	...	4 525	12 141	6 723
Philippines	2 074	2 111	1 869	2 070	1 956

**Imports of Unmanufactured Asbestos**

tonnes

Country	1988	1989	1990	1991	1992
Saudi Arabia	2 780	2 941	2 005	1 599	...
Singapore	1 701	1 733	4 741	2 035	1 525
Sri Lanka	9 898	...	7 002	1 126	6 498
Syria	...	...	1 548	...	...
Taiwan	32 680	29 464	15 165	8 080	10 075
Thailand	109 103	118 520	116 652	271 011	128 126
Australia (b)	2 072	2 128	1 706	1 342	1 533

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

(c) Data for the Federal Republic of Yugoslavia only

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

(e) Years ended 31 March following that stated



**Production of Barytes**

Country	1988	1989	1990	1991	1992
United Kingdom	76 253	70 026	67 551	85 505	76 723
Belgium	* 35 000	* 40 000	* 35 000	* 35 000	* 30 000
France	104 400	111 840	92 600	90 000	96 000
Germany, Federal Republic of	165 317	144 106	147 776	147 219	154 873
Greece	1 316	1 247	1 617	546	812
Irish Republic	83 500	82 000	101 000	94 300	70 600
Italy	77 273	60 331	44 345	86 542	86 000
Portugal	1 740	1 860	1 480	—	378
Spain	6 585	6 745	11 285	9 000	10 000
Bulgaria	171 798	269 357	192 881	* 180 000	* 150 000
Czechoslovakia	60 794	62 438	* 87 000	* 85 000	31 313
Finland	10 993	1 614	—	—	—
German Democratic Republic	92 100	89 400	* 85 000	—	—
Poland	53 000	57 900	25 300	18 300	* 18 000
Romania	* 40 000	25 250	* 20 000	* 26 000	* 25 000
Soviet Union	* 540 000	* 540 000	* 500 000	* 450 000	* 400 000
Turkey	405 017	425 519	366 995	260 596	264 300
Yugoslavia	23 350	23 558	40 329	(a)* 30 000	* 10 000
Algeria	42 797	49 166	52 288	44 361	51 159
Egypt	5 651	7 295	6 197	5 943	7 841
Morocco	321 562	403 177	363 580	434 660	401 599
South Africa	8 735	8 570	2 490	4 790	3 570
Tunisia	31 300	36 800	33 600	48 000	34 100
Zimbabwe	3 400	1 900	320	866	232
Canada	49 000	47 000	41 000	50 000	37 000
Guatemala	5 064	2 663	421	...	328
Mexico	534 954	324 739	305 716	203 975	443 782
USA (b)	404 000	290 000	430 000	448 000	326 000
Argentina	48 972	55 922	41 091	23 896	10 015
Brazil (d)	78 842	51 407	55 576	46 784	54 490
Chile	43 135	59 873	3 038	3 153	2 514
Colombia	4 550	5 460	5 380	9 288	9 380
Peru (e)	47 731	55 012	39 889	...	...
Afghanistan (c)	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
China	* 1 400 000	1 510 100	1 462 000	* 1 500 000	* 1 100 000
India	445 604	548 103	633 000	615 000	* 400 000
Iran (c)	44 309	59 660	77 423	191 238	* 200 000
Japan	...	22 886	18 336	18 944	15 119
Korea, Republic of	2 573	3 735	2 923	1 014	40
Malaysia	17 280	16 250	* 20 000	16 600	10 525
Myanmar	17 112	...	9 468	11 339	13 589
Pakistan	21 926	29 718	23 329	28 751	30 000
Philippines	349	348	500	* 500	* 500
Thailand	40 587	106 422	139 257	113 534	46 328
Australia	20 649	* 20 000	* 22 000	* 22 000	* 22 000
World total	5 600 000	5 700 000	5 600 000	5 500 000	4 700 000

## Note(s):

- (1) This table may include small quantities of witherite  
(2) In addition to the countries listed, Cuba is believed to produce barytes  
(a) Excluding data from August to December for the Republic of Croatia  
(b) Sold or used by producers  
(c) Years ended 20 March following that stated  
(d) Including beneficiated and directly shipped material  
(e) Exports

## Barytes

**Exports of Barytes**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	17 104	14 572	25 365	9 057	5 570
Belgium-Luxembourg	51 297	72 044	52 167	49 621	43 083
France	93 888	89 037	78 032	33	3
Germany, Federal Republic of	36 829	35 460	36 854	37 353	31 999
Irish Republic	69 969	74 767	100 772	95 927	54 805
Italy	10 018	8 740	9 948	8 599	4 070
Netherlands	80 545	75 756	73 133	87 869	78 364
Spain	2 334	2 822	2 762	2 705	4 338
Czechoslovakia (b)	* 500	* 700	* 4 200	* 9 800	...
Norway	10 574	3 699	16 563	8 047	3 992
Turkey	233 899	301 096	177 017	116 156	42 054
Yugoslavia	10 095	9 136	4 295	(e) —	...
Algeria	17 500	21 700	11 636	...	...
Morocco	398 090	358 909	373 857	444 939	334 172
Tunisia	3 851	1 116	930	20 407	24 057
Canada	9 312	6 214	9 945	12 080	17 253
Mexico	44 633	54 243	41 161	35 197	19 898
USA	288	17 120	12 511	43 687	12 566
Bolivia	—	—	300	1 363	368
Brazil	6 445	6 334	12 498	6 368	36
Chile	25 076	26 929	...	...	...
Peru	47 731	55 012	39 889	...	...
China	1 095 854	1 031 302	1 442 997	1 124 746	626 016
Hong Kong (c)	5 941	5 400	4 150	1 967	3 232
India (a)	433 068	413 120	304 150	392 070	38 129
Indonesia	2 178	7 695	5 246	1 902	7 345
Malaysia	1 438	1 268	...	278	11
Singapore	17 624	8 401	18 562	19 033	12 008
of which: Re-exports	6 835	5 806	8 195	8 679	9 381
Thailand	74 561	99 316	105 232	44 542	39 103
Australia (d)	436	80	1 179	275	1 324

## Note(s):

(1) Trade in barytes is reported under item 278.92 of the Standard International Trade Classification (Revision 3) and is described as 'barytes and witherite'. However, only small quantities of witherite are traded

(a) Years ended 31 March following that stated

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

(c) Re-exports

(d) Years ended 30 June of that stated

(e) Data for the Federal Republic of Yugoslavia only

## Imports of Barytes

Country	1988	1989	1990	1991	1992
United Kingdom	157 892	113 018	217 427	183 430	169 319
Belgium-Luxembourg	7 694	9 565	9 666	10 080	13 025
Denmark	13 030	7 934	16 917	29 920	26 773
France	34 250	45 440	42 058	53 855	18 740
Germany, Federal Republic of	216 526	218 489	232 327	169 577	200 656
Greece	1 375	1 071	2 249	1 432	537
Irish Republic	4 737	2 379	2 668	1 430	1 551
Italy	40 300	61 779	74 217	58 242	55 255
Netherlands	107 033	150 665	94 774	94 482	81 754
Portugal	627	1 428	1 042	2 704	1 562
Spain	10 657	17 492	23 121	24 706	17 062
Albania (b)	* 9 000	* 8 500	* 8 000	* 6 500	...
Austria	6 555	2 668	2 948	3 251	4 746
Finland	1 845	2 036	1 864	1 407	1 667
Hungary	15 958	9 753	91	...	4 706
Norway	162 357	219 642	194 465	216 697	104 044
Poland	(b)* 5 100	7 616	14 053	10 234	...
Romania (b)	...	...	* 13 300	* 14 200	...
Soviet Union (b)	* 135 000	* 209 200	* 123 300	* 119 700	* 20 000
Sweden	5 440	5 016	3 809	3 215	4 503
Switzerland	3 068	4 228	1 548	1 289	2 318
Yugoslavia	2 979	7 069	181	(c) 20	...
Gabon	...	...	2 802	...	...
Ivory Coast	1 071	...	...	...	...
Kenya	2 006	...	...	...	...
South Africa	2 761	2 041	1 542	1 280	...
Canada	4 736	5 577	7 995	12 493	11 908
Mexico	81	233	36 083	85 601	15 462
Trinidad & Tobago	28 684	48 304	20 687	31 856	...
USA	1 146 422	1 034 150	1 044 301	858 908	353 682
Argentina	212	52	32	...	812
Colombia	12 093	16 029	3 070	5 126	30 315
Ecuador	91	51	1 901	95	601
Venezuela	92 731	84 105	80 738	134 664	120 492
Abu Dhabi	16 993	...	25 986	46 389	34 965
Hong Kong	6 450	6 703	4 783	1 939	2 314
Indonesia	33 197	61 484	82 394	67 580	41 396
Japan	91 355	129 383	115 684	106 038	92 692
Korea, Republic of	3 533	4 148	47 839	39 104	40 557
Malaysia	737	700	...	1 392	1 485
Philippines	1 298	757	366	846	1 209
Saudi Arabia	567	3 922	4 829	3 519	...
Singapore	14 488	10 056	30 830	30 998	20 855
Syria	...	...	13 605	...	...
Taiwan	1 619	1 719	11 960	5 832	11 438
Thailand	0	37	1 037	4 136	10 152
Australia (a)	1 222	14 164	10 151	12 832	3 720
New Zealand (a)	3 279	1 880	1 929	957	2 236

## Note(s):

(1) Trade in barytes is reported under item 278.92 of the Standard International Trade Classification (Revision 3) 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

(c) Data for the Federal Republic of Yugoslavia only

**Production of Bentonite and Fuller's Earth**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Fuller's earth (a)	213 000	210 000	205 000	188 800	189 400
France					
Bentonite	* 8 000	* 8 000	* 10 000	* 10 000	* 10 000
Germany, Federal Republic of					
Bentonite	197 000	200 000	223 000	224 000	257 000
Fuller's earth	670 000	636 000	653 000	708 000	673 000
Greece					
Bentonite	730 501	1 096 177	592 684	600 286	600 083
Italy					
Bentonite	321 121	234 212	228 153	390 977	* 360 000
Fuller's earth	38 955	43 550	45 800	23 400	* 23 000
Spain					
Bentonite	103 753	141 283	151 226	* 145 000	* 150 000
Attapulgit	43 585	23 990	* 25 000	* 25 000	* 25 000
Sepiolite	383 649	384 449	* 392 000	* 375 000	* 375 000
Czechoslovakia					
Bentonite	157 284	156 719	143 130	84 918	...
Hungary					
Bentonite	65 000	58 000	25 000	18 000	23 000
Poland					
Bentonite	100 000	93 098	68 692	34 662	17 654
Romania					
Bentonite	* 180 000	* 180 000	* 150 000	* 150 000	* 120 000
Soviet Union					
Bentonite	* 2 900 000	* 2 900 000	* 2 700 000	* 2 400 000	* 2 000 000
Turkey					
Bentonite	80 218	93 256	97 464	123 928	439 126
Yugoslavia					
Bentonite	125 069	139 693	102 681	(d)* 75 000	* 98 000
Algeria					
Bentonite	26 000	30 028	33 708	25 806	31 019
Fuller's earth	* 3 500	8 783	7 840	4 526	3 656
Egypt (e)					
Bentonite	3 166	3 629	4 904	5 916	4 185
Morocco					
Bentonite	3 445	11 000	11 000	7 000	7 273
Fuller's earth (f)	52 697	40 820	45 230	37 552	38 098
Mozambique					
Bentonite	986	126	—	660	—
Senegal					
Attapulgit	323 470	98 882	114 610	99 377	148 000
South Africa					
Bentonite	66 750	62 987	66 059	64 600	43 977
Attapulgit	7 161	6 609	7 628	8 109	8 235
Canada					
Bentonite	88 800	...	...	...	...
Guatemala					
Bentonite	976	8 236	* 9 000	12 000	7 002
Mexico					
Bentonite	163 916	123 927	144 895	145 347	135 993
Fuller's earth	37 226	24 603	29 863	41 078	41 111
Nicaragua					
Bentonite	3 851	1 855	2 082	2 295	1 277
USA					
Bentonite (c)	2 870 971	3 112 365	3 473 595	3 432 000	3 354 000
Fuller's earth (c)	1 792 232	1 881 511	2 307 475	2 740 000	2 413 000
Argentina					
Bentonite	173 930	89 189	107 035	108 782	97 531
Fuller's earth	* 2 000	* 2 000	* 2 000	* 2 000	* 1 500
Brazil					
Bentonite	147 149	113 720	105 809	140 051	197 385
Colombia					
Bentonite	2 458	2 950	3 100	3 178	3 258
Peru					
Bentonite	50 741	* 40 000	* 45 000	* 55 300	* 14 500

**Production of Bentonite and Fuller's Earth**

Country	1988	1989	1990	1991	1992
Cyprus					
Bentonite	90 300	59 744	81 800	58 400	58 840
India (h)					
Bentonite	226 000	246 000	242 000	291 000	...
Fuller's earth	26 000	35 000	20 000	31 000	...
Indonesia					
Bentonite	8 266	3 862	5 914	21 512	17 960
Iran (g)					
Bentonite	37 028	31 547	51 096	40 452	62 000
Japan					
Bentonite	455 137	526 131	549 414	554 145	534 445
Korea, Republic of					
Bentonite	16 600	24 400	28 900	35 100	37 100
Myanmar					
Bentonite	203	...	416	684	693
Pakistan					
Bentonite	4 370	5 466	4 213	5 106	* 6 000
Fuller's earth	15 282	15 436	16 489	22 075	* 20 000
Philippines					
Bentonite	2 030	5 961	14 607	42 066	31 896
Australia					
Bentonite	35 671	* 35 000	* 35 000	* 35 000	* 35 000
Fuller's earth	* 15 000	* 15 000	* 20 000	* 15 000	* 15 000
New Zealand					
Bentonite	1 255	1 342	1 393	—	—
World total Bentonite	9 450 000	9 930 000	9 600 000	9 430 000	9 220 000
World total Fuller's earth (b)	3 620 000	3 430 000	3 890 000	4 320 000	4 010 000

## Note(s):

- (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
- (2) Calcium bentonite can be converted to sodium bentonite by a sodium-exchange process
- (3) 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
- (4) In addition to the countries listed, Austria, Bulgaria, China and Tanzania are 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) Excluding data from August to December for the Republic of Croatia
- (e) Years ended 30 June of that stated
- (f) Smectite
- (g) Years ended 20 March following that stated
- (h) Years ended 31 March following that stated

## Bentonite and Fuller's Earth

**Exports of Bentonite and Fuller's Earth**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Bentonite	39 027	49 012	62 097	52 093	55 539
Fuller's earth	31 091	33 663	33 747	27 794	32 029
Belgium-Luxembourg					
Bentonite	453	553	1 498	12 461	4 324
Fuller's earth	547	1 220	1 758	1 819	678
France					
Bentonite	9 006	19 315	23 044	20 517	18 201
Fuller's earth	3 971	4 113	5 425	3 803	4 046
Germany, Federal Republic of					
Bentonite	43 388	59 087	55 326	63 502	88 375
Fuller's earth	4 735	2 970	1 421	369	533
Greece					
Bentonite	391 781	85 390	73 045	100 938	111 980
Italy					
Bentonite	37 919	59 523	42 954	38 880	19 997
Netherlands					
Bentonite	39 936	35 010	40 936	35 805	42 822
Fuller's earth	—	502	670	1 140	3 192
Spain					
Bentonite	49 814	59 789	65 850	45 527	60 582
Sepiolite	486 464	505 231	511 769	541 328	530 567
Fuller's earth	3 956	6 087	7 624	7 429	7 746
Austria					
Bentonite	34	1 114	782	1 132	2 136
Czechoslovakia					
Bentonite (c)	* 500	* 1 200	* 8 200	* 9 100	* 9 500
Hungary					
Bentonite	12 496	...	912	...	950
Turkey					
Bentonite	26 227	40 248	29 401	29 808	22 915
Yugoslavia					
Bentonite	2 792	11 633	7 521	(e) 229	...
Morocco					
Bentonite	3 000	5 500	17 600	4 000	4 000
Fuller's earth (a)	75 000	76 200	89 100	58 074	...
Senegal					
Fuller's earth (b)	71 714	10 350	...	...	...
South Africa					
Bentonite	808	505	878	—	—
Canada					
Bentonite	1 120	2 398	1 170	1 139	1 605
Mexico					
Bentonite	3 075	5 345	1 126	2 410	3 261
USA					
Bentonite	569 071	671 437	698 904	661 921	606 824
Fuller's earth	112 265	96 897	46 901	27 488	27 709
Argentina					
Bentonite	6 375	8 753	...	13 200	15 369
Colombia					
Bentonite	796	395	455	1 125	1 428
China					
Bentonite	(c)* 8 600	(c)* 18 900	(c)* 19 300	(c)* 24 300	43 488
Fuller's earth	(c)* 1 800	(c)* 200	(c)* 1 900	(c)* 2 000	1 005
Cyprus					
Bentonite	...	5 936	12 732	12 088	18 768
India (d)					
Bentonite	68 472	63 995	49 011	76 857	112 543
Fuller's earth	382	592	109	357	68
Indonesia					
Bentonite	5 544	12 114	7 708	14 453	14 288
Fuller's earth	1 500	—	688	850	1 878

**Exports of Bentonite and Fuller's Earth**

Country	1988	1989	1990	1991	1992
Korea, Republic of Bentonite	4 608	3 727	6 119	5 660	5 184
Singapore Bentonite	19 365	21 327	23 284	21 503	16 262
of which: Re-exports	19 365	21 327	20 472	15 275	11 368
Fuller's earth (f)	6 179	3 636	2 556	4 556	1 863
Australia Bentonite (g)	...	5 803	21 325	8 609	14 174

## Note(s):

- (1) See notes 1-3 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 3) 278.27
  - (3) Activated bentonite and fuller's earth, Standard International Trade Classification (Revision 3) 598.65 are excluded
  - (4) Some countries are believed to include sodium-exchanged bentonite, often referred to as activated bentonite, under Standard International Trade Classification (Revision 3) 598.65, e.g. Italy
- (a) Smectite
  - (b) Attapulgite
  - (c) BGS estimates, based on known imports into certain countries
  - (d) Years ended 31 March following that stated
  - (e) Data for the Federal Republic of Yugoslavia only
  - (f) Re-exports
  - (g) Years ended 30 June of that stated

**Imports of Bentonite and Fuller's Earth**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Bentonite	115 114	117 483	154 133	137 444	134 444
Fuller's earth	3 068	3 582	6 114	6 379	4 921
Belgium-Luxembourg					
Bentonite	37 102	28 112	31 876	24 040	23 763
Fuller's earth	481	307	1 132	884	1 846
Denmark					
Bentonite	7 884	10 280	12 306	13 214	14 580
Fuller's earth	691	599	738	3 069	1 500
France					
Bentonite	114 725	125 749	127 278	117 588	104 262
Fuller's earth	1 142	2 618	5 966	2 744	958
Germany, Federal Republic of					
Bentonite	187 642	252 864	225 056	231 644	291 128
Fuller's earth	11 672	14 875	13 067	12 657	18 333
Greece					
Bentonite	353	415	581	315	377
Italy					
Bentonite	38 493	72 727	84 091	76 651	77 254
Fuller's earth	3 631	5 167	6 801	7 926	6 430
Netherlands					
Bentonite	85 396	99 267	108 305	73 327	144 735
Fuller's earth	11 534	8 283	5 428	5 053	5 650
Portugal					
Bentonite	16 259	12 963	12 237	9 736	9 668
Fuller's earth	201	18	177	...	—
Spain					
Bentonite	35 913	34 675	44 776	34 064	20 260
Fuller's earth	62	705	27	607	93
Austria					
Bentonite	12 620	15 042	12 722	20 662	30 822
Fuller's earth	538	604	795	627	728
Finland					
Bentonite	9 412	5 674	7 841	7 583	6 273
German Democratic Republic					
Bentonite (c)	* 12 400	* 11 000	* 10 000	—	—
Fuller's earth (c)	* 900	* 1 500	* 1 000	—	—
Norway					
Bentonite	23 362	16 778	16 616	16 525	9 660
Fuller's earth	197	126	544	649	550
Poland					
Bentonite (c)	* 17 700	* 14 500	* 11 900	* 6 400	* 8 400
Sweden					
Bentonite	7 693	9 961	11 810	10 576	10 656
Fuller's earth	7 570	6 595	6 435	6 717	5 994
Switzerland					
Bentonite	8 566	12 288	10 668	14 692	18 524
Fuller's earth	609	1 329	1 624	1 507	1 987
Algeria					
Bentonite (b)	0	85	4 023	...	...
Senegal					
Bentonite	603	1 570	...	...	...
South Africa					
Bentonite	260	593	557	942	1 040
Tunisia					
Bentonite	1 102	1 562	2 226	1 513	3 799
Canada					
Bentonite	334 872	294 267	229 959	268 612	255 810
Fuller's earth	6 477	7 377	6 643	6 138	7 576
Mexico					
Bentonite	2 950	2 900	4 670	4 970	4 357
USA					
Bentonite	3 200	2 427	2 045	2 207	2 527
Fuller's earth	487	16	69	82	160
Brazil					
Bentonite	16 989	31 595	30 499	26 676	18 206



**Imports of Bentonite and Fuller's Earth**

Country	1988	1989	1990	1991	1992
Chile					
Bentonite	3 843	10 065	4 771	5 337	8 007
Colombia					
Bentonite	9 074	3 743	3 745	10 221	1 461
Peru					
Bentonite	294	583	703	383	...
Uruguay					
Bentonite	221	...	...	479	388
Venezuela					
Bentonite	12 447	3 947	13 551	13 245	14 274
Indonesia					
Bentonite	13 532	11 707	30 462	12 518	9 951
Israel					
Bentonite (c)	* 3 000	* 1 900	* 500	* 500	* 500
Japan					
Bentonite	128 280	169 298	202 908	236 906	169 560
Fuller's earth	4 781	6 321	8 776	8 243	8 233
Korea, Republic of					
Bentonite	10 728	6 892	11 549	15 102	17 238
Kuwait					
Bentonite	37 742	17 596	21 395	...	5 148
Malaysia					
Bentonite	27 278	64 748	...	53 361	80 442
Fuller's earth	14 180	7 402	...	7 424	8 250
Pakistan (a)	15 854	...	2 871	4 783	3 456
Philippines	4 601	7 461	8 500	6 206	8 962
Singapore					
Bentonite	44 902	27 750	54 723	31 113	34 998
Fuller's earth	5 848	4 531	22 937	4 744	1 432
Taiwan					
Bentonite	23 712	26 533	49 133	34 227	35 436
Thailand					
Bentonite	11 474	12 043	32 390	22 407	31 779
Australia					
Bentonite (a)	15 193	21 344	28 476	28 348	12 529

## Note(s):

- (1) See notes 1-3 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 3) 278.27
  - (3) Activated bentonite and fuller's earth, Standard International Trade Classification (Revision 3) 598.65 are excluded
  - (4) Some countries are believed to include sodium-exchanged bentonite, often referred to as activated bentonite, under Standard International Trade Classification (Revision 3) 598.65, 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

## Bismuth

**Mine Production of Bismuth**

tonnes (metal content)

Country	1988	1989	1990	1991	1992
France	100	110	70	—	—
Italy	32	46	34	45	20
Romania	* 65	* 65	* 40	* 55	* 50
Soviet Union	* 85	* 85	* 80	* 70	* 65
Yugoslavia	23	40	9	(b) 22	* 60
Canada	212	205	87	65	224
Mexico	958	883	733	651	807
USA	* 100	* 100	* 100	* 100	* 100
Bolivia	13	41	68	—	—
Peru (a)	386	687	* 555	* 610	* 550
China	* 750	786	1 058	1 040	820
Japan	524	502	442	461	530
Korea, Republic of	132	96	79	42	7
Australia	* 400	* 400	* 400	* 400	* 400
World total	3 800	4 000	3 800	3 600	3 600

## Note(s):

- (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
- (2) 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
- (3) In addition to the countries listed, Belgium, Brazil, Bulgaria, German Democratic Republic and Namibia are believed to produce bismuth
- (a) Including Bi content of bullion and concentrates exported
- (b) Excluding data from August to December for the Republic of Croatia

**Exports of Bismuth**

Country	1988	1989	1990	1991	1992
United Kingdom					
Metal	566	413	598	473	574
Belgium-Luxembourg					
Compounds	25	3	21	52	136
France					
Compounds	163	113	68	86	160
Metal	73	88	78	18	33
Germany, Federal Republic of					
Compounds	104	24	56	39	70
Metal	144	168	75	107	150
Italy					
Metal	23	31	19	7	18
Netherlands					
Metal	30	18	46	2	8
Spain					
Compounds	32	36	33	30	14
Canada					
Metal	103	28	130	49	41
Mexico					
Metal	1 514	1 174	871	1 567	1 783
USA					
Metal	154	124	123	77	101
Peru					
Metal	425	424	...	...	...
China					
Metal	(a)* 530	(a)* 300	609	961	1 259
Japan					
Metal	68	16	35	13	21
Korea, Republic of					
Metal	180	161	129	90	49
Australia					
Metal (b)	...	380	176	41	—

## Note(s):

(1) The compounds recorded in this table are bismuth carbonate and/or bismuth nitrate

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

(b) Years ended 30 June of that stated

## Bismuth

**Imports of Bismuth**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Compounds	48	4	3	16	0
Metal	678	414	449	572	695
France					
Compounds	59	59	13	1	3
Metal	427	273	199	311	307
Germany, Federal Republic of					
Compounds	9	11	5	4	93
Metal	659	602	635	847	912
Italy					
Compounds	14	17	11	9	31
Metal	96	80	144	107	88
Netherlands					
Compounds	246	40	28	136	242
Metal	28	25	41	26	30
Spain					
Metal	77	73	59	55	97
Switzerland					
Metal	28	12	15	11	7
Yugoslavia					
Metal	47	22	49	(c) —	...
USA					
Metal	1 749	1 880	1 612	1 410	1 621
Argentina					
Metal	28	...	...	...	...
Brazil					
Compounds (a)	6	10	4	9	...
Metal	55	88	63	57	65
India (b)					
Metal	32	28	32	13	36
Japan					
Metal	326	408	180	181	74

## Note(s):

(1) The compounds recorded in this table are bismuth carbonate and/or bismuth nitrate

(a) Also includes oxide and chloride

(b) Years ended 31 March following that stated

(c) Data for the Federal Republic of Yugoslavia only

**Production of Bromine**

Country	1988	1989	1990	1991	1992
United Kingdom	27 128 000	29 907 000	26 800 000	29 323 000	29 903 000
France	* 18 000 000	* 18 000 000	3 100 000	3 200 000	3 200 000
Germany, Federal Republic of	2 000 000	2 000 000	1 500 000	* 1 500 000	* 1 500 000
Italy	* 450 000	* 400 000	* 400 000	* 400 000	* 300 000
Spain	* 300 000	* 300 000	* 300 000	* 300 000	* 250 000
Soviet Union	* 25 000 000	* 25 000 000	* 25 000 000	* 24 000 000	* 24 000 000
USA (a)	163 300 000	174 600 000	177 000 000	170 000 000	171 000 000
India	1 241 900	1 272 200	1 505 000	2 047 000	2 039 000
Israel	118 000 000	134 725 000	130 000 000	135 000 000	135 000 000
Japan	* 15 000 000	* 15 000 000	* 15 000 000	* 15 000 000	* 15 000 000
World total	370 400 000	401 200 000	380 600 000	380 800 000	382 200 000

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

## Bromine

**Exports of Bromine**

kilograms

Country	1988	1989	1990	1991	1992
United Kingdom	2 146 979	2 690 302	3 161 019	4 386 570	2 765 540
Belgium-Luxembourg	17 200	33 200	52 800	17 800	—
Germany, Federal Republic of	7 100	69 000	22 700	132 400	95 200
Italy	7 000	12 000	25 000	500	17 000
Netherlands	724 000	691 000	586 000	550 000	457 000
German Democratic Republic (a)	* 2 416 000	* 1 956 000	* 1 274 000	—	—
USA	4 328 000	3 557 291	2 943 290	5 685 761	5 455 675
Israel	(a)* 32 200 000	43 119 000	31 885 000	44 673 000	(a)* 28 977 000

## Note(s):

(1) 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

Bromine  
kilograms

Country	1988	1989	1990	1991	1992
United Kingdom	9 725 931	9 592 918	7 196 864	7 424 357	7 935 040
Belgium-Luxembourg	2 121 700	2 273 200	1 801 800	1 528 100	2 079 000
Denmark	52 000	95 400	24 100	13 100	400
France	6 967 000	8 314 000	7 514 000	7 626 000	6 722 000
Germany, Federal Republic of	6 677 300	6 917 100	5 487 100	4 434 000	3 080 800
Irish Republic	...	183 000	280 279	298 741	152 553
Italy	2 232 500	1 787 000	1 439 000	474 300	377 200
Netherlands	9 332 000	8 125 000	10 640 000	8 622 000	10 269 000
Spain	107 000	59 000	85 000	58 000	74 000
Hungary	521 000	...	...	...	...
Yugoslavia	54 000	12 000	6 000	(d) —	...
South Africa	59 781	28 740	20 930	12 908	...
Canada	1 331 828	1 417 596	1 505 136	1 386 971	1 328 473
Mexico	* 180 000	(c)* 350 000	(c)* 180 000	(c)* 190 000	(c)* 220 000
USA	256 696	459 881	755 631	145 638	855 223
Argentina	20 000	...	...	...	...
Brazil	30 397	50 361	11 539	45 368	...
Colombia	19 078	62	34	...	...
Peru	339	...	843	177	...
Venezuela	319	3 445	...	...	...
India (a)	469 792	1 102 674	118 330	203 696	844 595
Israel (c)	* 91 300	* 90 800	* 98 600	* 7 000	—
Korea, Republic of	285 682	192 125	195 761	471 900	914 279
Pakistan (b)	4 032	...	15 991	330	5 629
Taiwan	80	259	20 517	112 647	88 843

Note(s):

- (1) 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
- (b) Years ended 30 June of that stated
- (c) BGS estimates, based on known exports from certain countries
- (d) Data for the Federal Republic of Yugoslavia only

## Cadmium

**Production of Cadmium**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	399	395	438	449	383
Belgium	1 836	1 761	1 956	1 807	1 560
France (a)	558	790	780	1 100	830
Germany, Federal Republic of (a)	1 156	1 208	973	1 048	941
Italy	705	775	691	658	742
Netherlands	655	505	590	539	612
Spain	438	361	355	344	361
Austria	26	49	44	19	—
Bulgaria	351	390	309	232	194
Finland	808	569	484	471	580
German Democratic Republic	30	26	17	—	—
Norway	169	207	286	237	249
Poland	642	485	373	364	132
Romania	* 27	186	—	—	—
Soviet Union	* 1 970	* 1 880	* 1 970	* 1 500	* 1 320
Turkey	22	54	46	22	21
Yugoslavia	405	475	362	* 300	* 250
Algeria	55	46	65	78	56
Namibia	106	88	69	67	29
Zaire	281	224	127	123	84
Canada (a)	1 694	1 620	1 470	1 829	1 963
Mexico (b)	1 553	1 316	1 280	1 126	1 146
USA (a)	1 885	1 550	1 678	1 676	1 620
Argentina	54	60	55	49	37
Brazil	161	190	135	* 140	135
Peru	316	497	378	526	399
China	* 840	1 165	1 129	1 222	1 138
India	237	275	277	274	311
Japan	2 614	2 694	2 451	2 889	2 986
Korea, Dem. P.R. of	* 260	* 190	* 180	* 200	* 200
Korea, Republic of	* 490	* 470	568	395	789
Thailand	—	—	—	373	635
Australia	855	696	648	1 076	1 001
World total	21 600	21 200	20 200	21 100	20 700

## Note(s):

(1) Data in this table excludes secondary metal unless otherwise stated

(a) Including cadmium sponge and/or secondary metal

(b) Including oxides



**Exports of Cadmium**

Country	1988	1989	1990	1991	1992
United Kingdom	147	570	621	210	308
Belgium-Luxembourg					
Metal	1 032	1 643	1 168	1 390	1 445
Sulphide	56	162	60	49	30
France	544	679	377	721	841
Italy	560	741	450	686	584
Netherlands	703	717	500	513	436
Spain	438	254	155	318	...
Austria	20	120	35	20	0
Bulgaria (b)	* 40	* 110	* 40	* 190	* 250
Finland	784	591	591	407	586
Hungary	...	147	144	...	...
Norway	140	229	287	232	186
Poland	...	122	140	—	...
Soviet Union	* 100	* 100	...	...	...
Yugoslavia	125	318	33	(a) —	...
Algeria	30	40	58	...	...
Namibia	107	73	45	69	38
Zaire	* 240	* 250	* 110	...	...
Canada	1 113	1 433	1 283	1 452	1 581
Mexico	1 408	1 061	691	521	590
USA	626	790	702	460	213
Peru	200	299	...	...	...
China	(b)* 700	(b)* 430	568	475	125
Japan	158	141	255	13	30
Korea, Republic of	731	828	874	669	804
Australia (c)	1 103	1 237	311	701	1 076

(a) Data for the Federal Republic of Yugoslavia only

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

(c) Years ended 30 June of that stated

## Cadmium

**Imports of Cadmium**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	1 157	943	971	696	828
Belgium-Luxembourg					
Metal	2 096	1 991	1 925	2 221	2 188
Sulphide	6	29	31	45	174
Denmark					
Sulphide	82	157	—	1	—
France					
Metal	1 180	1 746	1 750	1 546	1 293
Sulphide	76	70	69	41	49
Germany, Federal Republic of					
Metal	658	791	530	482	613
Sulphide	59	8	4	9	7
Italy					
Metal	84	64	71	70	88
Sulphide	6	8	4	8	50
Netherlands					
Metal	102	65	32	5	—
Sulphide	7	7	2	28	49
Spain	65	105	69	85	93
Czechoslovakia	93	137	134	...	...
Finland	68	0	1	0	13
German Democratic Republic (a)	* 50	* 10	* 30	—	—
Sweden	177	181	252	157	242
USA	2 482	2 787	1 740	2 037	1 921
Brazil					
Metal	22	98	56	80	24
Oxide	74	85	82	131	...
India (b)	2	24	190	141	279
Japan	2 546	2 908	2 199	3 568	2 796
Pakistan (c)					
Sulphide	15	...	49	...	...
Taiwan					
Oxide	282	274	254	258	399

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

(b) Years ended 31 March following that stated

(c) Years ended 30 June of that stated

## Production of Chromium Ores and Concentrates

Country	1988	1989	1990	1991	1992
Greece	49 335	47 324	22 400	20 108	—
Albania	1 109 000	1 101 000	1 011 000	586 700	322 000
Finland (b)	536 309	573 715	461 277	458 000	499 325
Soviet Union	3 700 000	3 800 000	* 3 800 000	* 3 800 000	* 3 700 000
Turkey (a)	851 425	1 415 038	1 089 942	1 381 633	758 700
Madagascar	171 484	165 397	122 276	145 583	150 000
South Africa	4 244 632	4 950 854	4 618 000	5 100 299	3 363 481
Sudan	25 000	30 000	35 000	* 25 000	* 20 000
Zimbabwe	561 630	627 500	562 600	566 200	521 600
Cuba	52 200	50 600	* 50 000	* 50 000	* 50 000
Brazil (a)	229 912	270 198	171 081	* 250 000	* 350 000
India	820 863	1 002 659	939 000	1 087 000	1 312 000
Iran (b) (c)	60 289	72 628	77 189	90 119	130 265
Japan	9 508	11 674	8 075	* 8 000	* 8 000
Oman	* 4 000	12 810	...	...	1 764
Pakistan	4 924	27 105	18 191	31 474	22 852
Philippines (b)	170 898	247 705	263 382	210 397	113 297
Vietnam	2 600	4 000	4 600	* 3 500	* 3 500
New Caledonia	70 341	60 281	6 223	—	8 169
World total	12 700 000	14 500 000	13 300 000	13 800 000	11 300 000

## Note(s):

(1) In addition to the countries listed, Bulgaria, China, Democratic P.R. of Korea and Thailand are believed to produce chromite

(a) Including beneficiated and direct shipping ore

(b) Including foundry sand and/or lumpy ore

(c) Years ended 20 March following that stated

## Chromium

**Exports of Chromium**

tonnes

Country	1988	1989	1990	1991	1992
<b>United Kingdom</b>					
Ores & concentrates	207	64	36	75	442
Metal	3 469	3 409	3 301	3 787	2 575
<b>Belgium-Luxembourg</b>					
Ores & concentrates	1 484	290	12 484	16 491	16 104
Metal	133	82	65	11	31
<b>France</b>					
Ores & concentrates	3 113	9 676	2 395	4 089	1 980
Metal	2 205	2 358	3 900	2 674	2 065
<b>Germany, Federal Republic of</b>					
Ores & concentrates	14 419	16 237	13 466	18 221	19 064
Metal	189	364	1 184	1 798	343
<b>Greece</b>					
Ores & concentrates	6 484	17 510	7 967	8 539	3 895
<b>Italy</b>					
Ores & concentrates	13 475	2 999	3 940	1 960	2 718
Metal	28	817	157	69	60
<b>Netherlands</b>					
Ores & concentrates	31 902	39 777	37 703	37 183	30 653
Metal	5	65	50	44	13
<b>Albania</b>					
Ores & concentrates	669 700	620 800	468 800	(b)* 201 900	(b)* 146 900
<b>Austria</b>					
Ores & concentrates	213	94	131	140	72
<b>Finland</b>					
Ores & concentrates	200 693	109 976	9 106	2 008	1 405
<b>Soviet Union</b>					
Ores & concentrates	632 000	741 000	587 000	(c) 350 673	(c) —
Metal (b)	* 300	* 800	* 1 900	* 3 200	* 800
<b>Turkey</b>					
Ores & concentrates	843 116	882 627	676 499	577 358	447 574
<b>Yugoslavia</b>					
Ores & concentrates	2 459	3 124	—	—	...
<b>Madagascar</b>					
Ores & concentrates	148 500	152 591	125 558	129 342	108 450
<b>South Africa</b>					
Ores & concentrates	1 461 713	1 541 011	1 200 919	1 010 101	1 087 217
<b>USA</b>					
Ores & concentrates	4 964	42 820	10 373	8 808	7 149
of which: Re-exports	1 033	2 375	4 052	—	85
Metal	322	1 503	345	440	304
<b>Brazil</b>					
Ores & concentrates	29 931	41 863	34 995	59 253	68 000
<b>China</b>					
Ores & concentrates	...	...	2 448	2 042	6 705
Metal	(b)* 1 200	(b)* 1 100	(b)* 2 500	(b)* 1 500	6 720
<b>India (a)</b>					
Ores & concentrates	588 700	234 219	179 580	397 547	395 946
<b>Iran</b>					
Ores & concentrates (b)	* 7 500	* 30 500	* 30 700	* 67 400	* 112 700
<b>Japan</b>					
Ores & concentrates	298	2 429	495	356	195
Metal	2 014	2 322	2 822	2 020	2 315
<b>Philippines</b>					
Ores & concentrates	163 499	201 683	198 366	197 764	143 777
<b>Singapore</b>					
Ores & concentrates (d)	4 016	633	3 364	636	5 516

**Exports of Chromium**

Country	1988	1989	1990	1991	1992
New Caledonia Ores & concentrates	71 646	64 651	6 782	—	9 624

## Note(s):

(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Years ended 31 March following that stated

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

(c) Data for the Russian Federation only

(d) Re-exports

## Chromium

**Imports of Chromium**

tonnes

Country	1988	1989	1990	1991	1992
<b>United Kingdom</b>					
Ores & concentrates	199 043	170 461	154 919	80 278	113 521
Metal	391	709	854	910	987
<b>Belgium-Luxembourg</b>					
Ores & concentrates	3 404	3 861	19 926	28 515	20 448
Metal	374	392	570	465	538
<b>Denmark</b>					
Ores & concentrates	697	6 481	14 770	2 878	1 035
<b>France</b>					
Ores & concentrates	80 910	81 288	88 144	77 035	46 752
Metal	264	506	1 047	1 557	721
<b>Germany, Federal Republic of</b>					
Ores & concentrates	272 541	343 779	245 513	276 511	231 151
Metal	1 347	2 147	3 236	3 207	1 495
<b>Greece</b>					
Ores & concentrates	42 600	73 812	47 284	39 575	...
<b>Italy</b>					
Ores & concentrates	304 149	383 158	179 711	159 914	163 614
Metal	376	289	649	478	380
<b>Netherlands</b>					
Ores & concentrates	34 477	42 777	54 066	34 378	30 801
Metal	155	137	261	175	124
<b>Portugal</b>					
Ores & concentrates	1 136	1 055	1 571	1 922	1 589
<b>Spain</b>					
Ores & concentrates	104 254	87 766	54 695	40 115	11 135
Metal	80	104	110	117	127
<b>Austria</b>					
Ores & concentrates	58 712	60 936	43 752	47 997	37 190
Metal	170	112	177	130	78
<b>Czechoslovakia</b>					
Ores & concentrates	171 000	171 000	170 000	...	...
<b>German Democratic Republic</b>					
Ores & concentrates (b)	47 400	41 600	...	—	—
<b>Hungary</b>					
Ores & concentrates	(a)* 27 500	18 315	16 169	...	...
<b>Norway</b>					
Ores & concentrates	558	64 663	159 457	338 719	...
<b>Poland</b>					
Ores & concentrates	168 081	159 110	147 418	6 808	...
<b>Romania</b>					
Ores & concentrates	115 500	146 700	* 92 000	...	...
<b>Sweden</b>					
Ores & concentrates	432 148	397 178	190 308	230 352	328 668
Metal	220	271	315	253	339
<b>Switzerland</b>					
Ores & concentrates	1 211	2 404	2 682	1 568	876
Metal	112	115	184	247	183
<b>Yugoslavia</b>					
Ores & concentrates	290 212	334 479	283 601	(d) 19 389	...
<b>Canada</b>					
Ores & concentrates	32 529	33 843	21 309	20 957	13 775
<b>Mexico</b>					
Ores & concentrates	39 019	29 376	29 037	12 207	...
<b>USA</b>					
Ores & concentrates	625 490	525 044	565 357	212 139	218 770
Metal	4 104	4 184	6 713	5 765	5 276
<b>Argentina</b>					
Ores & concentrates	14 776	20 393	17 160	...	19 224
<b>Brazil</b>					
Ores & concentrates	8 649	18 358	12 290	1 779	25 977
<b>Chile</b>					
Ores & concentrates	12 233	22 111	9 148	12 840	14 475
<b>Peru</b>					
Ores & concentrates	3 246	2 006	2 001	...	...
<b>Venezuela</b>					
Ores & concentrates	7 072	11 958	3 383	6 160	1 321

**Imports of Chromium**

Country	1988	1989	1990	1991	1992
China					
Ores & concentrates	429 808	595 783	641 267	544 648	901 020
Japan					
Ores & concentrates	976 168	1 043 468	789 225	755 059	724 983
Metal	725	830	571	812	1 002
Korea, Dem. P.R. of					
Ores & concentrates (a)	* 21 000	* 38 300	* 20 000	...	...
Korea, Republic of					
Ores & concentrates	7 408	3 250	528	501	319
Philippines					
Ores & concentrates	52 111	46 541	20	15	—
Singapore					
Ores & concentrates	4 045	7 010	1 073	673	936
Taiwan					
Ores & concentrates	12 238	35 709	4 492	5 595	6 240
Thailand					
Ores & concentrates	4 492	7 359	5 872	2 944	3 831
Australia					
Ores & concentrates (c)	2 579	8 154	5 302	7 394	5 407
Metal (c)	61	79	91	95	128

## Note(s):

(1) 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) Cr<sub>2</sub>O<sub>3</sub> content

(c) Years ended 30 June of that stated

(d) Data for the Federal Republic of Yugoslavia only

## Coal

**Production of Coal**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Anthracite	1 798 000	2 060 000	1 945 000	1 864 000	2 040 000
Bituminous	102 268 000	98 545 000	91 563 000	93 057 000	82 834 000
Belgium					
Bituminous	2 487 217	1 892 689	1 035 832	634 000	218 000
France					
Anthracite & bituminous	12 142 000	11 471 000	10 487 000	10 100 000	9 500 000
Lignite	1 653 000	2 168 000	2 333 000	2 000 000	1 600 000
Germany, Federal Republic of					
Anthracite & bituminous	73 304 000	71 428 000	70 159 000	66 438 000	65 906 000
Brown coal	108 563 000	110 081 000	107 525 000	111 676 000	241 751 000
Greece					
Lignite	48 507 091	51 942 495	51 500 678	52 912 210	54 413 000
Irish Republic					
Anthracite & semi-bituminous	41 700	42 900	25 000	* 5 000	* 1 000
Italy					
Bituminous	48 408	69 420	56 300	170 000	110 000
Lignite	1 600 373	1 485 490	1 482 611	1 563 000	1 195 000
Portugal					
Anthracite	227 188	229 271	264 924	245 782	221 436
Spain					
Anthracite	5 276 111	5 519 231	5 720 000	5 950 000	6 450 000
Bituminous	13 608 676	13 604 995	13 760 000	12 599 000	12 470 000
Lignite	12 959 775	17 274 878	16 370 000	15 551 000	14 710 000
Albania					
Lignite	2 184 130	2 193 050	2 070 574	1 098 000	306 000
Austria					
Brown coal & lignite	2 129 264	2 065 815	2 448 053	2 080 649	1 750 451
Bulgaria					
Anthracite & bituminous	196 000	193 000	143 000	169 000	200 000
Brown coal & lignite	33 951 000	34 105 000	31 532 000	28 323 000	30 100 000
Czechoslovakia					
Bituminous	25 503 000	25 070 000	22 082 000	19 522 000	18 486 000
Lignite	3 558 000	3 348 000	3 124 000	2 838 000	...
Brown coal	96 361 000	90 915 000	82 044 000	79 669 000	(a) 72 500 000
German Democratic Republic					
Brown coal	310 314 000	301 058 000	249 100 000	—	—
Hungary					
Bituminous	2 254 882	2 127 359	1 735 940	1 694 882	1 296 000
Lignite	5 633 577	5 882 957	5 469 419	5 326 624	7 020 000
Brown coal	12 986 323	12 019 527	10 372 572	9 952 700	7 627 000
Norway					
Spitzbergen (d)					
Bituminous	263 717	339 000	302 804	329 849	358 878
Poland					
Bituminous	193 015 000	177 633 000	147 672 000	140 269 000	131 523 000
Brown coal	73 489 000	71 815 000	67 584 000	69 406 000	66 852 000
Romania					
Anthracite & bituminous	11 568 000	11 583 000	5 950 000	5 411 000	5 623 000
Lignite	50 439 000	53 980 000	34 220 000	29 149 000	34 993 000
Brown coal	910 000	899 000	677 000	645 000	622 000
Soviet Union					
Anthracite & bituminous	599 000 000	577 000 000	543 000 000	487 000 000	489 000 000
Lignite	172 000 000	164 000 000	160 000 000	143 000 000	135 000 000
Turkey					
Bituminous	6 687 948	6 258 784	5 628 747	5 209 481	5 300 000
Lignite	39 025 028	52 567 468	46 892 206	48 038 561	68 725 454
Yugoslavia					
Bituminous (b)	362 000	292 588	292 000	(i) 209 000	104 000
Lignite	60 352 000	62 276 291	64 094 000	(i) 62 453 000	...
Brown coal (b)	11 876 611	12 062 544	12 029 113	(i) 8 613 000	(a) 39 375 000
Botswana	612 873	663 045	794 041	783 873	901 452
Malawi	* 39 000	* 41 500	41 380	52 347	* 45 000
Morocco					
Anthracite	636 700	504 300	526 000	550 840	575 800



## Production of Coal

Country	1988	1989	1990	1991	1992
Mozambique					
Bituminous	23 856	62 010	40 411	50 832	12 620
Niger	* 150 000	171 434	153 913	156 542	133 525
Nigeria					
Sub-bituminous	82 488	57 379	77 502	* 90 000	102 000
South Africa					
Anthracite	4 950 988	4 208 058	3 622 253	2 689 353	3 344 699
Bituminous	176 408 771	172 074 711	171 161 308	175 704 883	171 047 407
Swaziland					
Bituminous	164 845	165 122	152 705	122 502	100 220
Tanzania					
Bituminous	11 580	45 380	41 900	74 914	21 795
Zaire					
Bituminous	* 123 000	* 125 000	* 126 000	* 60 000	60 600
Zambia					
Bituminous	523 651	394 839	381 501	* 420 000	421 989
Zimbabwe					
Bituminous	5 065 000	5 112 000	5 504 000	5 616 000	5 548 000
Canada					
Bituminous	38 585 104	38 793 780	37 671 686	39 910 597	32 314 840
Sub-bituminous	19 910 132	20 917 638	21 252 402	22 242 244	23 019 899
Lignite	12 148 427	10 815 846	9 406 963	8 981 478	10 026 882
Mexico					
Bituminous	10 586 336	9 983 087	10 013 655	9 401 325	8 699 927
USA					
Anthracite	3 300 000	3 000 000	3 200 000	3 100 000	3 200 000
Bituminous & lignite	858 800 000	886 700 000	930 400 000	900 400 000	904 200 000
Argentina					
Bituminous	505 000	441 052	270 354	293 946	214 684
Brazil					
Bituminous & lignite (e)	7 686 516	6 837 044	5 218 469	5 200 000	4 700 000
Chile					
Bituminous	1 436 151	1 267 456	1 467 885	1 341 527	977 775
Lignite	1 034 265	1 136 088	1 261 404	1 399 034	1 130 310
Colombia					
Bituminous	15 101 000	18 902 000	20 400 000	20 031 000	23 700 000
Peru					
Anthracite	101 198	* 100 000	* 125 000	125 300	79 805
Bituminous	49 200	* 50 000	* 50 000	25 500	14 485
Venezuela					
Bituminous	1 072 204	2 113 296	2 242 965	2 403 405	2 479 897
Afghanistan (c)					
Bituminous	* 138 000	* 125 000	* 200 000	* 250 000	* 300 000
China					
Anthracite	...	217 980 000	212 850 000	217 500 000	220 960 000
Bituminous	(h) 980 000 000	793 390 000	821 530 000	825 120 000	846 320 000
Lignite	...	42 780 000	45 500 000	44 790 000	47 270 000
India					
Bituminous	189 023 000	199 054 000	191 000 000	218 000 000	224 400 000
Lignite	12 588 000	12 571 000	9 000 000	15 000 000	12 600 000
Indonesia					
Anthracite & bituminous	4 094 629	4 533 055	7 330 156	7 823 781	* 13 000 000
Iran (c)					
Bituminous	1 625 214	1 457 406	1 435 318	1 480 091	1 507 697
Japan					
Anthracite & bituminous	11 223 396	10 187 309	8 262 891	8 060 000	7 600 000
Lignite	12 600	14 240	14 618	46 808	54 226
Korea, Dem. P.R. of					
Anthracite	40 000 000	40 700 000	40 700 000	43 300 000	43 100 000
Lignite	12 500 000	13 000 000	13 000 000	13 000 000	13 000 000
Korea, Republic of					
Anthracite	24 294 700	20 785 000	17 216 500	15 057 700	11 969 900
Mongolia					
Anthracite	692 000	* 1 000 000	...	...	...
Lignite	7 914 000	7 000 000	(g) 6 367 800	(g) 6 354 700	(g) 5 652 800

## Coal

**Production of Coal**

tonnes

Country	1988	1989	1990	1991	1992
Myanmar	26 968	...	30 815	36 337	33 573
Pakistan (a)	2 696 000	2 642 489	2 733 345	3 039 967	2 954 000
Philippines					
Bituminous	1 335 687	1 344 676	1 246 777	1 307 040	1 582 430
Taiwan					
Bituminous	1 225 487	784 409	472 050	402 575	334 821
Thailand					
Lignite	7 273 647	8 899 195	12 421 138	14 688 440	15 618 230
Vietnam					
Anthracite	6 332 200	3 310 800	5 197 800	4 895 400	4 938 500
Australia					
Bituminous (f)	176 604 000	190 085 000	199 212 000	206 045 000	223 199 000
Brown coal	43 450 000	48 252 000	47 725 000	52 124 000	50 228 000
New Zealand					
Bituminous	(a) (f) 2 400 556	773 015	651 927	734 122	907 102
Sub-bituminous	...	1 780 694	1 762 729	1 779 549	1 897 243
Lignite	...	159 289	169 596	170 476	179 666
World total	4 783 000 000	4 865 000 000	4 744 000 000	4 427 000 000	4 557 000 000

## Note(s):

- (1) 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) Data for 1992 is for the Federal Republic of Yugoslavia only
- (c) Years ended 20 March following that stated
- (d) Not including production from mines controlled by the Soviet Union
- (e) Including beneficiated and directly shipped material
- (f) Including sub-bituminous
- (g) Including anthracite
- (h) Including anthracite and lignite
- (i) Excluding data from August to December for the Republic of Croatia

## Exports of Coal

Country	1988	1989	1990	1991	1992
United Kingdom					
Anthracite	286 298	336 862	508 720	695 699	396 230
Other coal	1 450 667	1 735 043	1 812 866	1 127 964	576 652
Briquettes	78 860	129 750	137 304	107 015	70 459
Belgium-Luxembourg					
Anthracite	122 089	83 189	96 708	254 128	175 764
Other coal	830 587	875 041	723 999	684 291	574 068
Lignite	3 635	11 693	5 204	2 398	282
Briquettes	23 847	14 958	17 780	12 495	11 932
Denmark (b)	89 464	44 397	44 394	54 777	36 585
of which: Re-exports	83 417	44 289	44 342	54 649	27 911
France					
Anthracite	38 001	62 562	36 793	32 511	18 067
Other coal	1 643 901	745 379	606 512	651 922	571 416
Briquettes	13 799	14 119	27 705	49 896	47 171
Germany, Federal Republic of					
Coal (b)	5 020 570	5 921 642	5 410 412	3 531 584	1 647 834
Brown coal	365 660	410 623	448 886	441 817	362 187
Briquettes	738 730	672 258	1 037 618	1 268 700	850 120
Irish Republic (b)	30 455	23 165	27 785	23 997	30 078
Italy (b)	84 631	27 521	30 883	72 248	8 042
Netherlands					
Anthracite	330 853	230 634	341 242	288 319	206 755
Other coal	1 416 406	928 530	1 933 077	2 012 522	1 931 546
Briquettes	2 734	1 337	512	—	11 680
Spain (b)	7 117	7 351	3 230	759	678
Albania					
Lignite	305 000	304 000	* 235 000	* 100 000	...
Austria					
Brown coal	3 557	3 285	3 472	2 562	2 996
Czechoslovakia					
Coal	2 147 000	2 202 000	1 557 000	2 484 000	(c)* 1 999 000
Brown coal	1 968 000	2 303 000	2 515 000	2 722 000	(c)* 2 734 000
German Democratic Republic					
Briquettes	3 352 000	3 059 000	...	—	—
Hungary					
Brown coal	11 726	2 274	...	...	...
Norway (b)	254 941	246 956	254 277	270 980	168 114
Poland					
Coal (b)	32 187 000	28 859 000	28 066 000	19 274 000	19 578 411
Brown coal	—	—	193 000	1 183 000	977 865
Soviet Union					
Coal (b)	39 385 000	37 514 000	35 438 000	(e) 17 500 000	(e) 18 113 000
Brown coal (c)	* 109 000	* 372 800	* 393 400	* 345 900	* 504 500
Sweden (b)	35 380	7 331	2 290	13 065	14 620
Switzerland (b)	26 289	18 426	4 274	3 104	3 430
Turkey					
Coal	154	1 709	5 000	43 000	—
Lignite	3 364	3 000	3 000	4 000	—
Yugoslavia					
Brown coal	45 625	29 747	72 914	(f) 70 405	...
Morocco					
Anthracite	10 655	2 659	—	—	—
South Africa					
Anthracite	2 938 789	3 712 572	3 519 364	3 293 983	2 249 739
Other coal	40 059 056	44 856 995	46 047 056	45 971 140	47 891 609
Swaziland	160 239	...	6 525	...	...
Zimbabwe (b)	78 516	* 80 000	59 369	50 512	42 984
Canada	29 449 199	31 779 902	31 989 284	32 403 178	25 914 793
USA					
Anthracite	817 129	677 200	625 786	503 437	469 580
Other coal	85 287 394	90 791 738	95 391 482	100 071 698	92 453 836
Lignite	109 037	24 971	34 719	40 599	29 438
Briquettes	44 104	7 443	36 545	26 618	39 480
Colombia	10 075 435	12 485 059	13 504 899	16 403 000	14 612 000
Venezuela	964 629	1 785 059	1 711 198	2 292 533	2 395 383

## Coal

**Exports of Coal**

tonnes

Country	1988	1989	1990	1991	1992
China					
Anthracite	2 027 968	1 329 719	1 527 221	2 093 491	2 014 976
Other coal	13 597 541	14 008 431	15 765 939	17 907 764	17 647 500
India (a)	166 407	224 862	411 770	134 957	381 601
Indonesia					
Anthracite	198 995	742 611	643 386	587 133	1 013 148
Other coal	1 162 085	1 649 505	3 707 778	7 019 073	14 798 274
Briquettes	—	94 669	96 769	434 562	103 808
Japan	1 304	989	1 987	1 098	2 506
Korea, Dem. P.R. of (c)	* 2 095 000	* 1 948 000	* 1 701 000	* 1 466 000	* 1 090 000
Malaysia (b)	22 084	66 581	42 000	35 085	30 630
Singapore (b)	80	85	12 708	171 057	87 476
of which: Re-exports	80	85	12 708	165 687	87 170
Vietnam	314 300	543 300	693 000	* 1 000 000	...
Australia	99 821 000	99 121 000	107 682 000	120 828 000	127 038 000
New Zealand (d)	331 437	428 670	377 775	416 183	731 131

## Note(s):

- (1) 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
- (d) Years ended 30 June of that stated
- (e) Data for the Russian Federation only
- (f) Data for the Federal Republic of Yugoslavia only

# Imports of Coal

	Coal				
	tonnes				
Country	1988	1989	1990	1991	1992
United Kingdom					
Anthracite	803 736	765 182	633 964	1 133 205	860 286
Other coal	10 881 160	11 371 897	14 156 669	18 477 346	19 479 171
Briquettes	167 942	140 317	132 484	160 513	153 349
Belgium-Luxembourg					
Anthracite	1 020 753	1 009 006	911 275	1 181 064	1 117 927
Other coal	10 334 943	11 413 679	14 182 191	13 597 504	13 896 298
Brown coal	221 441	245 294	260 967	250 191	210 079
Briquettes	123 138	93 127	85 399	98 517	68 692
Denmark					
Coal (c)	10 306 160	10 876 410	9 953 126	12 879 950	12 145 342
Lignite	11 016	5 333	4 476	5 943	4 163
Briquettes	3 662	597	3 627	4 359	2 548
France					
Anthracite	1 987 932	1 807 936	1 979 970	2 687 252	2 349 429
Other coal	10 866 117	14 067 060	17 161 598	18 851 045	20 047 859
Lignite	48 674	61 902	70 793	75 582	68 381
Briquettes	161 503	172 897	174 924	191 201	185 277
Germany, Federal Republic of					
Anthracite	75 517	72 803	76 926	135 426	195 372
Other coal	7 092 646	6 335 453	10 778 573	15 264 936	15 232 654
Brown coal	1 882 968	2 091 051	2 408 115	3 424 576	3 640 309
Briquettes	983 620	930 281	467 176	299 022	268 850
Greece (c)	774 650	833 092	980 147	1 739 792	1 496 000
Irish Republic					
Anthracite	96 526	109 099	139 914	174 255	193 022
Other coal	3 478 429	3 221 483	2 994 684	2 950 728	2 824 278
Lignite	7 231	10 227	26 006	58 278	28 193
Briquettes	11 448	12 107	14 141	16 801	8 683
Italy					
Anthracite	2 847 819	2 875 271	2 838 619	3 152 616	2 957 935
Other coal	16 237 229	17 370 830	16 860 099	16 998 778	14 978 425
Lignite	4 706	398 295	3 047	754	1 066
Briquettes	148 379	123 844	125 489	213 006	89 597
Netherlands					
Anthracite	400 968	346 112	308 069	274 047	349 758
Other coal	14 766 903	13 548 665	17 196 108	15 533 199	14 602 130
Brown coal	64 264	64 100	73 609	50 945	34 941
Briquettes	14 417	10 042	4 496	5 562	5 430
Portugal					
Anthracite	...	...	...	595 000	675 000
Other coal	(c) 3 115 713	(c) 3 529 728	(c) 4 555 309	3 553 000	3 813 000
Spain					
Anthracite	13 931	87 800	218 661	522 941	358 092
Other coal	8 747 702	10 638 155	10 292 866	12 628 683	13 649 867
Lignite	1 525	1 213	848	886	578
Briquettes	73 071	136 236	312 344	4 282	269
Albania (e)	* 246 000	* 212 000	* 188 000	* 163 000	...
Austria					
Anthracite	16 716	17 692	16 265	7 475	10 650
Other coal	3 843 570	3 703 417	3 579 750	3 769 821	3 788 446
Brown coal	38 520	24 225	23 551	22 842	8 547
Briquettes	359 213	317 729	318 977	326 738	265 226
Bulgaria					
Anthracite	1 112 000	...	...	...	...
Other coal	5 339 000	5 001 000	(c) 5 682 000	(c) 3 968 000	...
Czechoslovakia					
Coal	4 781 000	4 503 000	4 736 000	5 843 000	...
Briquettes	977 000	766 000	198 000	1 000	...
Finland					
Anthracite	43 486	24 605	17 246	13 070	24 529
Other coal	4 756 402	5 540 412	6 084 368	5 160 032	4 239 787
Briquettes	6 921	0	0	1 419	8
German Democratic Republic (c)	5 802 000	4 311 000	...	—	—
Hungary					
Coal (c)	2 076 309	1 697 415	1 039 267	2 262 000	2 272 382
Briquettes	917 931	936 554	794 180	189 000	85 058
Iceland	66 167	71 534	64 518	60 493	50 844
Malta	191 579	303 101	247 893	237 837	210 441

## Coal

## Imports of Coal

tonnes

Country	1988	1989	1990	1991	1992
Norway (a)					
Anthracite	110 264	126 477	120 549	114 801	77 602
Other coal	662 906	520 972	577 096	475 404	529 380
Lignite	22	5 331	6 126	7 562	9 663
Briquettes	707	4 429	9 377	3 124	805
Poland					
Anthracite	21 000	20 000	20 000	8 000	125 215
Other coal	1 108 000	926 000	540 000	54 000	...
Romania	8 085 700	6 831 700	4 981 000	2 971 000	5 244 000
Soviet Union (e)	* 11 735 000	* 9 947 000	* 8 637 000	* 230 600	...
Sweden					
Anthracite	28 219	23 750	50 705	33 058	60 183
Other coal	3 811 143	3 671 573	3 510 958	3 095 351	2 949 191
Switzerland					
Coal (c)	436 555	333 358	484 654	364 363	148 567
Briquettes	24 910	16 020	11 475	17 191	17 290
Turkey					
Coal	4 460 192	4 043 847	(c) 4 771 000	(c) 5 115 000	(c) 4 026 000
Lignite	228 644	253 000	445 000	512 000	486 000
Yugoslavia					
Anthracite	225 661	186 579	174 121	(g) 9 489	...
Other coal	3 895 877	3 984 780	3 342 281	(g) 45 803	...
Brown coal	2 444	12 892	12 973	(g) 14 347	...
Briquettes	22 709	14 550	23 921	(g) —	...
Algeria	1 304 651	719 212	1 008 868	1 000 139	...
Botswana	21 999	15 554	...	...	...
Egypt	1 142 007	1 291 202	1 518 000	1 207 000	1 155 000
Kenya	130 791	151 000	113 007	132 000	...
Madagascar	17 000	13 371	11 473	11 049	11 985
Malawi	16 000	11 000	18 000	11 000	...
Morocco	1 018 299	(c) 1 278 452	(c) 1 189 248	(c) 1 376 178	(c) 1 061 120
Mozambique	* 20 000	* 22 000	* 18 000	* 20 000	...
South Africa	2 372	100 977	483 428	709 642	639 271
Tanzania	4 130	3 537	...	...	...
Tunisia (c)	28 505	11 588	13 025	3 086	11 138
Zaire	* 43 000	* 45 000	* 45 000	* 46 000	...
Zimbabwe	* 50 000	* 50 000	71 173	* 75 000	...
Canada					
Anthracite	407 199	422 178	440 670	312 863	285 593
Other coal	15 258 058	15 020 145	14 364 811	11 377 781	13 464 204
Cuba	60 819	193 861	* 150 000	* 100 000	* 150 000
Mexico					
Coal	76 242	20 229	285 993	202 394	...
Lignite	4 232	1 459	1 631	1 743	1 303
USA					
Anthracite	...	382 847	104	242	132 798
Other coal	(c) 1 935 959	2 111 797	2 384 111	3 002 205	3 253 930
Briquettes	74 002	99 262	69 989	74 611	17 827
Argentina	1 252 053	1 032 878	861 998	931 888	993 042
Brazil					
Anthracite	156 866	235 433	249 187	328 940	457 784
Other coal	10 554 775	10 096 062	9 857 766	11 224 767	11 452 589
Chile	417 559	1 572 006	1 791 072	1 520 283	963 140
Peru	53 517	61 504	46 506	181 567	* 100 000
Venezuela	40 980	43 673	35 903	19 391	56 730
China					
Anthracite	1 596 749	1 521 550	1 201 885	968 476	801 922
Other coal	96 153	669 724	784 161	376 488	400 616
Lignite	—	98 944	17 039	23 119	27 869
Cyprus	58 370	102 419	97 035	72 175	131 050
Hong Kong (c)	9 266 528	9 927 839	8 930 667	9 634 464	10 214 003
India (c) (d)	4 488 209	4 835 100	6 047 265	5 276 238	6 493 594
Indonesia (c)	1 035 432	1 299 378	620 717	673 050	453 660
Iran (b)	120 605	277 816	603 307	* 600 000	...
Israel	3 536 000	3 673 000	3 998 000	3 921 000	...

# Imports of Coal

Coal  
tonnes

Country	1988	1989	1990	1991	1992
Japan					
Anthracite	2 453 917	2 272 209	2 039 845	2 390 381	2 360 510
Other coal	101 726 899	102 729 332	105 477 448	109 563 568	108 926 077
Lignite	28 208	22 477	10 875	24 566	15 758
Korea, Dem. P.R. of (e)	* 1 797 000	* 1 605 000	* 1 728 000	* 1 948 000	* 1 369 000
Korea, Republic of					
Anthracite	2 803 007	1 516 883	1 072 492	1 409 952	808 629
Other coal	21 913 035	23 499 690	22 846 311	27 849 073	29 767 640
Briquettes	20 990	31 087	19 717	19 352	16 299
Malaysia					
Anthracite	13 450	...	...	19 012	14 019
Other coal	694 832	1 021 454	(c) 2 009 000	2 090 647	2 315 960
Lignite	127 647	186 180	28 000	47 781	4
Pakistan (f)	814 459	...	764 981	973 438	1 069 091
Philippines (c)	1 255 437	883 983	891 901	1 265 657	856 846
Taiwan					
Anthracite	—	72 324	58 573	61 976	47 053
Other coal	17 887 678	16 941 660	18 947 445	18 393 435	23 146 730
Briquettes	...	52 807	5 482	31 479	87
Thailand (c)	292 300	370 408	249 615	442 312	470 241
Australia (f)	342	126 447	166 244	7 139	970
New Caledonia	163 507	199 200	212 747	195 304	...

(a) Excludes coal imported from Spitzbergen

(b) Years ended 20 March following that stated

(c) Including anthracite

(d) Years ended 31 March following that stated

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

(f) Years ended 30 June of that stated

(g) Data for the Federal Republic of Yugoslavia only

**Mine Production of Cobalt**

tonnes (metal content)

Country	1988	1989	1990	1991	1992
Albania	673	643	586	500	300
Finland	—	250	273	234	216
Soviet Union	* 5 600	* 5 600	* 6 000	* 5 200	* 4 400
Botswana	298	215	205	208	208
Morocco	238	114	103	295	425
South Africa	206	199	249	209	234
Zaire	10 026	9 311	9 981	8 620	6 625
Zambia	5 025	4 488	4 614	4 817	4 610
Zimbabwe	122	111	121	118	101
Canada	6 234	6 167	5 470	5 274	5 102
Cuba	1 783	1 827	1 743	1 331	1 360
Brazil	500	700	600	900	1 000
China	* 270	255	325	233	255
Australia	2 443	* 2 270	* 1 770	* 1 470	* 1 070
New Caledonia	2 137	2 885	2 551	2 990	3 015
World total	35 600	35 000	34 600	32 400	28 900

## Note(s):

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



**Production of Cobalt Metal**

Country	1988	1989	1990	1991	1992
Belgium (a)	...	...	...	...	...
Germany, Federal Republic of (b)	656	713	1 303	975	815
Albania	* 10	* 10	* 20	* 20	—
Czechoslovakia	* 50	50	59	60	68
Finland	436	402	507	515	742
Norway	1 851	1 946	1 830	1 983	2 293
Soviet Union	* 6 000	* 6 500	* 6 650	* 6 460	* 4 900
South Africa	206	199	249	209	234
Zaire	10 026	9 311	10 033	8 790	6 625
Zambia	5 025	4 488	4 614	4 817	4 610
Canada (c)	2 356	2 110	2 063	2 248	2 210
China	* 270	255	325	340	437
Japan	109	98	199	185	105
World total	27 000	26 100	27 900	26 600	23 000

## Note(s):

(1) In addition to the production listed above, several countries, including the United Kingdom, Finland, France 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 and elsewhere

(b) Sales

(c) Including oxides

**Exports of Cobalt**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Metal	820	1 089	1 385	1 328	1 635
Oxides	1 004	1 200	1 413	1 730	1 282
Belgium-Luxembourg (a)					
Metal	* 1 900	* 3 100	* 3 400	* 3 600	* 2 400
Oxides	* 1 600	* 1 500	* 1 900	* 1 900	* 1 100
France					
Metal	617	966	616	669	860
Oxides	33	55	32	22	48
Germany, Federal Republic of					
Metal	1 236	1 084	1 382	1 332	1 666
Oxides	37	50	63	41	84
Italy					
Metal	74	123	71	222	600
Oxides	213	218	54	49	78
Netherlands					
Metal	47	91	93	186	167
Oxides	41	24	45	39	38
Spain	1	6	83	32	9
Austria	7	18	8	28	64
Finland					
Metal	282	288	318	396	659
Oxides	1 772	1 539	1 112	1 065	1 198
Norway	1 740	1 962	1 832	2 010	2 103
Soviet Union					
Metal (d)	* 30	* 90	* 300	* 1 000	* 2 300
Sweden					
Metal	325	217	142	140	820
Oxides	155	141	181	117	841
Switzerland	88	111	130	139	179
Morocco					
Ore	2 148	2 021	2 070	3 126	3 000
South Africa	175	148	219	176	211
Zaire	8 700	* 4 500	* 17 200	...	...
Zambia	5 891	2 785	...	...	...
Canada					
Metal	3 062	3 245	3 056	4 910	3 181
Oxides	953	371	393	463	489
Cuba					
Oxide, sinter & sulphide (b)	* 1 800	* 1 800	* 1 700	* 1 300	* 1 300
USA					
Metal	903	538	1 059	1 039	959
Oxides	419	606	934	1 115	1 002
Brazil	89	61	125	249	97
China					
Metal	(d)* 30	(d)* 40	32	100	141
Oxides	(d)* 60	(d)* 80	170	143	116
Hong Kong					
Metal (c)	...	...	...	...	1 394
Oxides (c)	14	33	50	42	133
Japan					
Metal	207	355	440	335	265
Oxides	48	21	99	50	50
Korea, Republic of					
Oxides	16	47	—	1	—

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

(b) Co content

(c) Re-exports

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

## Imports of Cobalt

Country	1988	1989	1990	1991	1992
United Kingdom					
Metal	2 898	2 588	3 857	3 558	3 157
Oxides	645	500	543	528	671
Belgium-Luxembourg					
Metal	417	(b)* 600	(b)* 440	(b)* 460	(b)* 590
Oxides	146	142	191	171	184
Denmark					
Metal	24	20	24	19	13
Oxides	53	9	2	7	13
France					
Metal	1 563	1 518	1 632	1 339	1 559
Oxides	286	357	290	404	415
Germany, Federal Republic of					
Metal	2 773	2 690	2 765	2 163	2 476
Oxides	383	387	496	503	447
Italy					
Metal	539	604	632	543	722
Oxides	454	473	591	656	510
Netherlands					
Metal	24	50	127	161	125
Oxides	321	285	329	316	270
Portugal					
Oxide	65	13	21	13	14
Spain					
Metal	264	238	285	189	173
Oxides	179	214	255	209	248
Austria					
Metal	347	388	405	286	304
Oxides	28	28	23	20	21
German Democratic Republic (b)	* 10	* 30	* 20	—	—
Norway					
Oxides	33	163	2	41	335
Sweden	585	599	785	576	881
Switzerland	243	240	256	248	249
Turkey					
Oxides	49	55	63	57	72
Yugoslavia					
Metal	53	73	93	(d) 22	...
Oxides	50	47	42	(d) 3	...
South Africa					
Metal	115	116	348	324	114
Oxides	21	16	6	14	17
Canada	768	716	812	2 083	1 200
Mexico					
Metal	112	121	31	49	124
Oxides	136	200	182	277	172
USA					
Metal	6 562	6 011	6 377	6 894	6 089
Oxide	337	380	488	584	430
Argentina	36	...	...	...	...
Brazil					
Metal	511	748	496	564	263
Oxide	29	70	48	45	59
Venezuela					
Oxides	28	48	28	238	61
China	...	...	498	437	768
Hong Kong					
Metal	...	...	...	...	1 828
Oxide	32	164	62	46	64
India (a)	273	208	318	205	197
Indonesia					
Oxides	24	27	41	156	139
Japan					
Metal	4 934	3 377	4 807	6 815	4 387
Oxide	455	449	631	571	336

## Cobalt

**Imports of Cobalt**

tonnes

Country	1988	1989	1990	1991	1992
<b>Korea, Republic of</b>					
Metal	404	436	630	654	467
Oxides	64	74	147	168	120
<b>Malaysia</b>					
Metal	346	431	88	25	26
Oxides	24	21	...	29	199
<b>Saudi Arabia</b>					
Oxides	364	106	106	256	...
<b>Taiwan</b>					
Metal	159	118	107	181	175
Oxides	109	102	148	133	102
<b>Australia</b>					
Metal (c)	48	37	47	37	35
Oxide (c)	72	66	71	55	47

(a) Years ended 31 March following that stated

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

(c) Years ended 30 June of that stated

(d) Data for the Federal Republic of Yugoslavia only

## Mine Production of Copper

tonnes (metal content)

Country	1988	1989	1990	1991	1992
United Kingdom	732	508	955	294	—
France	509	1 027	483	372	149
Germany, Federal Republic of	700	100	—	—	—
Portugal	8 221	98 017	159 841	158 885	152 300
Spain	14 165	27 510	13 300	7 716	9 818
Albania	17 269	16 000	12 250	8 000	3 400
Bulgaria	50 000	38 800	32 900	47 200	47 400
Czechoslovakia	3 807	3 709	2 884	1 550	1 000
Finland	18 420	25 107	17 482	16 224	15 351
German Democratic Republic	9 019	7 906	3 564	—	—
Norway	18 655	20 132	23 041	19 901	12 668
Poland	459 000	401 000	370 000	382 000	373 000
Romania	50 200	47 800	32 000	27 200	24 436
Soviet Union	* 990 000	* 950 000	* 900 000	* 840 000	* 800 000
Sweden	75 032	71 238	74 283	81 650	89 145
Turkey	37 746	38 151	39 825	39 422	36 425
Yugoslavia	103 523	139 631	140 145	(a) 121 842	(b) 97 811
Botswana	24 428	23 403	20 612	20 576	20 413
Congo	520	—	—	—	—
Morocco	13 228	14 647	13 901	13 633	12 004
Mozambique	139	88	28	—	—
Namibia	42 899	32 792	27 797	31 719	31 313
South Africa	178 171	191 577	188 368	193 642	176 074
Zaire	505 800	442 800	352 400	236 100	147 300
Zambia	518 062	540 079	545 677	423 000	432 600
Zimbabwe	16 116	15 800	14 800	13 811	9 600
Canada	776 482	723 052	793 735	811 134	768 582
Cuba	2 951	2 759	* 2 000	* 2 000	* 1 500
Honduras	538	244	1 388	* 1 000	1 600
Mexico	268 359	249 328	298 695	284 174	279 042
USA	1 416 928	1 497 818	1 587 742	1 631 078	1 764 800
Argentina	492	653	357	409	297
Brazil	44 845	47 439	34 441	37 947	39 848
Chile	1 451 000	1 609 300	1 588 400	1 814 300	1 932 700
Peru	316 400	368 200	323 400	382 277	369 365
China	* 370 000	544 000	557 000	304 000	334 300
Cyprus	383	485	472	226	200
India	51 463	53 342	51 566	50 430	49 036
Indonesia	126 200	135 035	162 366	267 401	369 281
Iran	50 700	68 000	65 800	97 000	105 000
Japan	16 666	14 650	12 927	12 413	12 074
Korea, Dem. P.R. of	* 12 000	* 12 000	* 12 000	* 14 000	* 12 000
Malaysia	22 014	23 565	24 327	25 581	28 556
Mongolia	121 594	123 410	123 893	90 100	105 100
Myanmar	4 700	5 000	4 400	5 700	5 000
Oman	18 100	16 600	13 700	13 500	13 400
Philippines	216 465	191 930	180 459	148 000	123 523
Australia	243 800	296 000	330 000	320 000	371 000
Papua New Guinea	218 633	204 025	170 211	204 459	193 359
World total	8 900 000	9 300 000	9 300 000	9 200 000	9 400 000

(a) Excluding data from August to December for the Republic of Croatia

(b) Data for the Federal Republic of Yugoslavia only

## Copper

## Smelter Production of Copper

tonnes

Country	1988	1989	1990	1991	1992
Belgium	* 200	—	1 500	1 000	1 000
Germany, Federal Republic of	162 500	176 900	183 600	171 900	179 100
Spain	* 115 000	* 120 000	* 121 000	* 144 000	* 137 000
Albania	14 000	15 600	11 600	4 800	2 300
Bulgaria	57 400	59 200	30 300	27 800	50 600
Czechoslovakia	34 792	36 832	33 000	27 658	25 100
Finland	95 745	99 147	112 843	114 284	136 768
German Democratic Republic	* 22 700	* 20 100	* 14 000	—	—
Hungary	3 593	4 287	* 4 000	4 900	100
Norway	31 730	34 980	36 455	38 447	39 259
Poland	469 560	460 519	430 000	440 000	454 000
Romania	38 697	39 397	28 300	27 800	27 900
Soviet Union	* 1 110 000	* 1 075 000	* 990 000	* 920 000	* 910 000
Sweden	93 653	69 977	76 385	68 113	77 804
Turkey	12 910	21 129	18 840	28 380	26 088
Yugoslavia	106 457	101 606	105 908	122 200	110 000
Namibia	42 163	37 978	33 190	33 539	37 531
South Africa	180 600	184 800	176 000	164 700	158 700
Zaire (a)	439 500	424 500	338 700	221 100	134 000
Zambia (a)	466 756	485 199	426 246	408 443	483 697
Zimbabwe	27 500	23 100	24 400	23 800	22 400
Canada	478 321	462 324	475 596	505 425	515 028
Mexico	166 631	183 356	209 801	208 339	256 110
USA	1 042 961	1 120 445	1 158 462	1 122 926	1 180 305
Brazil	147 880	153 378	152 117	141 443	156 775
Chile	1 189 400	1 266 600	1 328 500	1 146 100	1 176 500
Peru	239 151	309 348	261 403	341 919	326 617
China	* 425 000	557 000	358 000	385 000	418 000
India	44 284	42 456	40 667	45 541	45 500
Iran	* 52 000	76 000	78 500	123 200	120 000
Japan	994 045	1 005 534	1 040 628	1 085 435	1 174 895
Korea, Dem. P.R. of	* 29 000	* 30 000	* 25 000	* 25 000	* 20 000
Korea, Republic of	123 500	159 600	160 500	186 000	174 000
Oman	21 700	19 600	15 200	15 100	18 700
Philippines	159 218	156 268	153 462	167 462	168 831
Taiwan	56 400	61 900	11 400	—	—
Australia	177 669	203 000	192 000	197 000	199 000
World total	8 900 000	9 300 000	8 900 000	8 700 000	9 000 000

## Note(s):

(1) 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	1988	1989	1990	1991	1992
United Kingdom	123 958	119 033	121 634	70 060	42 067
Belgium	354 300	329 200	331 857	297 593	* 316 000
France	43 239	43 163	44 034	43 570	43 200
Germany, Federal Republic of	426 400	475 200	476 200	521 500	581 400
Italy	75 400	83 300	83 000	83 400	76 000
Portugal	5 400	—	100	300	—
Spain	158 756	165 700	170 567	189 850	179 117
Albania	13 000	13 000	10 900	4 400	1 200
Austria	38 378	46 267	49 703	52 837	54 680
Bulgaria	50 020	55 800	24 333	27 700	28 000
Czechoslovakia	27 076	26 920	24 606	25 273	25 000
Finland	55 846	69 911	69 030	64 908	79 900
German Democratic Republic	75 700	75 100	55 700	—	—
Hungary	15 627	13 137	12 817	9 341	4 100
Norway	31 730	32 294	33 514	38 447	39 259
Poland	400 560	390 268	346 000	378 500	387 000
Romania	* 32 000	* 33 200	* 24 700	* 25 700	* 26 500
Soviet Union	* 1 370 000	* 1 330 000	* 1 160 000	* 1 040 000	* 875 000
Sweden	90 292	94 745	97 278	96 554	101 634
Turkey	76 400	84 800	85 200	80 700	100 100
Yugoslavia	145 376	151 035	151 395	(a) 122 200	114 800
Egypt	8 427	* 4 000	* 4 000	* 4 000	* 4 000
South Africa	136 700	144 200	133 000	127 200	120 100
Zaire	202 790	203 800	173 175	120 000	57 200
Zambia	422 252	450 910	426 243	394 900	472 000
Zimbabwe	27 500	24 000	24 400	23 800	22 400
Canada	528 723	515 216	515 835	538 339	539 302
Mexico	133 909	140 510	157 108	171 866	203 006
USA	1 852 000	1 956 851	2 017 390	1 995 194	2 143 815
Argentina	* 12 500	* 11 000	* 15 000	* 15 000	* 15 000
Brazil	147 880	153 378	152 117	141 443	156 775
Chile	1 012 700	1 071 000	1 191 600	1 228 300	1 242 300
Peru	174 746	224 260	181 790	246 198	251 100
China	517 000	555 100	558 000	560 000	659 200
India	40 100	41 843	46 400	47 222	45 255
Iran	32 600	39 900	47 800	79 700	101 800
Japan	955 108	989 566	1 007 976	1 076 283	1 160 859
Korea, Dem. P.R. of	* 40 000	* 40 000	* 30 000	* 30 000	* 28 000
Korea, Republic of	170 541	178 665	192 196	200 763	209 757
Oman	16 267	15 318	12 015	11 413	11 383
Philippines	132 183	132 193	125 938	115 471	145 674
Taiwan	43 333	43 237	16 090	—	—
Australia	222 707	255 000	274 000	272 000	326 000
World total	10 400 000	10 800 000	10 700 000	10 600 000	11 000 000

## Note(s):

(1) 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) Excluding data from August to December for the Republic of Croatia

## Copper

## Exports of Copper

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ore & matte	4 310	1 401	5 138	2 041	150
Unwrought	13 800	11 050	11 597	16 356	4 908
Unwrought alloys	19 585	19 400	21 055	21 719	24 261
Scrap	125 557	127 878	111 208	126 652	117 398
Belgium-Luxembourg					
Unwrought	...	...	(h) 231 548	(h) 181 083	186 979
Unwrought alloys	7 850	11 005	8 275	7 525	8 097
Scrap	46 016	65 906	55 629	55 978	51 508
Denmark					
Unwrought	209	273	2	7	54
Unwrought alloys	494	1 731	277	460	184
Scrap	23 775	23 924	22 089	22 681	28 040
France					
Ore	1 707	996	1 060	683	539
Matte & cement	578	215	77	61	94
Unwrought					
Unrefined	5 638	7 971	5 271	3 754	4 964
Refined	6 195	7 036	7 176	12 389	15 391
Alloys	12 082	13 651	15 169	13 306	11 891
Scrap	174 213	188 955	161 158	169 115	164 269
Germany, Federal Republic of					
Ore	5 944	149	4 310	70	8 285
Matte & cement	7	1 644	1 568	1 026	49
Unwrought					
Unrefined	822	1 497	577	470	99
Refined	73 849	83 396	94 534	62 995	59 521
Alloys	14 987	13 542	14 383	17 674	26 925
Scrap	120 925	143 471	156 553	212 555	231 537
Greece					
Unwrought	—	59	1 003	1 540	1 515
Scrap	2 325	1 882	2 620	2 444	3 111
Irish Republic					
Unwrought	280	74	78	42	116
Scrap	10 121	10 061	9 274	9 713	8 554
Italy					
Ore	521	974	125	76	73
Matte & cement	156	101	265	298	542
Unwrought	13 078	15 175	20 281	19 519	3 854
Unwrought alloys	8 326	6 912	7 256	6 545	6 189
Scrap	19 447	26 324	22 797	24 655	24 796
Netherlands					
Unwrought	1 657	2 517	449	717	729
Unwrought alloys	5 115	8 146	8 523	5 970	11 592
Scrap	96 744	105 708	83 437	107 608	138 415
Portugal					
Ore	49 412	442 029	706 115	694 535	696 987
Unwrought	3 081	1 577	340	11	77
Scrap	5 402	3 903	6 304	11 087	12 994
Spain					
Ore	24 009	24 910	42 476	19 967	27 604
Matte & cement	4 486	4 458	4 118	1 181	614
Unwrought	39 642	41 794	30 834	83 963	68 165
Unwrought alloys	1 059	476	186	1 766	1 961
Scrap	11 741	17 112	16 859	34 126	43 086
Austria					
Unwrought	18 254	28 203	39 412	41 927	46 773
Unwrought alloys	6 180	5 243	5 272	6 042	3 885
Scrap	25 360	15 717	13 638	16 583	26 929
Bulgaria					
Unwrought (f)	* 2 400	* 500	* 4 000	* 13 000	* 33 000
Scrap (f)	* 1 500	* 1 200	* 1 100	* 6 400	* 9 600
Czechoslovakia					
Scrap (f)	* 5 700	* 3 400	* 3 500	* 18 000	* 36 100
Finland					
Ore	5 243	16 701	12 432	18 071	9 759
Unwrought					
Unrefined	23 811	22 675	25 413	24 690	37 999
Refined	15 241	18 873	19 509	19 812	19 227
Alloys	1 642	1 828	3 093	1 425	1 223
Scrap	3 596	4 621	3 289	6 553	20 382



## Exports of Copper

Country	1988	1989	1990	1991	1992
German Democratic Republic					
Unwrought (f)	* 12 900	* 14 100	* 7 900	—	—
Hungary					
Unwrought	...	(c) 5 111	(c) 7 755	...	3 626
Scrap	1 223	4 077	6 537	...	14 601
Norway					
Ore	71 858	94 482	90 189	91 627	57 546
Unwrought					
Unrefined	10 236	24	19 397	—	25
Refined	29 075	33 706	37 682	37 755	40 027
Scrap	10 709	12 233	10 790	11 404	13 337
Poland					
Unwrought	166 520	157 247	176 590	222 820	266 829
Scrap	...	2 311	4 113	52 294	(f)* 59 900
Soviet Union					
Ore (i)	...	...	...	174 531	44 936
Unwrought	(f)* 140 700	(f)* 186 400	(f)* 261 000	(f)* 285 600	(i) 149 809
Scrap	(f)* 27 100	(f)* 17 900	(f)* 10 900	(f)* 33 500	(i) 7 298
Sweden					
Ore	55 190	75 144	93 376	116 722	92 711
Unwrought					
Unrefined	4 929	20	5	943	10 605
Refined	41 737	33 151	39 582	32 070	27 848
Alloys	4 031	7 575	4 918	4 463	2 361
Scrap	3 658	6 347	3 019	6 463	32 526
Switzerland					
Unwrought					
Refined	4 425	1 457	3 816	3 131	724
Alloys	6 588	5 870	4 842	7 299	6 972
Scrap	23 721	27 701	18 721	25 786	26 134
Turkey					
Ore	47 908	17 669	30 873	6 100	46 248
Unwrought	5 458	6 113	2 145	4 000	9 181
Yugoslavia					
Ore	11 722	6 191	17 479	(k) 1	...
Matte	4 902	8 104	9 199	(k) 522	...
Unwrought	44 553	49 989	66 224	(k) 65 189	...
Unwrought alloys	9 003	9 029	14 778	(k) 7 671	...
Scrap	4 741	2 151	2 393	(k) 829	...
Algeria					
Scrap	6 158	3 193	2 179	9 389	...
Botswana					
Matte (b)	25 400	19 200	19 300	20 100	18 100
Morocco					
Ore	44 675	45 229	44 848	43 295	45 867
Matte	2 738	2 647	2 057	2 562	2 100
Scrap	3 312	5 323	4 800	7 954	11 120
Namibia					
Unwrought	39 049	33 306	29 974	30 218	34 109
Senegal					
Scrap	2 085	853	1 067	...	...
South Africa					
Ores & concentrates (b)	14 824	18 078	17 283	20 735	21 088
Unwrought	88 010	103 406	86 787	97 963	92 100
Scrap (f)	* 6 100	* 12 600	* 9 300	* 9 300	* 12 600
Tunisia					
Scrap	6 916	5 735	2 747	2 004	1 370
Zaire					
Ores & concentrates	46 784	* 26 000	* 28 000	* 23 000	* 18 000
Unwrought					
Unrefined (e)	233 376	221 400	215 451	117 813	* 79 900
Refined	198 307	201 600	140 743	* 130 000	* 62 000
Zambia					
Unwrought, refined	435 548	456 365	459 924	382 326	411 892
Zimbabwe					
Unwrought	15 549	10 200	11 899	9 422	8 784

## Copper

**Exports of Copper**

tonnes

Country	1988	1989	1990	1991	1992
Canada					
Ores & concentrates (b)	330 840	329 617	359 553	324 584	317 066
Matte & cement (b)	10 952	18 796	14 682	22 211	20 060
Unwrought	264 045	322 017	335 983	377 988	385 780
Unwrought alloys	5 909	4 262	714	236	69
Scrap	76 959	67 327	104 469	86 407	101 975
Cuba					
Concentrates (b)	3 108	2 783	2 000	2 000	...
Scrap (a)	4 213	1 804	2 548	3 337	1 585
Mexico					
Concentrates	346 684	221 195	286 724	212 310	56 537
Unwrought, unrefined	28 270	49 891	48 115	60 617	70 801
Scrap	13 989	7 937	11 899	16 972	28 376
USA					
Ores & concentrates (b)	192 406	360 494	258 235	229 467	251 857
Unwrought					
Unrefined	33 337	5 475	6 424	21 212	16 714
Refined	60 633	145 769	212 719	266 424	186 932
Alloys	8 856	6 641	9 272	9 344	9 379
Scrap	320 751	369 697	325 581	306 070	244 548
Brazil					
Unwrought, refined	5 000	33 802	40 914	63 064	79 716
Chile					
Ores & concentrates (b)	241 800	317 900	258 300	503 100	630 600
Matte & cement (b)	2 200	7 900	700	—	—
Unwrought					
Unrefined	161 800	168 500	151 100	92 500	127 000
Refined	975 500	1 060 500	1 141 100	1 130 500	1 178 000
Scrap	3 100	2 800	2 400	1 500	400
Colombia					
Ore	—	—	60	13 543	6 953
Peru					
Ore (f)	* 208 000	* 172 000	* 165 000	* 127 500	* 141 100
Unwrought					
Unrefined	54 989	89 777	92 834	100 979	88 717
Refined	147 377	167 538	137 433	207 512	214 506
Venezuela					
Scrap	—	4 819	8 654	10 037	10 399
China					
Unwrought	49 144	11 770	18 002	8 711	12 320
Scrap	(f)* 17 400	(f)* 14 900	(f)* 20 800	(f)* 27 000	23 114
Cyprus					
Cement copper	600	955	1 080	500	300
Scrap (j)	29 900	63 795	46 484	140 329	92 544
Hong Kong					
Unwrought	32 887	6 599	5 483	14 382	44 638
of which: Re-exports	32 841	6 400	5 134	14 260	44 523
Scrap	62 367	69 626	80 879	111 755	209 817
of which: Re-exports	12 516	16 898	21 708	38 619	94 781
India (g)					
Ores & concentrates	14 000	18 350	14 322	20	—
Indonesia					
Ores & concentrates	299 665	321 745	397 648	600 571	965 911
Iran					
Unwrought (f)	* 10 000	* 18 500	* 11 400	* 12 900	* 35 900
Israel					
Scrap	2 949	4 961	3 875	3 246	2 696
Japan					
Unwrought	78 494	68 625	81 710	87 267	111 970
Scrap	6 933	18 816	12 003	9 186	24 451
Jordan					
Scrap	1 529	2 831	1 483	4 918	2 866
of which: Re-exports	563	734	282	438	9
Korea, Republic of					
Unwrought	20 979	35 225	1 125	151	13 813
Scrap	1 274	2 080	1 919	2 819	11 262
Malaysia					
Ore	85 872	102 168	105 664	97 068	104 378
Scrap	17 922	24 617	...	20 068	19 488

**Exports of Copper**

Country	1988	1989	1990	1991	1992
Myanmar (g)					
Ores & concentrates	14 800	11 320	24 036	19 576	...
Oman					
Unwrought	18 137	15 999	12 124	10 811	12 399
Pakistan (d)					
Scrap	1 295	2 645	3 772	786	409
Philippines					
Ores & concentrates	450 330	426 191	421 405	396 962	350 326
Unwrought	126 731	114 273	109 703	98 047	98 056
Scrap	2 702	3 960	27 999	46 696	26 839
Saudi Arabia					
Unwrought	2 911	3 192	1 718	2 629	...
Scrap	23 224	22 830	23 023	8 540	...
Singapore					
Unwrought	60 654	53 903	41 937	58 632	94 067
of which: Re-exports	60 603	53 591	39 273	58 464	83 788
Scrap	37 356	40 426	38 762	41 847	43 014
Taiwan					
Unwrought	2 972	2 983	6 655	3 991	7 725
Scrap	16 395	15 665	30 498	15 991	22 614
Australia					
Ores & concentrates	210 700	199 400	232 400	212 000	271 400
Matte & cement (d)	...	440	120	6 182	3 289
Unwrought					
Unrefined	1 009	3 733	4 756	3 207	11 328
Refined	94 400	120 400	152 800	182 000	178 100
Alloys (d)	2 140	429	676	1 594	1 328
Scrap (d)	368	193	3 107	14 676	17 282
New Zealand (d)					
Unwrought	2	288	255	243	170
Scrap	2 499	2 567	2 406	4 708	2 942
Papua New Guinea					
Ores & concentrates (b)	221 891	226 000	155 624	193 700	171 216

## Note(s):

- (1) In this table the term 'unwrought' copper corresponds to item 682.1 of the Standard International Trade Classification (Revision 3) and includes both unrefined (including blister) and refined copper
  - (2) The term 'unwrought' as used here includes alloys unless these are separately specified. The term 'scrap' includes scrap alloys
- (a) Imports into the Netherlands
  - (b) Cu content
  - (c) Including semi-manufactures
  - (d) Years ended 30 June of that stated
  - (e) Including leach cathodes
  - (f) BGS estimates, based on known imports into certain countries
  - (g) Years ended 31 March following that stated
  - (h) Refined only
  - (i) Data for the Russian Federation only
  - (j) Re-exports
  - (k) Data for the Federal Republic of Yugoslavia only

## Copper

**Imports of Copper**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ore & matte	801	950	2 065	2 536	2 123
Unwrought					
Unrefined	61 754	65 293	63 905	31 567	8 094
Refined	246 103	259 584	251 031	242 657	278 223
Alloys	4 610	1 508	3 036	2 297	2 195
Scrap	18 893	23 123	22 017	16 356	23 220
Belgium-Luxembourg					
Ore	1 434	2 368	4 968	3 150	322
Unwrought					
Unrefined	...	...	191 653	161 730	171 100
Refined	...	...	260 877	235 950	194 236
Alloys	5 561	16 920	8 421	23 440	9 352
Scrap	208 488	191 150	158 411	201 245	208 722
Denmark					
Unwrought	205	340	1 017	146	51
Unwrought alloys	1 402	1 972	1 967	2 652	1 481
Scrap	11 585	16 558	19 731	19 650	21 183
France					
Ore	4 566	137	50	4 455	45
Matte & cement	5 446	91	322	369	854
Unwrought					
Unrefined	15 137	20 732	20 921	12 598	15 707
Refined	379 216	411 534	429 752	436 732	444 410
Alloys	6 681	6 548	9 420	7 951	5 363
Scrap	52 634	67 093	58 396	69 198	75 288
Germany, Federal Republic of					
Ore	553 600	621 619	498 000	523 295	576 813
Matte & cement	12 892	8 543	17 569	19 717	22 787
Unwrought					
Unrefined	43 722	55 586	53 036	59 749	56 048
Refined	433 407	459 577	514 754	556 500	532 522
Alloys	40 682	52 923	64 831	68 003	67 984
Scrap	295 279	364 619	310 643	322 879	452 555
Greece					
Unwrought	53 120	51 226	54 776	48 986	47 671
Unwrought alloys	1 827	1 780	1 581	1 268	1 310
Scrap	825	1 633	664	689	790
Irish Republic					
Unwrought	551	194	329	334	160
Scrap	127	437	527	483	335
Italy					
Unwrought					
Unrefined	4 020	992	241	3 165	1 943
Refined	377 363	389 998	412 020	406 596	435 668
Alloys	16 199	17 559	24 179	27 603	30 181
Scrap	136 953	163 875	175 917	175 057	210 634
Netherlands					
Unwrought	22 036	20 508	23 539	18 333	18 835
Unwrought alloys	1 130	2 166	2 121	1 419	1 912
Scrap	57 453	71 478	78 218	95 818	108 765
Portugal					
Unwrought	25 833	24 105	25 830	27 303	22 889
Scrap	264	1 399	939	396	207
Spain					
Ore	381 180	367 532	393 745	464 853	412 428
Matte & cement	24	897	365	111	377
Unwrought					
Unrefined	25	2 173	3 122	35 649	24 981
Refined	7 554	21 460	21 406	26 403	28 344
Alloys	5 203	3 829	3 629	5 569	3 769
Scrap	49 944	50 704	42 090	34 430	30 219
Austria					
Unwrought					
Unrefined	3 850	2 824	746	8 009	6 172
Refined	6 023	2 817	7 598	5 756	8 803
Alloys	1 539	1 651	1 783	2 588	2 890
Scrap	49 652	32 225	24 662	59 836	63 642

## Imports of Copper

Country	1988	1989	1990	1991	1992
Bulgaria					
Ores & concentrates (a)	...	* 26 000	* 17 000	* 50 500	* 66 600
Unwrought (a)	...	* 600	* 1 000	* 5 600	...
Czechoslovakia					
Unwrought	35 000	32 000	35 000	12 000	...
Finland					
Ore	249 107	209 136	279 755	304 188	318 940
Unwrought					
Refined	30 995	39 013	27 427	19 074	9 656
Alloys	1 030	2 111	1 808	1 000	1 267
Scrap	7 462	3 392	988	6 379	40 684
German Democratic Republic					
Ores & concentrates (a)	* 20 800	* 16 600	* 5 900	—	—
Unwrought (a)	* 76 400	* 67 000	* 64 600	—	—
Scrap (a)	* 25 000	* 25 300	* 20 600	—	—
Hungary					
Unwrought	(c) 32 038	(c) 21 275	(c) 14 958	20 000	14 057
Scrap	4 721	2 951	895	...	2 260
Norway					
Matte	12	228	0	6	62
Unwrought	343	105	302	364	97
Unwrought alloys	1 904	2 276	2 833	2 771	3 155
Scrap	71 509	715	1 578	4 908	3 664
Poland					
Unwrought	14 021	7 993	2 900	112	201
Romania					
Unwrought	(a)* 2 700	2 391	(a)* 10 300	(a)* 4 000	1 075
Soviet Union					
Unwrought	* 1 000	...	...	...	...
Sweden					
Ore	83 977	60 666	51 012	23 978	62 860
Matte & cement	3 423	1 957	11	2 572	0
Unwrought	61 407	65 599	63 387	61 554	49 218
Unwrought alloys	5 204	7 889	4 840	4 325	4 284
Scrap	15 945	9 148	14 605	44 320	22 647
Switzerland					
Unwrought					
Refined	6 583	7 695	7 239	7 450	5 445
Alloys	1 189	1 248	1 598	1 484	1 536
Scrap	4 106	5 288	8 188	8 402	11 003
Turkey					
Unwrought	47 978	62 230	55 915	49 708	38 805
Scrap	1 715	3 120	1 088	227	2 486
Yugoslavia					
Unwrought	22 831	20 683	8 190	(b) 7 899	...
Unwrought alloys	37	154	1 714	(b) 686	...
Scrap	21	525	730	(b) 73	...
Algeria					
Unwrought	298	365	1 849	112	...
Morocco					
Unwrought	662	761	733	743	661
South Africa					
Ores & concentrates	5 555	8 068	8 099	24	—
Matte & cement	3 642	8 414	7 405	1 538	8 169
Unwrought	451	703	21	210	162
Unwrought alloys	136	228	438	283	...
Scrap	1 222	1 442	759	1 894	8 583
Tunisia					
Unwrought	507	485	503	1 036	1 212
Zambia					
Ores & concentrates (d)	32 822	16 272	17 291	13 240	9 450
Canada					
Ores & concentrates (d)	41 464	40 693	30 167	69 809	96 363
Unwrought	7 719	17 290	9 456	16 334	30 098
Unwrought alloys	1 953	1 694	3 274	3 594	3 379
Scrap	91 107	97 174	65 540	47 704	42 182

## Copper

**Imports of Copper**

tonnes

Country	1988	1989	1990	1991	1992
Cuba					
Unwrought	7 446	7 815	8 100	5 000	...
Mexico					
Unwrought & scrap	45 889	50 704	29 236	42 114	37 511
USA					
Ores & concentrates (d)	4 332	46 516	91 493	60 766	102 122
Matte (d)	5 738	2 251	7 813	1 732	6 116
Unwrought					
Unrefined	132 735	80 866	44 668	60 750	58 632
Refined	382 320	300 109	261 672	288 586	289 078
Alloys	11 281	4 745	2 289	3 200	12 975
Scrap	87 180	110 897	134 615	125 855	168 729
Argentina					
Unwrought, refined	31 949	15 432	10 127	27 500	40 667
Brazil					
Ores & concentrates	378 252	350 215	351 892	408 029	414 517
Unwrought					
Unrefined	15 075	6 536	12 826	0	0
Refined	37 935	50 621	36 439	75 919	80 513
Scrap	3 622	3 869	4 141	2 920	2 178
Colombia					
Unwrought	347	2 125	581	1 300	858
Venezuela					
Unwrought					
Refined	27 225	9 864	12 016	21 139	19 540
Alloys	2 144	446	1 064	305	664
China					
Ores & concentrates	(f) 172 999	(f) 178 166	242 197	309 786	340 093
Unwrought	84 368	70 082	40 251	113 967	378 996
Scrap	(a)* 20 100	(a)* 52 300	21 729	78 358	491 411
Hong Kong					
Unwrought	30 542	9 207	7 097	20 337	56 195
Scrap	22 408	33 758	46 639	92 467	201 487
India (e)					
Unwrought	67 740	71 781	72 049	49 740	52 431
Scrap	67 783	75 106	80 201	64 154	51 470
Indonesia					
Unwrought	30 639	39 305	49 456	49 322	51 812
Unwrought alloys	382	293	958	527	3 914
Scrap	140	98	1 806	3 232	2 634
Japan					
Ores & concentrates	3 435 547	3 372 960	3 522 535	3 786 873	3 469 611
Matte & cement	65	179	3 110	438	90
Unwrought	443 872	509 130	646 210	658 722	400 657
Unwrought alloys	4 979	6 084	6 841	10 893	7 812
Scrap	108 438	82 247	126 662	153 426	97 672
Korea, Republic of					
Ore	346 370	463 175	368 402	429 317	244 173
Matte & cement	25 114	13 086	8 487	3 530	1 972
Unwrought	147 960	115 233	176 006	199 673	222 515
Scrap	129 098	126 010	287 313	220 544	156 562
Malaysia					
Unwrought	32 878	48 495	50 173	67 103	80 187
Philippines					
Concentrates	107 030	119 691	187 398	272 910	270 552
Unwrought	2 483	2 331	6 092	4 225	9 958
Saudi Arabia					
Unwrought	9 902	4 722	50 716	51 335	...
Singapore					
Unwrought	77 952	55 594	66 018	84 053	135 979
Scrap	13 367	12 646	45 843	14 748	18 720
Taiwan					
Ores & concentrates	118 023	152 261	10 625	301	400
Unwrought	176 690	278 665	256 166	404 984	431 270
Scrap	30 479	30 445	15 333	39 596	23 819
Thailand					
Unwrought	29 594	34 184	53 725	68 953	91 319
Scrap	2 087	4 281	2 450	1 331	5 104

**Imports of Copper**

Country	1988	1989	1990	1991	1992
Australia Scrap (g)	2 982	2 616	3 034	5 362	4 485
New Zealand (g) Unwrought	3 195	6 007	4 416	5 031	3 973

## Note(s):

- (1) In this table the term 'unwrought' copper corresponds to item 682.1 of the Standard International Trade Classification (Revision 3) and includes both unrefined (including blister) and refined copper
- (2) 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) Data for the Federal Republic of Yugoslavia only
- (c) Including semi-manufactures
- (d) Cu content
- (e) Years ended 31 March following that stated
- (f) Including cement copper
- (g) Years ended 30 June of that stated

## Diamond

**Production of Diamond**

carats

Country	1988	1989	1990	1991	1992
Soviet Union	* 15 000 000	* 15 000 000	* 15 000 000	* 13 000 000	* 11 250 000
Angola	1 044 551	1 320 000	1 280 000	961 000	1 300 000
Botswana	15 229 000	15 252 000	17 351 000	16 506 000	15 946 000
Central African Republic	359 752	447 676	418 667	429 734	414 277
Ghana	259 431	285 636	636 503	687 736	694 029
Guinea	146 440	148 000	127 286	* 97 000	(b) 195 066
Ivory Coast	(a) 116 543	11 689	* 12 000	* 15 000	* 15 000
Liberia	(a) 167 030	(a) 154 554	* 100 000	* 100 000	* 150 000
Namibia	974 565	926 765	762 837	1 186 874	1 549 260
Sierra Leone	17 492	128 967	78 000	251 534	344 082
South Africa	8 504 016	9 115 880	8 708 231	8 431 389	10 177 283
Swaziland	72 676	55 264	42 488	57 420	50 547
Tanzania	85 892	75 885	74 480	99 762	67 304
Zaire	18 162 555	17 652 206	19 427 551	* 18 300 000	13 501 450
Zimbabwe	—	—	—	—	40 654
Brazil	544 588	500 141	1 542 241	* 1 400 000	1 318 000
Guyana	4 357	8 054	15 279	29 290	45 980
Venezuela	128 405	213 264	336 976	337 022	477 164
China	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000
India	14 191	15 451	18 121	17 660	* 18 000
Indonesia	* 29 000	* 32 000	* 30 000	* 32 000	* 27 000
Australia	35 221 000	35 079 000	34 662 000	35 956 000	40 173 000
World total	97 100 000	97 400 000	101 600 000	98 900 000	98 800 000

Note(s):

(1) This table does not show production of synthetic diamond

(a) Exports

(b) Including artisanal production



## Exports of Diamond

Country	1988	1989	1990	1991	1992
United Kingdom					
Rough	51 482 512	52 538 712	34 676 265	42 000 201	33 130 647
Cut	1 205 380	824 100	362 307	210 863	135 153
Industrial	15 218 700	23 245 260	27 054 112	13 675 479	7 594 918
Dust	9 507 960	13 095 360	25 069 200	20 858 820	16 277 700
Belgium-Luxembourg					
Rough	69 309 541	73 010 340	60 624 921	76 041 911	68 624 367
Cut	4 716 709	4 683 881	4 425 511	4 743 900	4 661 404
Industrial	17 715 358	20 844 348	19 131 379	12 493 222	11 289 033
Dust	9 620 000	14 506 840	20 113 060	16 413 585	15 582 490
France					
Rough	7 932	12 298	9 285	6 508	11 448
Cut	31 013	43 982	30 106	24 835	24 311
Industrial	178 948	142 454	53 345	128 957	30 533
Dust	837 265	1 193 995	2 324 495	1 490 435	1 751 985
Germany, Federal Republic of					
Industrial	302 117	296 042	337 547	136 038	96 221
Dust	46 235 000	15 790 000	17 840 000	21 520 000	22 855 000
Other	186 461	188 724	130 629	137 392	155 686
Irish Republic					
Industrial	685 000	9 760 000	9 860 000	1 075 000	7 865 000
Italy					
Industrial	10 784	...	404 237	186 613	50 573
Dust	2 575 000	...	...	3 000 000	1 965 000
Other	18 928	...	127 179	274 430	635 569
Netherlands					
Rough	231 191	150 773	211 275	184 059	156 990
Cut	163 343	77 318	60 478	56 741	61 062
Industrial	898 393	783 373	526 887	228 287	107 506
Dust	84 460	—	246 130	705 875	281 005
Portugal	£39 766 000	£53 704 000	£44 636 000	£48 559 000	£40 292 000
Spain					
Industrial	5 960	117 859	257 189	223 474	108 165
Other	1 305	1 376	3 087	2 849	920
Austria					
Industrial	65 000	100 000	285 000	965 000	435 000
Other	150 000	25 000	35 000	150 000	45 000
Malta	£1 068 000	£1 521 000	£2 292 000	£1 546 000	£429 000
Soviet Union					
Diamond	(b)* 894 600	(b)* 838 800	(b)* 563 700	(b)* 688 100	(e) 8 496 000
Dust (b)	* 7 983 600	* 6 810 200	* 12 901 400	* 6 985 900	* 4 715 800
Sweden					
Industrial	£53 000	£43 000	£86 000	£61 000	£32 000
Other	£1 360 000	£1 112 000	£7 028 000	£734 000	£1 200 000
Switzerland					
Industrial	145 000	175 000	480 000	285 000	10 000
Dust	23 575 000	25 615 000	29 115 000	25 865 000	28 560 000
Other	13 770 000	12 970 000	10 025 000	7 355 000	5 650 000
Central African Republic					
Gem	356 852	362 934	312 438	305 950	311 684
Industrial	—	80 806	104 398	122 141	102 245
Ghana					
Industrial	306 700	246 000	...	...	...
Ivory Coast	116 543	...	...	...	...
Kenya	20 090	...	...	...	...
Liberia	167 030	154 554	...	...	...
Mauritius					
Industrial	£1 572 900	£1 230 900	...	£9 300	—
Other	£12 936 100	£12 929 400	...	£14 432 500	£12 001 100
Namibia	924 998	923 407	779 395	1 134 270	1 326 114
Sierra Leone	20 000	130 000	89 600	250 170	313 300
South Africa (c)					
Industrial	£238 209 000	£138 727 000	£25 438 000	£21 817 000	(f) ...
Other	£449 250 000	£719 143 000	£875 220 000	£769 661 000	£1 175 759 000
Tanzania	101 417	46 915	...	...	...

## Diamond

## Exports of Diamond

carats

Country	1988	1989	1990	1991	1992
Tunisia					
Industrial	295 000	310 000	145 000	70 000	...
Other	805 000	680 000	755 000	455 000	...
Zaire	18 445 000	...	...	...	...
Canada					
Cut	59 740	175 352	65 513	29 303	38 460
of which: Re-exports	47 264	126 074	53 584	19 928	26 117
Industrial	249 981	195 252	43 105	82 252	44 890
of which: Re-exports	209 539	71 310	28 122	56 754	25 172
Dust	2 714 739	2 801 820	3 720 527	2 887 771	5 878 169
of which: Re-exports	2 244 108	2 794 020	3 315 615	2 785 047	5 449 978
USA					
Rough	1 367 803	1 877 191	1 707 593	2 702 270	3 028 999
of which: Re-exports	1 367 597	1 866 832	1 543 797	2 239 814	2 361 803
Cut	767 275	778 548	1 003 760	1 010 609	916 185
of which: Re-exports	176 863	88 601	797 209	839 638	643 264
Industrial	2 993 356	2 755 240	3 320 638	4 273 235	6 197 790
of which: Re-exports	1 163 513	1 233 902	2 010 845	2 246 959	3 043 249
Dust	...	5 433 109	2 983 475	3 254 850	2 957 464
of which: Re-exports	...	1 539 757	489 801	404 524	1 201 707
Brazil					
Rough	95 265	251 900	* 250 000	* 200 000	...
Gem	50 365	47 480	51 375	...	...
Venezuela					
Rough	—	430 000	...	...	...
China					
Industrial	9 365	110 535	71 610	40 240	1 436 035
Other	280 135	233 300	228 850	206 060	309 100
Hong Kong					
Rough (g)	200 291	379 917	573 026	361 343	1 217 168
Cut	1 047 382	1 210 280	1 322 371	1 461 352	1 607 064
of which: Re-exports	1 044 282	1 203 959	1 312 355	1 456 298	1 597 460
Industrial (g)	122 784	117 865	193 154	215 606	132 319
India (d)					
Gem	10 424 856	9 139 502	8 274 607	8 026 725	10 252 715
Israel					
Industrial	£2 443 000	£3 150 000	£2 761 000	£1 932 000	£1 053 000
Other	£1 592 650 000	£1 898 872 000	£1 965 182 000	£1 883 856 000	£2 070 402 000
Japan					
Industrial	38 820	109 076	120 509	598 841	1 366 694
Dust	9 187 305	20 775 195	13 011 974	6 426 903	6 270 220
Other	3 797	2 411	2 973	2 905	53 170
Korea, Republic of	3 515	2 185	2 400	2 845	306 140
Malaysia					
Cut	£4 528 000	£17 927 000	...	£40 880 000	£43 372 000
Other	£12 003 000	£11 353 000	...	£1 206 000	£1 294 000
Singapore					
Rough	£401 000	£469 000	£969 000	£217 000	—
of which: Re-exports	£401 000	£469 000	£969 000	£201 000	—
Cut	£11 393 000	£20 669 000	£29 436 000	£55 464 000	£45 626 000
of which: Re-exports	£9 841 000	£19 555 000	£28 952 000	£55 178 000	£44 467 000
Industrial	£177 000	£6 885 000	£558 000	£721 000	£11 336 000
of which: Re-exports	£165 000	£6 669 000	£483 000	£654 000	£11 259 000
Sri Lanka					
Industrial	—	2 722	27 807	8 821	14 981
Other	268 622	343 286	948 674	778 139	288 173
Taiwan					
Industrial	12 710 000	57 225 000	—	1 610 000	2 185 000
Other	10 625 000	13 170 000	60 000	15 395 000	150 000
Thailand					
Industrial	126 628	52 632	72 514	82 138	24 884
Dust	2 573 115	9 409 400	35 807 500	5 455 400	...
Other	260 406	484 856	747 744	924 660	3 897 290

**Exports of Diamond**

Country	1988	1989	1990	1991	1992
Australia					
Gem (a)	631 392	1 242 000	911 000	1 485 000	954 000
Industrial	1 572 718	144 000	110 000	127 000	198 000

## Note(s):

- (1) 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
- (2) See explanatory notes at the front of the volume regarding currency conversion
- (a) Excluding unsorted rough diamonds
- (b) BGS estimates, based on known imports into certain countries
- (c) Values shown are for the common customs area
- (d) Years ended 31 March following that stated
- (e) Data for the Russian Federation only
- (f) Included with 'other' diamonds
- (g) Re-exports

## Diamond

## Imports of Diamond

carats

Country	1988	1989	1990	1991	1992
United Kingdom					
Industrial	7 370 042	9 471 872	8 700 514	...	...
Other	53 882 723	55 936 537	35 865 608	...	...
Belgium-Luxembourg					
Rough	66 154 145	74 616 865	62 928 645	70 841 435	65 094 082
Cut	4 060 064	4 402 608	4 270 948	4 577 689	4 247 970
Industrial	21 943 039	24 380 043	22 491 771	27 221 175	24 452 829
Dust	16 545 000	26 218 635	27 476 800	20 170 745	23 046 525
France					
Rough	48 512	29 709	40 446	36 370	18 591
Cut	443 950	314 179	314 213	219 165	199 890
Industrial	360 430	554 106	219 801	268 256	185 234
Dust	7 140 455	8 947 820	7 581 500	7 088 875	8 597 390
Germany, Federal Republic of					
Rough	14 104	10 798	18 339	6 332	4 927
Cut	601 688	650 622	577 768	562 680	463 672
Industrial	983 250	1 255 480	1 067 101	691 414	936 707
Dust	61 195 000	38 205 000	39 650 000	41 800 000	46 460 000
Greece					
Industrial	99 903	69 350	149 400	80 450	20 000
Dust	18 149 450	3 080 000	3 525 000	3 695 000	...
Other	78 809	78 409	113 815	166 077	475 000
Irish Republic					
Industrial	185 000	925 000	2 725 000	38 770 000	12 835 000
Dust	13 325 000	9 745 000	6 000 000	5 550 000	4 250 000
Other	1 475 000	1 365 000	1 100 000	865 000	2 250 000
Italy					
Industrial	316 734	283 038	490 569	367 437	237 651
Dust	33 575 000	39 911 380	35 416 890	33 330 000	111 325 000
Other	1 476 352	2 170 329	304 087	337 198	876 095
Netherlands					
Rough	421 154	227 864	331 724	124 387	78 790
Cut	314 466	162 003	158 022	113 429	86 757
Industrial	848 112	773 027	380 351	274 733	239 973
Dust	729 325	1 350 635	1 089 380	1 038 345	1 054 830
Portugal	£36 760 000	£44 239 000	£36 685 000	£30 687 000	£26 750 000
Spain					
Rough	92	246	3 438	1 244	55
Industrial	143 921	43 807	113 482	623 865	964 755
Dust	3 713 930	14 444 415	6 463 575	6 398 625	9 014 630
Other	169 205	96 252	320 395	120 066	571 870
Austria					
Industrial	10 135 000	5 060 000	205 000	130 000	2 010 000
Dust	4 505 000	5 440 000	5 940 000	7 315 000	6 965 000
Other	60 000	45 000	110 000	35 000	625 000
Bulgaria (a)	* 18 700	* 16 000	* 118 600	* 21 700	* 13 900
Czechoslovakia (a)	* 47 800	* 21 800	* 32 300	* 5 300	* 4 300
Finland					
Industrial	210 000	245 000	190 000	95 000	140 000
Other	125 000	20 000	25 000	15 000	5 000
German Democratic Republic (a)	* 90 400	* 39 800	* 10 900	—	—
Hungary					
Industrial	120 487	21 647	4 103	...	...
Malta					
Rough	£1 638 000	£2 600 000	£2 943 000	£2 556 000	£1 568 000
Industrial	£36 000	£1 000	£31 000	£1 000	£114 000
Norway					
Industrial	15 000	25 000	105 000	30 000	210 000
Other	30 000	20 000	20 000	10 000	20 000
Romania (a)	* 560 200	* 591 400	* 557 700	* 23 500	...
Sweden					
Industrial	£545 000	£499 000	£1 092 000	£632 000	£313 000
Other	£5 742 000	£5 957 000	£5 030 000	£3 919 000	£3 267 000
Switzerland					
Industrial	465 000	310 000	270 000	255 000	385 000
Dust	35 735 000	19 315 000	38 665 000	38 685 000	38 950 000
Other	15 850 000	11 195 000	9 810 000	8 270 000	6 115 000
Turkey					
Industrial	65 000	240 000	1 245 000	115 000	50 000
Other	35 000	5 460 000	585 000	1 275 000	4 100 000
Yugoslavia					
Industrial	£506 000	£640 000	£590 000	(d) £183 000	...
Other	£125 000	£462 000	£63 000	(d) —	...

## Imports of Diamond

Country	1988	1989	1990	1991	1992
Algeria					
Industrial	75 000	75 000	45 000	...	...
Mauritius					
Industrial	£1 029 000	£2 222 000	...	£432 700	£130 000
Other	£9 995 000	£2 082 000	...	£12 670 900	£11 394 500
South Africa					
Rough	418 420	244 075	2 089 930	4 192 565	179 960
Cut	3 845	42 700	19 895	16 825	10 195
Industrial	802 105	452 035	888 270	1 194 635	866 650
Tunisia					
Industrial	115 000	1 465 000	145 000	80 000	...
Dust	1 120 000	775 000	715 000	580 000	...
Other	750 000	860 000	610 000	325 000	...
Zambia					
Industrial	1 280 000	30 000	50 000	435 000	...
Canada					
Cut	91 934	104 501	197 029	240 826	194 890
Industrial	2 110 586	1 331 724	2 016 843	1 023 704	1 088 719
Dust	6 394 797	2 653 848	243 957	226 216	221 625
Costa Rica					
Industrial	5 000	45 000	55 000	60 000	25 000
Mexico					
Industrial	1 300 000	...	15 200 000	...	1 960 000
Dust	3 405 000	15 560 000	30 495 000	...	21 830 000
USA					
Rough	1 644 298	1 818 742	1 285 664	1 846 237	1 638 784
Cut	8 752 889	8 870 080	6 304 959	6 691 310	7 724 266
Industrial	6 908 427	12 661 094	12 478 222	8 840 456	11 901 572
Bort	515 145	...	...	...	...
Dust	12 479 416	12 086 560	12 200 699	10 863 584	10 736 444
Argentina					
Industrial	115 000	...	...	...	...
Dust	260 000	...	...	...	...
Brazil					
Cut	—	10 000	5 000	5 000	...
Industrial	171 455	640 000	235 000	85 000	...
Dust	6 068 840	6 920 000	5 500 000	4 870 000	...
Chile					
Industrial	...	...	197 450	255 835	281 190
Colombia					
Industrial	105 000	295 000	25 000	...	...
Other	65 000	50 000	50 000	...	...
Venezuela					
Industrial	1 790 000	925 000	...	...	...
Abu Dhabi	60 000	...	80 000	70 000	95 000
China					
Industrial	1 044 235	408 415	261 865	430 290	2 104 160
Other	342 575	478 320	412 970	293 560	1 073 570
Cyprus	...	£1 576 000	£1 688 000	£4 622 000	£6 399 000
Hong Kong					
Rough	216 690	267 007	478 921	878 085	563 316
Cut	2 791 158	2 848 252	2 451 193	2 733 564	3 359 645
Industrial	653 788	227 070	88 423	217 445	830 160
India (c)					
Rough	72 452 779	72 914 421	52 750 651	63 895 598	80 018 535
Industrial	125 000	45 000	—	—	—
Israel					
Rough	12 521 000	10 296 000	...	...	...
Cut	810 000	851 000	...	...	...
Industrial	£10 301 000	£12 662 000	£10 990 000	£6 840 000	£6 387 000
Japan					
Rough	40 279	108 629	38 348	34 038	37 887
Cut	3 344 661	3 243 934	3 266 006	3 044 706	2 869 714
Industrial	631 311	654 918	691 293	710 149	684 684
Dust	1 810 015	2 072 354	1 883 547	2 158 125	1 538 584
Korea, Republic of					
Industrial	235 115	216 130	63 640	15 439 110	11 465 885
Dust	1 243 200	153 750	111 625	38 940	71 170
Other	14 980	14 600	36 005	35 540	47 320

## Diamond

**Imports of Diamond**

carats

Country	1988	1989	1990	1991	1992
Kuwait	1 780 000	1 750 000	...	...	125 000
Malaysia					
Rough	£17 075 000	£31 094 000	£34 634 000	£37 190 000	£42 496 000
Cut	£7 060 000	£9 685 000	£14 264 000	£17 080 000	£26 542 000
Industrial	£883 000	£226 000	...	£294 000	£557 000
Philippines					
Industrial	132 950	107 751	59 350	55 523	58 950
Qatar	...	205 000	7 915 000	505 000	18 505
Saudi Arabia					
Industrial	380 000	105 000	85 000	30 000	...
Other	1 895 000	165 000	85 000	50 000	...
Singapore					
Rough	£240 000	£173 000	£1 515 000	£136 000	£42 000
Cut	£40 463 000	£49 729 000	£72 567 000	£118 129 000	£108 548 000
Industrial	£454 000	£2 610 000	£7 152 000	£1 688 000	£24 900 000
Sri Lanka					
Industrial	166 231	...	532 671	93 776	84 844
Other	437 343	...	443 803	655 437	426 407
Taiwan					
Industrial	265 000	490 000	25 000	290 000	265 000
Dust	9 825 000	27 925 000	17 070 000	19 125 000	14 080 000
Other	...	250 000	4 940 000	1 850 000	105 000
Thailand					
Rough	3 542 997	870 670	1 180 871	429 958	1 065 246
Cut	6 405 575	1 843 326	3 501 382	2 403 514	3 885 311
Industrial	787 404	317 915	423 385	305 639	8 933 958
Dust	1 316 400	1 918 155	6 718 070	2 920 930	11 859 920
Australia					
Rough	313 343	8 000	20 000	9 000	10 000
Gem	127 555	148 000	152 000	167 000	144 000
Industrial	2 176 931	1 577 000	1 542 000	2 546 000	1 544 000
Dust	783 000	755 000	823 000	741 000	854 000
New Zealand (b)					
Industrial	£129 000	£63 000	£43 000	£9 000	£25 000
Other	£3 934 000	£4 375 000	£5 179 000	£3 591 000	£3 963 000

## Note(s):

- (1) 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
- (2) See explanatory notes at the front of the volume regarding currency conversion
- (a) BGS estimates, based on known exports from certain countries
- (b) Years ended 30 June of that stated
- (c) Years ended 31 March following that stated
- (d) Data for the Federal Republic of Yugoslavia only

**Production of Diatomite**

Country	1988	1989	1990	1991	1992
United Kingdom	320	270	240	220	120
Denmark (a)					
Diatomite	* 6 000	* 6 000	* 1 000	* 1 000	* 1 000
Moler (d)	* 95 000	* 75 500	* 97 000	* 95 000	* 95 000
France (b)	* 250 000	* 250 000	* 250 000	* 250 000	* 250 000
Germany, Federal Republic of	47 200	46 800	49 800	44 300	47 300
Italy	* 28 000	* 25 000	* 25 000	* 23 000	* 26 000
Portugal	2 070	2 690	2 270	2 410	1 850
Spain (b)	81 331	83 943	108 000	* 60 000	36 000
Iceland	25 142	24 900	24 856	23 016	19 946
Romania	* 55 000	50 000	* 40 000	* 30 000	* 15 000
Soviet Union	* 260 000	* 260 000	* 250 000	* 220 000	* 190 000
Yugoslavia	5 364	6 081	6 119	* 4 000	* 5 000
Algeria	3 087	4 241	4 620	3 629	2 671
Kenya	711	1 968	750	2 395	2 142
South Africa	199	133	2 798	2 352	576
Canada	* 4 200	* 4 200	* 4 100	* 8 000	* 10 000
Costa Rica	5 200	6 000	6 000	* 12 000	* 12 000
Mexico	36 524	44 920	51 084	45 966	46 443
USA (c)	629 000	617 000	631 000	610 000	595 000
Argentina	7 122	6 301	4 254	6 132	5 363
Brazil (e)	14 387	21 320	18 565	12 442	14 669
Chile	2 919	3 315	3 877	5 557	5 897
Colombia	3 000	3 600	3 100	3 890	4 356
Peru	29 650	* 20 000	* 20 000	25 500	* 25 000
Korea, Republic of	71 952	75 019	55 445	91 126	76 775
Thailand	470	1 424	4 593	7 328	10 425
Australia	11 279	* 12 000	* 10 000	* 11 000	* 11 000
World total	1 680 000	1 650 000	1 670 000	1 600 000	1 510 000

## Note(s):

(1) In addition to the countries listed, Czechoslovakia, Hungary and Japan are 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

(e) Including beneficiated and directly shipped material

## Diatomite

**Exports of Diatomite**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	679	707	2 556	539	1 092
Belgium-Luxembourg	730	3 480	2 202	2 665	3 359
Denmark					
Diatomite	81 552	81 866	85 978	85 424	* 87 500
Moler bricks	23 705	...	...	...	...
France	36 309	36 767	41 661	35 767	36 595
Germany, Federal Republic of	2 274	2 401	2 509	1 930	2 138
Italy	2 543	2 894	2 765	1 872	1 343
Netherlands	586	860	866	778	1 552
Spain	8 739	8 096	4 658	2 250	6 334
Austria	2 811	3 671	5 780	5 914	6 021
Czechoslovakia (a)	* 5 300	* 5 400	* 5 100	* 4 700	* 4 800
Hungary	(a)* 1 800	(a)* 1 400	(a)* 400	(a)* 100	188
Iceland	25 840	23 553	24 251	21 788	19 172
Sweden	125	112	188	37	152
Turkey	513	314	968	640	—
Yugoslavia	712	687	1 340	(d) —	...
Algeria	968	940	965	452	...
Kenya	530	...	...	...	...
Mexico	6 145	7 986	5 106	7 727	9 211
USA	147 324	137 131	144 459	152 599	163 377
Chile	721	857	1 461	2 205	5 083
China	...	...	19 528	37 659	85 165
Hong Kong (b)	1 440	1 972	1 403	1 837	3 013
Japan	1 986	2 541	1 863	2 374	3 534
Korea, Republic of	100	228	623	183	256
Singapore (b)	661	543	778	412	384
Taiwan	22	136	195	528	482
Australia (c)	311	235	260	154	347

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

(b) Re-exports

(c) Years ended 30 June of that stated

(d) Data for the Federal Republic of Yugoslavia only



## Imports of Diatomite

Country	1988	1989	1990	1991	1992
United Kingdom	42 718	39 211	35 718	33 471	36 337
Belgium-Luxembourg	13 670	16 015	16 011	19 684	16 527
Denmark	5 867	5 547	4 505	4 915	4 757
France	11 688	14 130	20 160	17 458	20 483
Germany, Federal Republic of	37 903	38 857	46 043	50 795	50 482
Greece	1 793	2 609	2 771	2 670	2 307
Irish Republic	149	269	214	276	233
Italy	6 662	7 475	7 487	7 240	7 798
Netherlands	20 749	22 435	25 398	22 214	22 484
Portugal	3 780	4 361	4 528	3 406	3 497
Spain	3 448	4 435	4 073	3 702	4 115
Austria	14 342	14 080	13 657	13 404	14 626
Bulgaria (b)	* 1 900	* 1 800	* 2 200	* 1 600	* 1 300
Czechoslovakia (b)	* 1 700	* 1 500	* 2 000	* 1 400	* 1 400
Finland	2 785	3 443	3 610	2 913	2 782
German Democratic Republic (b)	* 1 900	* 2 100	* 1 000	—	—
Norway	1 835	2 067	1 922	1 602	1 663
Poland (b)	* 2 300	* 3 200	* 1 900	* 2 200	* 2 500
Romania (b)	* 500	* 400	* 1 100	* 1 300	* 800
Sweden	2 810	2 656	2 186	2 351	2 362
Switzerland	7 196	7 047	6 877	6 073	5 254
Turkey	131	232	383	380	391
Yugoslavia	1 372	1 051	1 422	(e) 841	...
Algeria	233	10	25	100	...
Cameroon	* 700	* 500	* 300	* 400	...
Gabon	...	...	212	...	...
Morocco	341	416	697	362	1 034
South Africa	2 671	2 422	2 667	2 407	2 592
Tunisia	795	763	3 183	3 699	909
Zambia	242	184	401	...	...
Zimbabwe	486	...	970	...	...
Canada	19 592	21 041	20 951	22 250	21 389
Costa Rica	186	315	316	143	180
El Salvador	527	215	255	301	...
Guatemala	340	297	296	427	820
Honduras	314	501	571	470	372
Mexico	594	2 095	519	406	498
Panama	316	471	748	532	588
USA	2 761	838	689	436	182
Argentina	2 038	1 738	1 788	...	...
Brazil	1 200	2 174	3 320	2 847	2 377
Colombia	1 471	1 406	2 132	...	1 874
Ecuador	355	221	245	327	3 579
Peru	1 097	292	1 796	536	...
Venezuela	7 330	2 587	2 837	4 010	4 710
China	(b)* 2 500	(b)* 2 700	765	1 847	2 352
Cyprus	210	360	239	176	175
Hong Kong	2 330	2 716	2 149	2 855	2 960
India (d)	1 303	688	1 185	1 210	1 148
Indonesia	2 045	1 298	2 071	1 591	2 379
Iran (c)	343	181	482	...	...
Israel (b)	* 1 200	* 1 100	* 1 000	* 1 000	* 1 100
Japan	6 860	5 327	4 501	5 517	5 128
Korea, Republic of	345	417	414	159	1 097
Malaysia	937	1 062	...	1 716	1 944
Pakistan (a)	408	...	257	70	38
Philippines	628	405	738	211	647
Saudi Arabia	1 867	4 785	1 190	2 674	...
Singapore	1 956	1 645	1 943	2 090	1 541
Taiwan	7 150	11 039	6 117	6 920	8 958
Thailand	105	143	275	243	375

## Diatomite

**Imports of Diatomite**

tonnes

Country	1988	1989	1990	1991	1992
Australia (a)	6 285	7 710	6 452	6 623	7 465
New Zealand (a)	2 466	2 549	2 654	2 002	1 847

- (a) Years ended 30 June of that stated
- (b) BGS estimates, based on known exports from certain countries
- (c) Years ended 20 March following that stated
- (d) Years ended 31 March following that stated
- (e) Data for the Federal Republic of Yugoslavia only

## Production of Feldspar

Country	1988	1989	1990	1991	1992
United Kingdom (g)	6 422	6 470	6 257	6 417	8 243
France	322 000	360 500	395 840	386 000	282 000
Germany, Federal Republic of	308 800	332 600	337 600	328 800	324 700
Greece	37 531	28 903	17 608	11 800	26 600
Italy	1 367 546	1 336 375	1 605 431	1 354 191	1 330 000
Portugal	51 903	69 584	77 329	93 702	99 645
Spain (c)	195 668	191 238	214 152	192 000	204 000
Austria	8 222	7 351	8 788	10 429	11 059
Finland	54 170	51 743	50 905	47 225	47 500
Norway (d)	90 338	59 709	63 440	* 65 000	* 75 000
Poland	* 50 000	* 50 000	* 45 000	* 40 000	* 45 000
Romania	* 82 000	59 960	* 45 000	* 40 000	27 715
Soviet Union	* 330 000	* 330 000	* 300 000	* 250 000	* 185 000
Sweden (e)	38 180	38 437	41 197	32 945	34 598
Turkey	82 225	84 932	182 266	229 543	284 645
Yugoslavia	35 614	48 276	43 000	* 40 000	* 25 100
Algeria	...	5 431	4 940	4 499	4 647
Egypt (h)	6 131	5 527	21 299	21 113	32 326
Kenya	—	1 112	1 290	* 1 200	* 1 200
Morocco	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Nigeria	75	945	714	* 700	* 700
South Africa	61 440	52 964	56 124	70 324	49 425
Zambia	120	20	60	* 70	113
Zimbabwe	3 730	2 697	2 197	3 820	2 696
Guatemala	7 200	10 079	11 895	6 961	6 113
Mexico	83 170	121 978	163 011	151 678	159 451
USA	650 000	655 000	630 000	580 000	725 000
Argentina	39 469	23 688	28 039	42 270	48 509
Brazil (f)	109 534	103 891	61 443	* 100 000	* 100 000
Chile	4 569	8 081	2 980	4 006	5 740
Colombia	30 500	40 850	38 675	75 575	78 446
Ecuador	10 562	7 463	8 127	2 254	5 505
Peru	2 738	* 10 000	* 10 000	* 3 000	10 021
Uruguay	2 787	2 852	4 311	3 676	8 211
Venezuela	96 744	83 557	100 779	138 369	168 689
Hong Kong	11 050	5 152	3 820	—	—
India	57 656	56 690	54 135	65 089	* 65 000
Indonesia	...	13 025	19 779	13 674	16 719
Iran (b)	14 781	20 458	32 071	64 754	52 120
Japan	504 068	548 084	528 201	536 588	434 136
Jordan	200	10 300	9 200	2 000	2 000
Korea, Republic of	241 511	232 607	237 447	247 969	281 553
Myanmar (a)	4 938	1 812	1 666	3 759	* 4 000
Pakistan	9 510	7 703	10 249	10 210	19 166
Philippines	9 199	36 803	46 102	47 979	* 45 000
Sri Lanka	7 278	1 282	9 750	9 908	7 524
Taiwan	19 101	9 806	7 321	1 339	2 216
Thailand	293 686	515 206	311 249	402 641	559 806
Australia	15 877	* 12 500	* 16 000	* 16 000	* 15 000
World total	5 400 000	5 700 000	5 900 000	5 800 000	5 900 000

## Note(s):

(1) In addition to the countries listed, China, Czechoslovakia and Namibia are believed to produce feldspar

(a) Years ended 31 March following that stated

(b) Years ended 20 March following that stated

(c) Including pegmatite

(d) Underground production of ground withheld

(e) Sold or used by producers

(f) Including beneficiated and directly shipped material

(g) China stone

(h) Years ended 30 June of that stated

## Feldspar

**Exports of Feldspar**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	823	2 350	2 447	1 017	169
France	77 857	119 843	123 367	110 846	92 506
Germany, Federal Republic of	29 131	32 335	33 010	36 678	35 614
Italy	34 557	29 989	29 132	26 308	23 058
Netherlands	1 216	1 608	1 840	1 938	2 118
Portugal	14 501	10 537	6 999	3 427	1 596
Spain	2 413	3 060	9 361	10 800	9 193
Czechoslovakia (b)	* 2 200	* 4 000	* 6 300	* 6 700	...
Finland	34 050	32 328	32 770	31 401	28 540
Norway	69 059	71 763	71 265	79 756	65 688
Sweden	26 386	20 070	24 211	19 549	25 075
Turkey	20 094	(a) 43 751	(a) 96 546	(a) 162 910	(a) 234 430
Yugoslavia	3 576	4 635	6 356	(f) 1 590	...
South Africa	4 514	5 797	6 029	2 974	3 526
Guatemala (a) (c)	3 665	4 067	4 993	4 210	6 073
Mexico	5 591	11 764	10 307	20 143	14 507
USA	(a) 12 510	9 705	24 795	8 604	17 734
Brazil	6 925	2 242	6 660	3 179	2 129
China	(b) (g)* 108 300	(b) (g)* 145 400	222 945	318 804	439 908
Hong Kong	(c) 79 524	(c) 105 673	(c) 146 487	(c) 177 932	(a) 201 873
of which: Re-exports	56 324	84 473	112 687	151 917	201 873
India (d)	28 593	25 892	38 182	47 894	26 355
Japan	28 841	34 369	31 331	40 412	34 581
Korea, Republic of	24 101	6 611	24 566	20 805	24 049
Singapore (a)	4 002	7 950	7 524	15 173	14 011
of which: Re-exports	4 002	7 950	7 522	14 581	13 966
Thailand	263 370	380 217	333 739	255 423	338 031
Australia (e)	...	9 214	12 548	20 751	14 354

(a) May include some leucite and nepheline

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

(c) Including some fluorspar

(d) Years ended 31 March following that stated

(e) Years ended 30 June of that stated

(f) Data for the Federal Republic of Yugoslavia only

(g) May include some fluorspar, leucite and nepheline

## Imports of Feldspar

Country	1988	1989	1990	1991	1992
United Kingdom	50 756	46 375	49 010	41 200	36 895
Belgium-Luxembourg	23 799	25 607	19 035	15 525	16 385
Denmark	4 595	3 938	4 083	3 874	3 644
France	29 021	32 008	32 340	40 228	32 953
Germany, Federal Republic of	66 710	78 046	76 606	95 350	83 554
Greece	3 497	4 365	7 812	6 532	...
Irish Republic	3 262	71	43	43	—
Italy	23 020	70 866	100 470	158 095	246 388
Netherlands	11 203	9 157	12 739	19 641	21 028
Portugal	630	1 582	7 340	(a) 13 041	(a) 13 058
Spain	42 837	70 048	81 353	73 575	96 450
Austria	4 767	4 386	4 944	4 472	4 800
German Democratic Republic (a) (b)	* 18 100	* 16 200	* 6 300	—	—
Hungary	545	590	304	...	747
Norway	1 362	751	233	311	383
Poland	12 401	12 182	14 275	11 513	(b)* 8 700
Sweden	10 035	8 410	5 907	8 270	4 565
Switzerland	16 207	16 459	14 266	12 462	9 929
Yugoslavia	2 373	1 139	1 393	(e) 20	...
Algeria (a)	4 116	2 700	2 650	5 201	...
Egypt (a) (c)	15 345	11 379	...	...	...
Morocco (a)	1 095	648	836	766	...
Tunisia	2 041	2 049	2 177	2 418	3 026
Canada	13 235	3 961	2 589	2 437	1 919
Costa Rica (c)	3 521	4 702	4 621	4 876	6 209
Mexico	522	1 445	1 431	979	913
Panama (a) (c)	1 517	38	3 164	185	3 068
USA	6 705	12 003	11 318	17 876	12 965
Venezuela	1 077	704	803	776	1 675
Hong Kong	(c) 85 947	(c) 126 087	(c) 178 243	(c) 185 599	(a) 205 010
Indonesia	(a) 16 000	18 977	16 723	17 930	26 225
Israel (a) (b)	* 2 500	* 2 700	* 3 300	* 3 300	* 3 200
Japan	11 709	4 298	12 636	4 440	2 789
Jordan (a) (c)	1 382	549	669	721	1 009
Korea, Republic of	2 849	2 329	8 728	6 206	9 435
Malaysia	31 668	41 821	...	97 392	120 847
Philippines	(a) (c) 3 423	(a) (c) 7 724	(a) (c) 6 258	4 246	4 751
Saudi Arabia	(a) (c) 619	(a) (c) 617	(a) (c) 393	701	...
Singapore (a)	5 686	13 385	20 889	33 780	33 264
Syria (a) (c)	...	...	678	...	...
Taiwan	(a) (c) 338 580	479 824	533 896	590 115	694 693
Thailand (a)	879	1 158	1 679	3 115	5 883
New Zealand (d)	(a) (c) 912	354	146	257	148

(a) May include some leucite and nepheline

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

(c) Including some fluorspar

(d) Years ended 30 June of that stated

(e) Data for the Federal Republic of Yugoslavia only

**Production of Fluorspar**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	103 797	122 057	118 498	77 903	76 129
France	185 400	208 200	257 896	187 500	130 900
Germany, Federal Republic of	77 700	73 800	85 400	60 900	53 100
Greece	604	450	* 200	* 200	* 200
Italy	140 885	118 692	125 467	104 828	60 000
Spain	142 575	172 325	153 691	112 000	96 000
Czechoslovakia	* 95 000	68 910	46 966	* 40 000	* 40 000
German Democratic Republic	111 400	99 200	* 80 000	—	—
Romania	* 18 000	* 16 000	* 15 000	* 14 000	* 15 000
Soviet Union	* 410 500	* 410 000	* 380 000	* 350 000	* 300 000
Turkey	13 240	* 13 000	* 13 000	* 13 000	* 13 000
Egypt (c)	1 849	1 611	1 249	1 526	981
Kenya	67 351	111 300	78 510	80 144	71 423
Morocco	100 500	105 000	86 500	74 600	85 500
Namibia	3 989	25 679	27 107	27 816	37 680
South Africa	328 421	368 340	311 032	270 341	259 790
Tunisia	56 000	53 700	40 974	37 580	13 750
Canada	40 751	50 794	21 400	—	—
Mexico	756 096	779 357	633 814	370 297	286 640
USA	* 63 500	* 66 000	* 63 500	* 58 000	* 51 000
Argentina	18 052	23 385	24 503	16 462	4 587
Brazil (a)	89 998	106 638	88 418	81 313	83 696
China	* 1 400 000	1 680 000	1 650 000	* 1 500 000	* 1 750 000
India	20 392	28 065	23 441	24 139	* 23 000
Iran (b)	6 483	* 6 000	4 767	12 260	* 12 000
Korea, Dem. P.R. of	* 40 000	* 40 000	* 40 000	* 41 000	* 41 000
Korea, Republic of	261	856	560	290	70
Mongolia	919 000	999 000	884 000	370 000	277 000
Pakistan	375	4 741	5 312	* 5 300	* 5 000
Thailand	76 321	98 375	94 757	62 067	56 459
World total	5 300 000	5 900 000	5 400 000	4 000 000	3 800 000

## Note(s):

(1) In addition to the countries listed, Bulgaria is believed to produce fluorspar

(a) Including beneficiated and directly shipped material

(b) Years ended 20 March following that stated

(c) Years ended 30 June of that stated

**Exports of Fluorspar**

Country	1988	1989	1990	1991	1992
United Kingdom	8 115	8 439	3 983	3 938	3 871
Belgium-Luxembourg	3 069	3 715	4 130	3 753	1 905
France	38 564	57 842	40 204	32 045	23 421
Germany, Federal Republic of	24 897	27 207	41 232	33 780	25 667
Italy	19 674	1 381	4 958	5 955	4 782
Netherlands	1 863	964	1 704	1 235	864
Spain	72 720	51 600	54 787	40 644	15 491
German Democratic Republic (a)	* 27 700	* 15 500	* 15 800	—	—
Sweden	2 108	1 600	1 514	912	1 100
Kenya	98 105	...	65 041	...	...
Morocco	89 694	108 664	81 748	76 300	78 000
South Africa	313 186	323 410	245 695	247 338	250 879
Tunisia	15 000	11 070	1 945	1 039	60
Canada	38 301	40 123	22 620	1 599	607
Mexico	509 444	554 390	379 086	225 218	150 275
USA	3 163	6 486	16 261	74 590	14 277
China	911 976	1 183 533	1 094 047	933 694	1 187 840
Japan	1 558	506	338	582	578
Thailand	25 487	73 864	79 695	84 210	60 078

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

## Fluorspar

## Imports of Fluorspar

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom (b)	* 26 700	* 16 000	* 12 800	* 6 500	* 9 900
Belgium-Luxembourg	17 663	17 109	20 442	12 725	16 754
Denmark	420	445	453	448	469
France	14 220	21 852	18 440	28 571	6 253
Germany, Federal Republic of	242 761	254 641	225 582	205 145	216 202
Greece	4 597	1 050	20 288	4 482	4 852
Italy	65 528	104 246	115 071	91 746	95 026
Netherlands	35 963	26 045	30 520	18 122	22 347
Portugal	2 230	2 049	1 963	603	1 401
Spain	7 628	4 924	5 015	4 714	9 123
Austria	11 387	16 779	19 756	15 994	10 859
Bulgaria (b)	* 700	* 500	* 500	...	...
Finland	7 548	7 851	8 654	6 709	12 209
Hungary	4 124	5 454	1 706	...	1 072
Norway	48 942	44 238	47 070	56 994	47 318
Poland	17 685	4 695	9 129	5 250	...
Romania (b)	...	...	* 17 200	* 16 200	* 8 000
Soviet Union	...	...	(b)* 165 700	(b)* 2 500	(g) 147 746
Sweden	11 832	13 915	11 407	9 550	8 143
Switzerland	696	860	998	575	597
Turkey	436	446	595	1 003	1 146
Yugoslavia	10 349	4 838	6 036	(f) 695	...
Algeria	369	100	5	...	...
Egypt (a) (c)	15 345	11 379	...	...	...
Tunisia	2 798	1 805	6 575	13 337	34 808
Canada	194 057	162 664	151 255	112 093	91 667
Costa Rica (c)	3 521	4 702	4 621	4 876	6 209
Mexico	46 399	47 265	33 308	...	...
Panama (a) (c)	1 517	38	3 164	185	3 068
USA	693 412	655 410	502 971	368 197	407 304
Brazil	—	2 344	137	9 542	14 141
Chile	(b)* 3 400	9 929	1 533	4 460	4 456
Peru	382	184	1 420	284	...
Venezuela	1 209	659	607	479	791
Hong Kong	(c) 85 947	(c) 126 087	(c) 178 243	(c) 185 599	300
India (e)	23 346	41 523	41 266	31 839	26 237
Indonesia	—	2 942	3 602	4 672	2 208
Japan	609 113	708 957	567 023	565 831	528 656
Jordan (a) (c)	1 382	549	669	721	1 009
Korea, Republic of	50 453	74 503	52 936	72 030	74 017
Malaysia	1 660	1 784	...	2 224	2 409
Philippines	(a) (c) 3 423	a) (c) 7 724	(a) (c) 6 258	1 687	765
Saudi Arabia (a) (c)	619	617	393	—	...
Syria (a) (c)	...	...	678	...	...
Taiwan	(a) (c) 338 580	14 587	25 431	25 956	28 483
Australia (d)	22 726	16 725	28 223	19 681	4 805
New Zealand (d)	(a) (c) 912	91	304	63	122

(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 31 March following that stated

(f) Data for the Federal Republic of Yugoslavia only

(g) Data for the Russian Federation only



## Mine Production of Gold

kilograms (metal content)

Country	1988	1989	1990	1991	1992
France	2 525	3 303	4 236	4 612	2 907
Germany, Federal Republic of	* 30	* 15	—	—	—
Portugal	317	294	276	264	138
Spain	5 571	7 719	6 814	7 420	5 887
Finland	594	1 785	1 503	1 818	1 663
German Democratic Republic	* 2 500	* 2 500	—	—	—
Hungary	* 560	* 600	* 600	* 500	* 500
Romania	* 5 000	6 000	* 5 000	* 6 000	3 700
Soviet Union	277 600	304 000	302 000	* 240 000	* 248 700
Sweden	3 590	5 120	6 326	6 247	6 164
Yugoslavia (d)	4 620	4 349	8 190	(f) 6 920	(g) 7 330
Botswana	21	67	46	20	165
Burkina Faso	2 761	4 085	2 715	2 579	1 151
Burundi	* 30	19	9	25	32
Central African Republic	382	328	241	191	155
Ethiopia (b)	728	746	848	3 038	2 224
Gabon	138	81	150	* 150	70
Ghana	11 631	13 265	16 563	26 310	31 038
Guinea	1 300	2 053	6 340	4 453	2 113
Ivory Coast	6	13	20	* 1 100	* 1 750
Kenya	16	16	48	34	20
Liberia (a)	677	734	* 600	* 600	* 700
Mali	483	699	2 355	2 568	3 227
Mauritania	—	—	—	—	700
Mozambique	—	—	72	394	296
Namibia	240	336	1 634	1 850	2 025
Rwanda	16	745	2 163	1 000	* 1 000
Sierra Leone	20	70	32	26	93
South Africa	621 000	607 474	605 100	601 013	613 036
Sudan	50	150	150	* 150	973
Tanzania	164	112	1 643	3 851	4 525
Zaire	3 301	2 485	5 224	6 131	2 525
Zambia (c)	262	149	129	124	218
Zimbabwe	14 965	16 003	16 921	17 820	18 278
Canada	135 889	159 527	169 412	176 552	161 402
Costa Rica (e)	368	92	72	564	144
Dominican Republic	6 335	5 355	4 354	3 160	2 375
Honduras	123	75	156	180	163
Mexico	9 098	8 613	8 548	8 937	10 412
Nicaragua	881	1 421	1 058	1 017	1 324
USA	200 914	265 731	294 189	294 062	330 212
Argentina	962	1 150	1 399	1 725	1 106
Bolivia	4 891	3 602	5 198	3 501	4 688
Brazil	56 447	52 378	101 728	89 578	85 862
Chile	20 614	22 559	27 503	28 879	34 473
Colombia	29 020	29 506	29 353	34 845	32 117
Ecuador	8 599	8 155	4 417	4 500	4 500
French Guiana	522	544	870	1 417	2 140
Guyana	585	539	1 204	1 844	2 475
Peru	9 720	9 898	9 097	9 987	10 082
Venezuela	3 502	5 113	6 334	6 733	8 547
China	* 78 000	* 90 000	* 100 000	* 120 000	* 140 000
India	1 942	1 827	1 983	1 973	1 498
Indonesia	4 731	5 239	10 653	11 275	37 978
Iran	* 400	* 400	* 500	* 800	* 1 000
Japan	7 308	6 097	7 303	8 299	8 893
Korea, Dem. P.R. of	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Korea, Republic of (d)	11 121	14 270	20 760	20 809	23 263
Malaysia	2 928	2 860	2 595	2 778	3 513
Myanmar (h)	31	44	26	22	31
Philippines	30 492	29 992	24 591	25 916	22 702
Saudi Arabia	...	2 901	3 536	4 808	5 909
Taiwan (d)	237	269	72	—	—

## Gold

**Mine Production of Gold**

kilograms (metal content)

Country	1988	1989	1990	1991	1992
Australia	156 950	203 563	242 420	235 990	243 545
Fiji	4 274	4 222	4 116	2 827	3 090
New Zealand	2 404	4 963	4 626	6 758	10 531
Papua New Guinea	38 089	31 137	34 280	60 782	71 190
Solomon Islands	50	39	53	50	39
World total	1 797 000	1 962 000	2 125 000	2 123 000	2 234 000

## Note(s):

- (1) In several countries substantial amounts of gold produced in small operations are not recorded in the official statistics used when compiling this table
- (2) In addition to the countries listed, Bulgaria, Cameroon, Czechoslovakia, Greece, Morocco, Norway, Oman and Thailand are believed to produce gold
  - (a) Exports
  - (b) Years ended 6 July of that stated
  - (c) Contained in blister copper, refinery muds and electrolytic copper
  - (d) Metal production
  - (e) Central Bank purchases
  - (f) Excluding data from August to December for the Republic of Croatia
  - (g) Data for the Federal Republic of Yugoslavia only
  - (h) Years ended 31 March following that stated

## Exports of Gold

Country	1988	1989	1990	1991	1992
United Kingdom					
Metal					
Refined	615 999	811 331	632 154	547 699	924 143
Other	5 204	22 091	15 034	9 726	75 874
Waste & scrap	2 862	156 276	248 638	5 490	2 307
Belgium-Luxembourg					
Metal	19 088	36 046	18 929	19 689	22 691
Waste & scrap	£4 560 000	£4 564 000	£3 068 000	£2 577 000	£3 826 000
Denmark					
Metal	684	972	1 865	961	878
of which: Re-exports	426	248	1 124	381	455
Waste & scrap	6 777	4 964	5 507	6 218	3 327
of which: Re-exports	3 988	969	1 575	2 088	547
France					
Metal	28 773	40 779	40 916	44 377	44 421
Waste & scrap	370 010	535 107	962 268	1 599 937	695 873
Germany, Federal Republic of					
Metal	45 665	46 980	44 493	71 517	58 945
Waste & scrap	135 140	88 894	108 542	32 567	3 013
Irish Republic					
Metal	£21 000	£114 000	£49 000	£32 000	£19 000
Waste & scrap	£1 282 000	£1 206 000	£1 350 000	£1 485 000	£1 296 000
Italy					
Metal	4 719	11 846	5 500	4 421	25 974
Netherlands					
Metal	23 293	4 693	1 643	1 083	1 199
Waste & scrap	11 000	17 000	21 000	3 000	11 000
Spain					
Metal	183	903	2 195	2 763	905
Austria					
Metal	1 015	622	313	638	948
Finland					
Metal	1 405	1 699	1 914	1 943	1 124
German Democratic Republic					
Metal (c)	* 700	* 700	* 200	—	—
Norway					
Metal	696	607	776	926	1 133
Waste & scrap	65	78	154	370	384
Soviet Union					
Metal (c)	* 165 400	* 83 900	* 41 400	* 79 700	* 22 700
Sweden					
Metal	6 000	7 000	7 000	9 000	7 000
Waste & scrap	21 000	41 000	42 000	39 000	28 000
Switzerland					
Metal	841 276	1 111 541	1 104 637	1 040 647	1 187 660
Waste & scrap	63 351	374 894	35 907	94 401	46 723
Ghana					
Metal	10 981	12 003	...	...	...
Liberia					
Metal	677	734	...	...	...
Namibia					
Metal	205	312	1 573	1 873	2 049
Sierra Leone					
Metal	40	200	10	19	51
South Africa					
Metal	£4 888 000 000	£4 684 000 000	£4 130 000 000	£3 969 000 000	£3 881 000 000
Zaire					
Metal	2 910	* 1 200	* 400	...	...
Zimbabwe					
Metal	14 432	...	18 454	...	...
Canada					
Ores & concentrates (d)	11 596	10 973	10 816	8 393	6 565
Metal	126 937	161 986	144 930	162 975	212 478
Dominican Republic					
Metal	6 335	5 355	4 354	3 160	2 375

## Gold

**Exports of Gold**

kilograms

Country	1988	1989	1990	1991	1992
USA					
Ore (b)	1 386	16	328	10	30
Metal					
Unrefined	20 614	43 071	88 275	47 534	51 086
Refined	300 965	124 938	142 460	177 920	264 383
Other	4 459	11 297	8 957	9 646	9 034
Waste & scrap	36 037	44 559	67 003	68 102	80 267
Bolivia					
Ores & concentrates (b)	1 873	1 924	2 229	1 675	1 799
Metal	2 380	1 677	3 028	1 682	165
Chile					
Metal	15 507	37 035	68 119	65 780	64 444
Colombia					
Ore	296 250	435 000	359 732	401 552	533 485
Peru					
Metal	24	—	713	9 890	19 583
China					
Metal (c)	* 1 100	* 1 900	* 2 200	* 1 500	* 1 500
Hong Kong					
Metal (a)	23 333	15 112	15 874	5 826	5 152
Waste & scrap (a)	1 470	1 038	3 044	2 000	2 526
Indonesia					
Metal	21 764	19 474	9 544	12 495	13 774
Japan					
Metal	11 241	18 136	30 995	12 353	36 349
Jordan					
Metal (a)	3 695	2 478	147	2 800	5 282
Korea, Dem. P.R. of					
Metal (c)	* 7 500	* 1 300	* 2 500	* 1 000	* 2 800
Korea, Republic of					
Metal	6 551	11 282	14 373	16 866	21 455
Malaysia					
Metal	1 104	893	1 153	720	1 072
Waste & scrap	431	645	900	788	480
Philippines					
Ores & concentrates (b)	8 529	9 181	7 515	5 682	11 884
Singapore					
Metal	4 624	5 176	20 127	8 258	9 907
of which: Re-exports	778	808	2 107	2 133	3 449
Waste & scrap	2 213	1 697	1 326	22 234	9 353
Taiwan					
Waste & scrap	12 339	41 621	42 946	22 361	16 832
Australia					
Ores & concentrates (b)	4 362	5 800	8 800	5 507	* 1 600
Metal	138 353	172 000	238 400	253 703	296 312
Fiji					
Metal	4 134	3 953	3 769	...	...
New Zealand (e)					
Metal	1 530	1 878	5 700	3 508	10 757
Papua New Guinea					
Metal	38 089	31 137	34 280	60 782	71 190

## Note(s):

(1) In this table the term 'metal' includes both unwrought and partly worked gold and alloys but excludes gold coin

(a) Re-exports

(b) Au content

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

(d) Au content of all ores and concentrates

(e) Years ended 30 June of that stated

## Imports of Gold

Country	1988	1989	1990	1991	1992
United Kingdom					
Ores & concentrates	12 892	2 031	15 913	39 980	68 099
Metal					
Unrefined	8 455	14 991	45 700	55 519	54 835
Refined	571 458	610 634	657 427	479 147	445 677
Other	23 709	57 616	49 219	25 886	42 516
Waste & scrap	165 158	282 175	145 639	82 801	135 730
Belgium-Luxembourg					
Metal	53 114	22 536	26 948	24 003	36 125
Waste & scrap	£3 371 000	£2 147 000	£1 270 000	£4 452 000	£1 552 000
Denmark					
Metal	1 017	1 024	1 239	1 159	1 229
Waste & scrap	534	1 062	385	494	1 044
France					
Metal	134 364	124 270	199 052	130 451	164 554
Waste & scrap	64 789	255 308	638 516	542 702	255 544
Germany, Federal Republic of					
Metal	165 884	123 074	118 394	116 945	138 223
Waste & scrap	783 171	286 692	360 989	347 327	192 353
Greece					
Metal	2 413	2 160	2 830	2 524	...
Irish Republic					
Metal	£4 030 000	£3 320 000	£3 940 000	£3 462 000	£3 972 000
Italy					
Metal	350 224	284 821	340 478	355 302	388 645
Waste & scrap	2 000	7 855	4 000	2 500	2 100
Netherlands					
Metal	3 936	3 858	5 770	5 931	8 222
Waste & scrap	1 000	1 000	...	1 000	1 000
Portugal					
Metal	900	2 100	6 128	...	...
Spain					
Metal	9 436	11 957	18 911	20 011	23 751
Waste & scrap	406	1 000	1 000	...	...
Austria					
Metal	13 459	3 482	16 646	2 871	3 315
Czechoslovakia					
Metal (d)	* 600	* 400	* 600	* 800	* 1 700
Finland					
Metal	753	1 133	962	942	784
Malta					
Metal	1 792	720	2 060	1 611	2 132
Norway					
Metal	702	566	2 363	861	1 122
Waste & scrap	240	519	423	784	311
Sweden					
Metal	2 000	2 000	3 000	3 000	3 000
Waste & scrap	£454 000	£337 000	£304 000	£341 000	£108 000
Switzerland					
Metal	968 810	1 202 144	1 403 258	1 198 349	1 457 018
Waste & scrap	64 199	35 840	66 809	57 175	58 135
Yugoslavia					
Metal	£1 808 000	£2 969 000	£3 973 000	(f) £1 647 000	...
Libya					
Metal	4 725	...	...	...	...
Reunion					
Metal	2 973	3 500	...	...	...
South Africa					
Metal	184	96	125	40	554
Waste & scrap	—	496	15 996	15 718	...
Tunisia					
Metal	—	183	268	274	...
Canada					
Ores & concentrates (e)	1 976	1 220	625	703	4 381
Metal	51 525	52 627	47 906	30 388	43 896

## Gold

**Imports of Gold**

kilograms

Country	1988	1989	1990	1991	1992
USA					
Ore (c)	3 976	2 427	5 625	3 601	349
Metal					
Unrefined (a)	32 672	54 818	29 955	31 237	40 125
Refined	57 597	96 967	64 755	147 050	141 249
Brazil					
Metal	4	535	894	98	796
China					
Metal (d)	* 9 900	* 5 500	* 4 900	* 2 500	* 4 400
Cyprus					
Metal	1 661	2 892	2 481	2 511	3 132
Hong Kong					
Metal	464 257	439 173	180 779	301 559	339 650
Waste & scrap	287	609	327	139	377
Israel					
Metal	£47 904 000	£57 098 000	...	£86 403 000	£83 737 000
Japan					
Metal	293 784	284 272	302 938	257 913	195 116
Waste & scrap	2 246	2 260	1 926	1 369	1 757
Jordan					
Metal	3 304	1 527	1 201	433	535
Korea, Republic of					
Ores & concentrates	417 259	5 292 311	354 692	593 595	...
Metal	7 396	13 755	20 407	22 427	32 283
Macao					
Metal	1 680	1 927	472	70	116
Malaysia					
Metal	22 592	71 274	116 544	116 289	60 894
Philippines					
Metal	117	133	433	30	124
Saudi Arabia					
Metal	13 400	70 299	128 603	118 509	...
Singapore					
Metal	6 466	7 817	11 811	10 083	9 798
Waste & scrap	398	411	467	331	343
Taiwan					
Metal	362 686	156 605	101 167	109 153	177 717
Thailand					
Metal	11 211	16 375	51 536	42 277	45 139
Australia					
Metal (b)	£34 464 000	£72 777 000	£124 416 000	£272 978 000	£431 398 000
New Zealand (b)					
Metal	51	388	2 704	309	484

## Note(s):

(1) In this table the term 'metal' includes both unwrought and partly worked gold and alloys but excludes gold coin

(a) Including waste and scrap

(b) Years ended 30 June of that stated

(c) Au content

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

(e) Au content of all ores and concentrates

(f) Data for the Federal Republic of Yugoslavia only

**Production of Graphite**

Country	1988	1989	1990	1991	1992
Germany, Federal Republic of	9 700	10 600	10 400	8 900	6 200
Austria (a)	7 577	15 307	22 705	19 750	19 547
Czechoslovakia	14 304	14 676	12 171	* 12 000	* 11 800
Norway	—	1 800	6 930	760	7 000
Romania	* 12 000	10 000	* 6 000	* 6 000	* 2 300
Soviet Union	* 84 000	* 84 000	* 80 000	* 75 000	* 65 000
Turkey	12 911	11 873	18 712	25 867	19 000
Madagascar	14 564	15 865	18 036	14 078	8 910
Zimbabwe	11 441	18 147	16 384	12 903	12 346
Canada	* 6 000	7 000	14 500	10 323	* 21 500
Mexico	49 607	40 246	24 916	37 258	48 038
Brazil (b)	52 789	45 899	41 189	36 000	34 000
China	* 200 000	494 400	678 900	* 600 000	* 550 000
India	57 325	47 731	50 000	50 000	* 50 000
Korea, Dem. P.R. of	* 25 000	* 35 000	* 35 000	* 35 000	* 38 000
Korea, Republic of	108 445	101 468	99 600	76 791	* 83 000
Sri Lanka	6 394	3 993	5 558	6 409	3 307
World total	672 000	958 000	1 141 000	1 027 000	980 000

## Note(s):

(1) This table includes all forms of amorphous and crystalline graphite but excludes synthetic material

(2) In addition to the countries listed, Egypt, Namibia and the USA are believed to produce graphite

(a) Crude

(b) Including beneficiated and directly shipped material

## Graphite

**Exports of Graphite**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	3 250	3 416	2 888	2 681	1 833
France	616	726	562	473	1 851
Germany, Federal Republic of	9 981	13 175	9 101	7 557	7 651
Italy	426	913	456	500	355
Netherlands	1 283	1 890	1 880	2 082	3 030
Spain	296	749	628	138	491
Austria	8 926	8 723	8 376	6 018	5 394
Czechoslovakia (a)	* 2 900	* 3 200	* 1 500	* 400	* 200
Norway	24	818	6 686	1 137	3 535
Madagascar	13 839	15 049	6 875	13 554	10 671
South Africa (a)	* 1 200	* 1 700	* 1 900	* 1 500	* 400
Zimbabwe	9 934	...	13 930	11 080	11 849
Canada	6 101	999	10 530	8 535	21 051
Mexico	22 843	18 645	10 016	10 403	9 048
USA	28 201	21 583	11 863	19 574	19 384
Brazil	12 706	13 006	8 491	7 298	8 956
China	(a)* 105 200	(a)* 142 700	141 234	153 061	154 869
Hong Kong (c)	3 930	3 840	1 576	2 410	2 427
India (b)	247	1 546	2 790	653	504
Japan	1 767	2 059	1 314	1 484	1 928
Korea, Dem. P.R. of (a)	* 9 200	* 12 400	* 10 100	* 11 000	* 6 900
Korea, Republic of	51 537	52 629	48 697	29 925	11 563
Sri Lanka	8 958	4 338	4 654	2 376	2 163

## Note(s):

(1) This table excludes synthetic graphite

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

(b) Years ended 31 March following that stated

(c) Re-exports



## Imports of Graphite

Country	1988	1989	1990	1991	1992
United Kingdom	23 437	28 447	24 767	15 050	20 895
Belgium-Luxembourg	578	1 288	700	879	939
Denmark	1 599	1 445	1 748	1 579	1 687
France	5 707	6 424	5 203	4 374	3 820
Germany, Federal Republic of	30 264	43 061	35 828	27 794	35 532
Greece	656	1 351	1 243	354	127
Italy	6 792	10 840	12 271	30 281	9 213
Netherlands	2 306	3 392	4 467	2 305	4 431
Portugal	241	281	202	356	489
Spain	4 108	5 161	4 413	2 442	3 472
Austria	3 291	8 362	2 933	5 051	4 022
Bulgaria (d)	* 1 000	* 1 100	* 150	* 50	...
Czechoslovakia (d)	* 300	* 400	* 600	* 200	* 100
Finland	77	301	188	100	139
German Democratic Republic	5 338	5 643	...	—	—
Hungary	4 690	1 602	1 282	...	...
Norway	61	146	180	626	294
Poland	4 957	4 108	1 738	632	(d)* 800
Sweden	599	456	627	701	829
Switzerland	158	150	210	202	237
Turkey	453	725	1 436	2 366	2 608
Yugoslavia	2 560	2 458	1 802	(e) 474	...
Egypt	859	1 036	...	...	...
Mauritius	1 813	737	416	229	158
South Africa	3 894	4 287	5 094	5 105	5 079
Canada	9 237	6 047	6 278	5 414	8 196
Mexico	1 181	1 229	1 747	1 488	2 681
USA	53 830	69 597	50 213	33 575	46 780
Argentina	553	1 317	1 202	...	507
Venezuela	1 560	637	1 620	1 946	1 980
Hong Kong	2 995	4 593	1 394	2 546	1 569
India (c)	457	719	315	206	317
Indonesia	448	766	1 687	1 761	1 205
Iran (a)	144	133	2 666	...	...
Japan	96 611	119 251	126 527	122 650	73 258
Korea, Republic of	5 942	6 341	23 692	11 917	57 464
Kuwait	632	784	365	...	...
Malaysia	697	718	...	705	1 576
Pakistan (b)	2 433	...	2 627	6 001	2 838
Philippines	328	213	231	235	105
Singapore	587	715	1 002	1 240	1 034
Taiwan	14 890	10 106	7 393	13 429	7 598
Thailand	665	1 275	984	838	1 247
Australia (b)	2 176	2 773	2 086	1 557	2 417

## Note(s):

(1) This table excludes synthetic graphite

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

(c) Years ended 31 March following that stated

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

(e) Data for the Federal Republic of Yugoslavia only

## Gypsum

## Production of Gypsum

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	3 700 000	3 570 000	3 100 000	* 2 500 000	* 2 500 000
France	5 628 000	5 684 000	5 796 000	5 934 000	5 000 000
Germany, Federal Republic of					
Gypsum	1 451 300	1 367 300	1 427 500	1 450 600	1 420 800
Anhydrite	291 400	* 350 000	400 000	300 000	600 000
Greece	599 011	540 637	630 243	664 897	459 037
Irish Republic	326 500	314 400	394 800	342 800	343 000
Italy	1 300 000	1 230 544	1 262 228	1 286 674	1 200 000
Luxembourg	* 400	* 400	* 400	* 400	* 400
Portugal	338 029	197 161	309 260	359 335	416 829
Spain	7 468 618	* 5 500 000	7 804 000	8 054 000	7 750 000
Austria					
Gypsum	624 101	693 711	633 054	558 348	714 275
Anhydrite	97 644	111 943	118 591	96 246	78 059
Bulgaria					
Gypsum	* 350 000	(a) 499 600	(a) 494 391	(a)* 450 000	(a)* 450 000
Anhydrite	* 100 000	...	...	...	...
Czechoslovakia (a)	774 133	796 000	744 000	624 000	* 600 000
German Democratic Republic	1 155 000	1 062 000	* 1 150 000	—	—
Hungary	117 845	115 000	189 933	128 175	* 130 000
Poland (a)	1 110 000	1 416 000	915 000	788 000	843 000
Romania	* 1 600 000	* 1 400 000	* 800 000	* 600 000	* 500 000
Soviet Union	4 902 000	4 900 000	4 500 000	* 4 000 000	* 3 500 000
Switzerland	* 230 000	* 230 000	* 230 000	* 230 000	* 200 000
Turkey	231 218	213 731	171 518	307 246	431 541
Yugoslavia	555 231	543 819	534 650	426 000	* 465 000
Algeria	* 275 000	* 275 000	* 250 000	152 400	* 150 000
Angola	* 57 000	* 57 000	* 57 000	* 57 000	* 57 000
Egypt (b)	1 337 000	1 309 426	1 279 000	1 239 000	1 425 383
Ethiopia	* 1 900	* 2 100	* 2 250	* 1 750	* 2 650
Kenya	37 565	36 478	36 000	* 36 000	* 36 000
Libya	* 180 000	* 180 000	* 180 000	* 180 000	* 180 000
Mauritania	6 033	6 350	3 600	2 839	5 843
South Africa	372 169	406 743	390 765	420 146	333 771
Sudan	10 000	28 000	30 000	...	...
Tanzania	19 570	5 895	36 155	8 765	15 031
Tunisia	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Canada					
Gypsum	9 288 000	9 055 000	8 639 000	6 697 000	7 413 000
Anhydrite	141 717	123 833	150 842	132 809	152 771
Cuba	* 130 000	* 130 000	* 130 000	* 130 000	* 130 000
Dominican Republic	66 261	* 70 000	78 146	117 600	83 306
El Salvador	* 4 500	* 4 500	* 4 500	* 5 000	* 5 000
Guatemala	35 371	57 268	65 560	51 519	72 608
Honduras	* 22 000	* 27 000	* 27 000	* 27 000	* 27 000
Jamaica	145 500	78 010	82 210	135 840	144 977
Mexico	4 779 827	5 390 391	5 423 804	4 774 130	5 157 950
Nicaragua	6 000	7 600	13 444	16 200	9 115
USA	14 868 880	15 988 300	14 883 120	14 021 000	14 759 000
Argentina	520 153	402 399	361 865	383 434	514 274
Brazil (e)	637 714	706 651	749 141	* 850 000	* 800 000
Chile	315 904	277 276	253 744	335 678	423 659
Colombia	307 236	553 025	608 328	638 744	670 681
Ecuador	8 118	10 670	24 200	24 000	* 24 000
Paraguay	3 600	4 500	* 4 500	* 4 500	* 4 500
Peru	* 150 000	* 160 000	* 150 000	* 150 000	* 160 000
Uruguay	145 105	63 830	204 412	239 335	209 057
Venezuela	221 532	318 521	248 522	243 998	207 165
Afghanistan	* 3 000	* 3 000	* 3 000	* 3 000	* 3 000
China	* 8 100 000	9 010 000	10 420 000	10 610 000	11 970 000
Cyprus	32 710	10 980	37 000	18 300	35 470
India	1 424 674	1 539 276	1 661 000	1 553 000	* 1 600 000
Iran (c)	7 648 475	7 858 283	7 724 265	8 838 838	8 252 808
Iraq	* 350 000	* 450 000	* 380 000	* 190 000	* 380 000
Israel	31 181	* 31 000	* 38 000	25 570	* 25 000

**Production of Gypsum**

Country	1988	1989	1990	1991	1992
Jordan	84 866	132 400	92 700	55 300	83 000
Laos	80 000	104 000	53 000	77 000	80 000
Lebanon	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
Mongolia	* 32 000	* 32 000	* 32 000	* 27 000	* 27 000
Myanmar	26 903	...	32 982	32 556	30 933
Pakistan (a)	374 258	466 969	477 671	521 891	471 000
Philippines	2 250	2 000	30 000	20 000	25 000
Saudi Arabia	151 722	160 766	* 160 000	* 160 000	* 160 000
Syria	179 000	180 000	175 451	* 175 000	* 175 000
Taiwan	2 438	3 904	1 743	3 723	1 673
Thailand	4 549 010	5 477 237	5 753 351	7 196 390	7 111 109
Vietnam	* 25 000	* 25 000	* 25 000	* 30 000	* 30 000
Yemen, Republic of (d)	60 000	63 000	66 000	100 000	* 100 000
Australia	1 655 956	* 1 800 000	* 1 800 000	* 2 000 000	* 2 000 000
World total	92 000 000	94 000 000	95 000 000	91 900 000	93 500 000

(a) Including anhydrite

(b) Years ended 30 June of that stated

(c) Years ended 20 March following that stated

(d) Yemen Arab Republic and People's Dem. Rep. of Yemen were unified on 22 May 1990 as the Republic of Yemen

(e) Including beneficiated and directly shipped material

## Gypsum

**Exports of Gypsum**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Crude	1 378	1 903	2 015	7 904	13 545
Calcined	12 176	15 128	14 496	14 066	12 955
Belgium-Luxembourg					
Crude	25 970	20 551	11 053	14 740	20 359
Calcined	102 402	98 677	116 974	121 005	131 612
Denmark					
Crude & calcined	4 716	1 349	5 059	36 908	27 719
of which: Re-exports	3 994	164	1 737	1 017	20 655
France					
Crude	915 105	769 463	759 277	802 935	726 881
Calcined	241 979	235 425	255 497	269 088	283 188
Germany, Federal Republic of					
Crude	184 425	164 413	235 071	279 192	348 173
Calcined	227 885	270 880	241 219	536 372	519 492
Greece	4 928	2 069	36 432	23 235	19 680
Irish Republic					
Crude	20 239	33 864	46 839	41 354	37 552
Calcined	35 776	35 268	34 707	33 067	36 410
Italy					
Crude	658	2 654	5 563	10 681	44 119
Calcined	12 735	13 133	15 320	16 093	16 034
Netherlands					
Crude	74 852	44 191	66 037	52 794	63 132
Calcined	9 759	44 085	6 658	10 639	12 999
Spain					
Crude	2 785 429	2 429 382	2 647 446	2 357 353	2 208 313
Calcined	29 108	39 792	93 173	111 557	135 132
Austria					
Crude	66 137	74 290	79 072	67 437	47 606
Calcined	61 612	77 047	80 867	91 937	108 371
German Democratic Republic					
Calcined	95 051	76 646	...	—	—
Poland	...	32	1 667	21 379	(a)* 16 700
Romania (a)	* 11 100	...	* 1 100	* 800	...
Soviet Union (a)	* 21 900	* 19 500	* 4 500	* 9 800	* 11 400
Sweden					
Crude & calcined	281	636	814	649	535
Switzerland					
Crude & calcined	13 827	15 283	13 265	14 692	14 564
Turkey					
Crude & calcined	14 227	611	2 127	1 342	3 071
Yugoslavia	16 158	8 183	47 137	(d) 327	...
Kenya	4 003	...	...	...	...
Morocco					
Crude	203 250	236 950	164 202	144 993	166 638
Calcined	662	2 892	649	2 152	1 782
South Africa	—	—	78	1 015	1 980
Tunisia					
Crude & calcined	1 571	2 654	1 252	2 451	2 905
Zimbabwe					
Crude	...	...	2 233	...	...
Canada					
Crude	5 680 756	5 195 621	5 804 951	4 963 732	5 074 804
Calcined	20 037	18 637	769	9 989	6 586
Dominican Republic	105 739	88 020	42 134	...	...
Guatemala	15 252	17 623	11 058	8 824	10 528
Jamaica	89 497	37 584	59 473	74 437	115 437
Mexico	2 241 219	2 603 744	2 065 277	2 629 636	2 481 371
USA					
Crude	4 423	98 152	170 926	213 580	260 794
Calcined	241 718	96 611	85 514	87 048	137 173
Argentina	20 334	14 396	16 030	...	26 588
Colombia	648	2 473	4 255	4 995	10 665
Venezuela	1	13 101	38 059	30 813	19 563

**Exports of Gypsum**

Country	1988	1989	1990	1991	1992
Abu Dhabi					
Crude & calcined	2 167	...	430	...	...
China	(a)* 32 200	(a)* 34 500	130 797	153 878	70 675
Cyprus					
Crude & calcined	11 728	3 138	30 178	12 092	10 050
Hong Kong (c)	2 928	19 859	7 736	16 205	40 579
India (b)	5 785	411	8 903	15 006	5 812
Indonesia					
Crude	116 213	110 753	81 639	89 300	61 607
Japan					
Crude	1 061	780	1 553	2 677	2 247
Calcined	4 835	5 166	4 253	4 896	5 619
Korea, Republic of					
Crude	11 205	16 220	11 032	82	34
Calcined	83	345	463	1 305	1 815
Philippines					
Crude	60 790	94 638	53 443	9 750	38 971
Saudi Arabia					
Crude & calcined	25 228	31 394	25 175	28 149	...
Singapore					
Crude & calcined	7 279	9 215	4 968	7 257	6 406
of which: Re-exports	6 386	7 515	4 253	6 230	4 802
Syria	...	...	59 974	...	...
Taiwan	1 747	3 068	3 299	6 367	9 801
Thailand					
Crude	3 833 944	8 735 772	11 727 007	11 157 399	17 062 990
Calcined	20 734	26 637	31 324	37 147	43 881
Australia					
Crude & calcined (e)	127 102	83 646	10 072	59 002	166 828

## Note(s):

- (1) In this table the term 'crude' may include some anhydrite
- (a) BGS estimates, based on known imports into certain countries
- (b) Years ended 31 March following that stated
- (c) Re-exports
- (d) Data for the Federal Republic of Yugoslavia only
- (e) Years ended 30 June of that stated

## Gypsum

**Imports of Gypsum**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Crude	169 119	132 501	262 557	283 803	371 952
Calcined	64 501	71 304	169 051	254 301	125 246
Belgium-Luxembourg					
Crude	516 063	459 122	489 572	496 249	522 367
Calcined	179 578	217 474	213 077	233 123	251 693
Denmark					
Crude	293 946	323 213	272 216	260 548	185 960
Calcined	23 836	19 764	49 253	58 865	122 252
France					
Crude	169 547	138 025	116 614	163 578	104 387
Calcined	59 784	47 525	31 321	21 651	56 336
Germany, Federal Republic of					
Crude	590 642	483 064	416 793	426 183	378 338
Calcined	154 656	206 096	196 191	201 297	232 647
Greece					
Crude	156	129	214	86	48
Calcined	742	1 039	1 466	1 341	1 901
Irish Republic					
Crude	1 550	562	3 419	799	550
Calcined	5 335	5 624	6 041	4 625	5 740
Italy					
Crude	12 258	11 272	27 203	21 941	27 369
Calcined	15 122	28 551	45 820	51 448	45 154
Netherlands					
Crude	340 126	330 515	263 521	178 051	210 682
Calcined	207 383	248 017	245 234	181 372	199 337
Portugal					
Crude	(c) 63 997	(c) 75 732	(c) 85 763	59 383	63 465
Calcined	...	...	...	38 635	62 135
Spain					
Crude	143 431	39 778	11 939	4 456	3 730
Calcined	1 513	13 396	33 189	24 283	27 759
Austria					
Crude	5 002	4 758	4 853	29 831	6 819
Calcined	5 515	7 149	8 368	19 311	9 731
Czechoslovakia	24 000	23 000	(a)* 20 900	(a)* 12 100	(a)* 23 600
Finland					
Crude	203 648	258 410	242 744	185 854	157 691
Calcined	4 786	7 094	6 580	7 748	8 186
Hungary					
Calcined	76 984	...	38 292	...	50 800
Iceland	9 993	5 739	6 408	6 197	5 719
Norway					
Crude	38 208	13 245	5 853	56 711	43 841
Calcined	221 321	247 905	285 631	253 046	274 885
Sweden					
Crude	492 098	521 192	500 874	441 707	355 621
Calcined	9 969	10 277	11 120	8 107	5 599
Switzerland					
Crude	65 281	59 933	56 594	53 488	48 702
Ground & calcined	49 923	62 025	72 064	68 443	67 061
Turkey	35 890	35 873	23 358	1 999	16 763
Cameroon					
Crude & calcined	...	33 170	...	...	...
Ghana	5 104	...	...	...	...
Ivory Coast					
Crude	27 622	...	...	...	...
Calcined	3 897	...	...	...	...
Kenya	18 803	...	...	...	...
Reunion					
Crude & calcined	8 121	...	...	13 376	...
Senegal					
Crude	12 282	15 930	(c) 14 546	...	...
Calcined	1 575	1 013	...	...	...
South Africa					
Crude & calcined	38 338	34 828	22 256	23 365	8 377

## Imports of Gypsum

Country	1988	1989	1990	1991	1992
Togo					
Crude & calcined	18 000	16 285	23 099	...	...
Tunisia					
Crude & calcined	679	393	562	515	412
Zaire					
Crude & calcined	* 5 600	* 8 300	* 8 800	...	...
Zambia					
Crude & calcined	10 010	3 187	5 469	...	...
Zimbabwe					
Crude & calcined	6 338	...	11	...	...
Bahamas					
Crude & calcined	2 925	511	522	685	...
Canada					
Crude	275 362	291 033	303 395	255 538	260 505
Calcined	* 30 000	32 901	33 401	29 353	31 992
Costa Rica					
Crude & calcined	26 880	29 697	28 289	30 225	36 473
El Salvador					
Crude & calcined	11 547	16 151	9 761	9 807	...
Guadeloupe					
Crude & calcined	17 651	9 192	15 079	12 660	12 010
Martinique					
Crude & calcined	17 833	11 039	16 995	12 318	19 490
Mexico					
Crude	29 449	10 203	38 123	36 688	18 709
Calcined	4 874	4 822	4 143	4 411	6 088
Panama					
Crude & calcined	13 045	...	14 899	16 490	23 286
Trinidad & Tobago					
Crude & calcined	12 224	13 925	19 650	24 688	17 155
USA					
Crude	8 780 753	8 440 848	7 916 468	6 921 348	7 166 122
Ground & calcined	2 638	2 346	1 324	10 029	6 291
Colombia					
Crude & calcined	34 822	32 121	66 042	57 047	25 807
Ecuador					
Crude & calcined	65 820	30 790	8 475	68 962	1 751
Paraguay					
Crude & calcined	5 070	...	5 667	...	...
Uruguay					
Crude & ground	8 929	2 684	1 474	1 409	1 322
Venezuela					
Crude & calcined	94 885	63 203	34 464	110 845	87 451
Abu Dhabi					
Crude & calcined	3 684	...	9 167	9 498	14 798
Bahrain					
Crude & calcined	8 719	7 742	...	13 270	...
Hong Kong					
Crude & calcined	113 482	132 623	77 441	90 446	125 712
India (d)					
Crude & calcined	18	63	4 234	16 934	5 445
Indonesia					
Crude & calcined	92 531	141 394	248 631	234 464	232 364
Israel (a)					
Crude & calcined	* 5 200	* 3 400	* 5 500	* 6 500	* 6 700
Japan					
Crude	2 909 802	3 245 275	3 632 538	3 947 570	3 815 987
Calcined	4 244	13 755	4 735	6 849	5 773
Jordan					
Crude & calcined	686	1 887	2 524	3 221	3 231
Korea, Dem. P.R. of (a)					
Crude & calcined	...	...	* 109 800	* 131 100	* 110 600
Korea, Republic of					
Crude & calcined	395 178	203 261	234 443	402 282	379 713
Kuwait					
Crude & calcined	71 726	105 034	48 243	3 197	6 229
Macao					
Crude & calcined	30 521	27 355	28 147	22 717	29 612
Malaysia					
Crude & calcined	178 213	223 265	...	269 100	273 287
Oman					
Crude & calcined	1 629	1 357	1 363	2 366	4 407
Philippines					
Crude	170 764	210 390	157 634	195 879	178 400
Calcined	7 613	6 934	7 978	9 960	12 598
Qatar					
Crude & calcined	5 540	6 689	8 150	9 895	9 413
Saudi Arabia					
Crude & calcined	61 963	69 858	51 876	49 841	...
Singapore					
Crude & calcined	53 960	51 702	67 949	74 316	113 047
Sri Lanka					
Crude & calcined	20 858	...	12 202	10 771	21 856
Taiwan					
Crude	412 782	480 927	460 567	536 399	618 876
Calcined	16 843	2 859	2 068	2 970	2 875
Thailand					
Crude & calcined	1 862	35 739	21 357	11 135	58 178

## Gypsum

**Imports of Gypsum**

tonnes

Country	1988	1989	1990	1991	1992
Australia (b)	1 906	1 960	1 760	52 469	47 243
New Caledonia					
Crude & calcined	4 067	6 204	5 122	5 277	...
New Zealand (b)					
Crude & calcined	176 952	83 374	127 461	94 377	150 686

## Note(s):

- (1) In this table the term 'crude' may include some anhydrite
- (a) BGS estimates, based on known exports from certain countries
- (b) Years ended 30 June of that stated
- (c) Including calcined
- (d) Years ended 31 March following that stated



**Production of Iodine**

Country	1988	1989	1990	1991	1992
Soviet Union	* 2 000 000	* 2 000 000	* 1 900 000	* 1 800 000	* 1 500 000
USA	1 015 000	1 508 000	1 973 000	1 999 000	1 995 000
Chile	4 035 000	4 881 000	5 000 000	5 700 000	6 308 000
China	* 500 000	* 500 000	* 500 000	* 500 000	* 500 000
Indonesia	9 753	14 275	59 820	36 353	* 35 000
Japan	7 451 000	7 592 000	7 581 000	7 492 000	6 764 000
World total	15 000 000	16 500 000	17 000 000	17 500 000	17 100 000

Iodine

**Exports of Iodine**

kilograms

Country	1988	1989	1990	1991	1992
United Kingdom	149 883	74 951	288 723	90 674	59 284
Belgium-Luxembourg	36 700	100	26 100	23 000	3 700
Denmark	—	3 100	300	—	800
France	68 500	30 000	37 000	10 000	108 000
Germany, Federal Republic of	123 500	138 900	295 000	401 900	217 800
Italy	10 100	63 000	140 000	2 500	1 700
Netherlands	7 000	168 000	214 000	...	...
Portugal	1 000	...	...	...	...
Spain	7 000	865 000	8 000	8 000	7 000
Switzerland	7 376	7 753	7 131	465 816	2 544
USA	...	...	1 107 364	1 437 006	1 629 162
Chile	3 954 342	4 639 700	3 980 490	5 410 750	5 838 830
Hong Kong (a)	15 201	12 763	2 076	31 241	...
Indonesia	—	12 500	18 550	37 000	29 000
Japan	6 120 490	6 136 161	5 192 230	4 792 500	4 324 520
Taiwan	3 601	611	—	3 000	25

(a) Re-exports

# Imports of Iodine

Iodine  
kilograms

Country	1988	1989	1990	1991	1992
United Kingdom	1 602 149	1 487 554	1 440 525	1 658 860	1 451 236
Belgium-Luxembourg	16 000	83 300	32 100	27 200	29 300
Denmark	4 300	26 400	7 200	10 200	30 200
France	859 700	931 000	881 000	827 000	882 000
Germany, Federal Republic of	916 500	1 112 000	1 414 400	1 205 600	1 053 600
Greece	750	1 000	1 000	53 000	...
Italy	991 200	1 107 000	848 000	878 400	953 400
Netherlands	547 000	809 000	502 000	494 000	686 000
Portugal	22 000	24 000	24 000	...	...
Spain	318 000	373 000	351 000	572 000	459 000
Austria	3 500	4 200	3 000	3 800	5 000
Finland	6 000	7 000	3 000	8 000	7 000
Hungary	35 400	...	...	...	—
Norway	943 000	602 000	559 000	680 000	437 000
Romania (c)	* 22 900	* 25 900	...	...	...
Soviet Union (c)	* 35 000	* 34 000	* 38 000	* 45 000	...
Sweden	5 000	10 000	3 000	5 000	4 000
Switzerland	37 554	61 496	100 024	84 628	73 316
Turkey	3 603	...	...	...	...
Yugoslavia	12 000	14 000	7 000	(d) 11 000	...
Algeria	746	1 728	864	...	...
Morocco	485	1 138	405	138	...
South Africa	14 270	13 542	12 352	11 713	29 489
Tunisia	950	1 319	1 446	1 741	...
Canada	36 734	44 722	103 699	107 856	141 286
Mexico	173 974	260 903	152 205	...	...
USA	3 228 608	3 313 556	2 847 621	3 503 729	3 654 772
Argentina	13 000	...	...	...	...
Brazil	182 039	281 884	135 032	333 562	...
Colombia	9 439	1 851	17 859	...	...
Peru	1 752	1 000	822	3 080	...
Uruguay	900	...	...	4 500	1 900
Venezuela	21 667	5 791	...	...	...
China	(c)* 117 000	(c)* 123 000	(c)* 309 000	(c)* 333 000	174 376
Hong Kong	15 800	11 940	2 780	29 600	...
India (a)	726 338	636 304	888 437	664 620	519 060
Indonesia	20 620	20 008	5 127	5 226	5 207
Japan	58 915	291 352	289 076	393 970	604 750
Korea, Republic of	10 805	12 782	13 571	13 713	16 571
Pakistan (b)	29 627	...	39 465	26 374	27 534
Taiwan	27 555	32 680	24 545	25 835	22 180
Thailand	2 987	5 968	6 337	7 960	8 296
Australia (b)	22 710	21 536	18 567	12 034	19 203
New Zealand (b)	5 176	11 062	12 413	14 495	13 614

(a) Years ended 31 March following that stated

(b) Years ended 30 June of that stated

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

(d) Data for the Federal Republic of Yugoslavia only

**Production of Iron Ore**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	224 100	34 300	55 300	59 400	30 900
France	9 869 000	9 187 000	8 023 000	7 490 000	5 707 000
Germany, Federal Republic of (f)	70 000	102 000	84 000	120 000	110 000
Portugal (f)	23 300	12 800	14 080	16 070	14 545
Spain	4 212 276	4 563 300	3 012 000	3 120 000	3 648 000
Albania (b)	* 1 200 000	1 179 000	1 093 000	446 000	21 000
Austria	2 300 000	2 410 000	2 300 000	2 120 000	1 627 000
Bulgaria	1 826 000	1 613 000	1 079 293	594 000	393 000
Czechoslovakia	1 773 000	1 780 000	1 831 000	1 738 000	730 000
Finland	555 550	35 170	69 014	32 672	22 836
Norway	2 600 248	2 322 776	2 235 062	2 360 540	2 152 408
Poland	6 300	7 400	2 400	100	—
Romania	2 252 000	2 482 385	2 002 000	1 461 000	1 229 000
Soviet Union	250 000 000	241 000 000	236 000 000	199 300 000	175 200 000
Sweden	20 447 000	21 763 000	19 877 000	19 328 000	19 277 000
Turkey	5 480 916	4 518 174	4 924 874	5 334 502	5 579 000
Yugoslavia	5 545 155	5 079 691	4 132 173	(d) 2 574 000	* 1 500 000
Algeria	3 118 000	2 748 300	2 941 000	2 344 000	2 523 000
Egypt (i)	2 112 026	2 562 351	2 405 000	2 131 000	2 287 000
Liberia	12 767 000	7 007 121	3 981 000	1 200 000	1 710 000
Mauritania	9 530 000	11 950 000	11 550 000	10 246 000	9 110 000
Morocco	156 416	176 057	149 540	98 676	84 679
Nigeria	313 192	66 396	307 528	* 350 000	* 350 000
South Africa (c)	25 247 678	29 958 256	30 290 945	29 075 422	28 225 859
Tunisia	325 117	279 994	290 708	295 000	300 000
Zimbabwe	1 020 900	1 142 995	1 260 000	1 137 000	1 181 000
Canada (g)	40 353 000	40 509 000	34 855 000	36 383 000	32 697 000
Cuba (h)	294 400	171 400	...	...	...
Mexico	8 431 000	8 141 000	8 073 000	7 540 000	7 809 000
USA	57 515 000	59 032 000	56 408 000	56 761 000	55 593 000
Argentina	673 707	645 189	775 073	160 684	5 958
Bolivia	* 53 000	14 254	125 264	101 642	34 956
Brazil (a)	146 004 330	158 340 531	152 303 718	149 986 400	145 820 000
Chile	7 865 712	8 760 684	8 247 908	8 414 443	7 224 030
Colombia	614 727	567 353	628 257	607 329	674 219
Peru	4 158 132	4 490 237	3 308 249	3 513 000	2 855 000
Venezuela	18 931 793	18 398 000	20 365 844	20 343 000	18 887 115
China	167 700 000	171 854 000	179 344 000	190 558 000	210 220 000
India	49 961 000	51 434 000	53 702 000	56 915 000	54 870 000
Indonesia	202 778	142 654	142 143	173 242	287 821
Iran (e)	2 004 832	2 296 407	2 611 388	3 888 100	4 193 650
Japan	99 418	41 425	34 092	31 444	39 791
Korea, Dem. P.R. of	* 9 500 000	* 9 500 000	* 9 500 000	* 9 500 000	* 9 500 000
Korea, Republic of	390 000	344 300	298 300	221 525	221 592
Malaysia (g)	201 821	192 573	344 186	375 869	319 919
Thailand	99 257	177 373	128 626	240 075	427 242
Australia	96 084 000	105 000 000	109 166 000	117 673 000	112 101 000
New Zealand	2 351 593	2 366 635	2 296 153	2 264 849	2 934 111
World total	976 000 000	996 000 000	983 000 000	959 000 000	930 000 000

## Note(s):

- (1) In addition to the countries listed, Vietnam is believed to produce iron ore
- (a) Including beneficiated and direct shipping ore
- (b) Nickeliferous iron ore
- (c) Including by-product magnetite
- (d) Excluding data from August to December for the Republic of Croatia
- (e) Years ended 20 March following that stated
- (f) Including manganiferous iron ore
- (g) Including by-product iron ore
- (h) From nickel plant waste
- (i) Years ended 30 June of that stated

## Exports of Iron Ore

Country	1988	1989	1990	1991	1992
United Kingdom	2 108	1 528	2 442	2 071	2 135
Belgium-Luxembourg					
Iron ore	6 960	11 373	15 790	12 612	20 340
Burnt pyrites	186 342	95 257	101 117	65 065	17 478
Denmark					
Iron ore	1 814	1 678	4 265	1 122	1 444
Burnt pyrites	2 283	1 969	—	—	1 093
France	3 646 269	3 461 892	3 280 365	3 152 726	2 874 808
Germany, Federal Republic of					
Iron ore	20 202	6 853	18 752	80 829	76 553
Burnt pyrites	17 526	29 290	18 883	26 438	9 998
Italy					
Iron ore	297	535	375	171	121
Burnt pyrites	21 073	38 469	27 897	27 151	66 350
Netherlands (b)	222 890	127 896	82 842	65 318	27 794
Spain					
Iron ore	2 037 453	1 768 432	1 632 737	2 219 306	1 879 336
Burnt pyrites	30 658	36 358	70 961	23 996	104 009
Norway					
Iron ore	1 757 308	1 987 150	2 112 730	2 098 540	2 281 251
Burnt pyrites	36 385	31 807	36 845	58 669	128 995
Soviet Union	43 063 000	29 281 000	26 254 000	(e) 21 957 000	(e) 8 210 000
Sweden	17 626 000	17 473 000	16 398 000	15 226 000	15 435 000
Yugoslavia					
Burnt pyrites	62 528	46 518	73 120	(d) 44 972	...
Algeria	20 585	—	2 375	13 300	...
Liberia	13 779 000	12 747 000	3 887 000	1 108 000	1 539 000
Mauritania	10 004 000	11 138 000	11 356 000	10 469 000	8 094 000
Morocco					
Iron ore	84 484	86 909	63 266	65 728	58 523
Burnt pyrites	—	—	—	1 700	...
South Africa	11 502 939	14 565 744	17 028 950	15 596 411	14 867 545
Tunisia	4 429	5 693	3 771	7 687	8 685
Canada	30 523 425	30 222 343	27 100 472	29 687 515	25 131 837
USA (b)	5 289 090	5 351 255	3 199 348	4 796 030	5 162 528
Bolivia	14 620	45 180	61 000	55 600	55 413
Brazil	112 814 864	118 472 323	113 496 703	113 622 721	105 011 089
Chile	6 681 784	7 017 429	6 909 717	7 263 904	6 620 645
Peru	4 560 643	4 047 700	3 305 201	2 582 000	3 022 000
Venezuela	12 289 357	14 434 960	13 620 344	13 385 242	10 229 000
India (c)	33 040 098	35 243 860	32 492 902	29 513 463	22 166 619
Korea, Dem. P.R. of (f)	* 1 088 000	* 519 000	* 599 000	* 830 000	* 786 000
Malaysia	1 429	2 003	10 559	3 900	197 307
Philippines					
Iron ore	4 873 530	4 352 282	4 740 768	4 776 273	3 882 726
Burnt pyrites	10 298	114	32 214	5 257	16 148
Australia	94 855 000	101 681 000	95 928 000	111 557 000	103 487 000
New Zealand (a)	1 831 806	1 236 274	1 223 284	1 115 922	1 006 369

(a) Years ended 30 June of that stated

(b) Including burnt pyrites

(c) Years ended 31 March following that stated

(d) Data for the Federal Republic of Yugoslavia only

(e) Data for the Russian Federation only

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

## Imports of Iron Ore

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Iron ore	17 718 174	19 179 227	14 700 130	15 443 012	15 799 744
Burnt pyrites	216 312	283 826	235 746	137 155	52 316
Belgium-Luxembourg					
Iron ore	20 795 613	19 787 055	20 277 528	19 485 930	17 994 255
Burnt pyrites	55 473	60 198	70 935	3 197	9 636
Denmark					
Iron ore	2 670	6 311	2 733	2 544	1 866
Burnt pyrites	21 820	26 996	26 438	25 805	35 534
France					
Iron ore	18 738 262	19 907 292	18 692 622	18 215 067	17 368 442
Burnt pyrites	74 272	100 876	103 193	72 033	43 004
Germany, Federal Republic of					
Iron ore	45 169 473	47 170 629	43 729 850	43 288 212	41 316 824
Burnt pyrites	102 327	112 264	160 483	151 422	157 630
Greece					
Burnt pyrites	9 732	14 436	18 134	52 839	42 000
Italy (a)	16 413 191	18 324 063	17 202 319	17 854 447	15 220 010
Netherlands (a)	7 561 586	8 165 012	8 313 443	7 902 383	7 532 106
Portugal	477 569	688 421	449 480	466 000	569 000
Spain	5 555 921	6 935 369	6 704 810	7 596 585	6 951 155
Albania	35 400	54 200	25 500	...	...
Austria					
Iron ore	4 164 338	4 192 117	3 891 887	3 968 429	3 915 271
Burnt pyrites	11 467	12 144	16 249	7 593	13 864
Bulgaria	2 112 000	1 922 000	1 964 000	710 000	416 000
Czechoslovakia	14 619 000	14 831 000	14 200 000	12 078 000	8 789 000
Finland	2 336 526	3 015 823	3 058 362	3 085 141	3 363 738
German Democratic Republic (b)	2 375 000	2 343 000	* 1 500 000	—	—
Hungary	2 326 326	2 250 759	1 691 551	849 000	387 671
Iceland	22 682	16 818	18 000	16 844	17 000
Norway	193 657	23 398	12 296	(a) 28 937	(a) 131 527
Poland	16 644 000	13 441 000	12 066 000	8 700 000	8 000 000
Romania	13 900 000	13 626 000	11 341 000	7 290 000	2 346 289
Sweden	129 000	255 000	268 000	442 000	355 000
Switzerland (a)	12 551	10 890	14 130	20 390	14 221
Turkey	1 798 326	2 525 097	1 972 000	2 721 000	1 887 000
Yugoslavia	1 485 638	2 307 006	1 285 196	(d) 293 903	...
Egypt	862 602	545 673	* 1 250 000	* 900 000	1 267 000
Libya	* 400 000	* 450 000	* 650 000	* 1 400 000	* 1 000 000
Nigeria (a)	143 000	290 000	200 000	200 000	* 160 000
Tunisia	46 511	88 202	66 619	74 822	88 066
Canada	4 791 064	5 367 879	4 112 971	4 620 082	5 280 481
Mexico	484 449	153 639	1 853	57 033	109 968
Trinidad & Tobago	473 870	1 337 544	944 411	586 768	253 343
USA					
Iron ore	(a) 20 126 541	19 476 815	18 081 620	13 347 954	12 434 557
Burnt pyrites	...	120 505	8	4 577	3 641
Argentina	3 259 581	4 000 956	3 140 243	2 310 419	3 574 092
Paraguay					
Burnt pyrites	50 863	111 219	51 176	192 294	130 206
Abu Dhabi	40	...	20 956	23 364	26 352
China					
Iron ore	10 540 959	12 251 557	14 342 626	18 458 146	25 171 190
Burnt pyrites	—	341 063	—	91 287	53 083
India (e)	8 020	80 924	114 584	73 260	26 263
Indonesia					
Iron ore	128	273 338	158 996	158 277	307 194
Burnt pyrites	766 433	1 492 461	1 779 175	1 613 101	1 967 824
Iran (f)	—	* 100 000	* 324 000	* 2 232 000	* 1 163 000
Japan	123 376 880	127 709 237	125 290 037	127 186 458	113 742 502
Korea, Republic of					
Iron ore	20 227 910	21 685 214	21 153 918	28 939 547	31 778 699
Burnt pyrites	—	—	29 167	9 927	4 985

**Imports of Iron Ore**

Country	1988	1989	1990	1991	1992
Malaysia	449 461	912 163	* 1 200 000	1 159 980	722 602
Oman	8 320	6 020	2 993	—	4 158
Pakistan (c)	1 344 432	* 1 200 000	1 308 249	1 418 221	1 587 159
Philippines	3 055 329	3 847 004	3 665 202	4 265 051	3 323 938
Qatar	699 370	792 218	863 511	743 475	787 205
Saudi Arabia	1 245 122	1 651 680	1 467 556	1 093 554	* 1 500 000
Singapore	443	1 036	4 566	1 631	200
Taiwan	8 477 333	8 370 538	7 761 819	8 433 068	7 250 604
Australia	468 728	1 844 000	2 760 000	2 946 000	3 474 000

(a) Including burnt pyrites

(b) Fe content of concentrates

(c) Years ended 30 June of that stated

(d) Data for the Federal Republic of Yugoslavia only

(e) Years ended 31 March following that stated

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

## Production of Pig Iron

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	13 055 900	12 637 800	12 319 200	11 883 400	11 542 400
Belgium	9 147 000	8 863 000	9 417 000	9 354 000	8 524 000
France	14 462 268	14 724 533	14 094 987	13 408 156	* 12 750 000
Germany, Federal Republic of	31 890 000	32 112 000	29 585 000	29 497 000	27 399 000
Italy	11 348 608	11 761 396	11 852 303	10 845 232	10 524 000
Luxembourg	2 519 200	2 683 800	2 645 200	2 463 000	2 255 200
Netherlands	4 993 800	5 163 100	4 959 900	4 696 500	4 849 200
Portugal	444 900	377 000	339 000	251 000	402 000
Spain	4 690 581	5 535 000	5 482 000	5 404 000	5 076 000
Austria	3 664 805	3 822 549	3 452 333	3 441 450	3 074 169
Bulgaria	1 483 000	1 499 000	1 142 607	960 000	848 000
Czechoslovakia	9 706 000	9 911 000	9 667 000	8 479 000	8 039 000
Finland	2 173 328	2 284 000	2 283 000	2 332 000	2 452 000
German Democratic Republic	2 786 000	2 732 400	2 163 000	—	—
Hungary	2 093 000	1 954 000	1 697 000	1 314 000	1 176 000
Norway	390 751	240 350	—	—	—
Poland	9 929 000	9 167 000	8 423 000	6 355 000	6 359 000
Romania	8 941 000	9 052 000	6 355 000	4 525 000	3 135 000
Soviet Union	114 558 000	114 000 000	110 167 000	90 953 000	85 420 000
Sweden	2 683 122	2 817 990	2 865 130	3 022 370	3 053 899
Switzerland	70 000	* 70 000	* 70 000	* 70 000	* 70 000
Turkey	4 915 555	3 930 240	5 308 726	4 992 563	4 936 021
Yugoslavia	2 916 000	2 899 000	2 313 000	(b) 1 258 000	824 000
Algeria	1 500 000	1 301 000	1 036 500	877 000	* 900 000
Egypt (c)	131 598	112 410	108 024	113 156	60 045
Nigeria	140 000	130 000	112 000	108 000	50 000
South Africa	6 171 000	6 543 000	6 257 000	6 968 000	6 498 000
Tunisia	132 300	154 400	146 000	161 400	146 600
Zimbabwe	545 000	525 000	521 131	535 000	507 000
Canada	9 498 264	10 138 904	7 346 127	8 267 542	8 621 236
Mexico	5 364 271	5 393 487	6 189 919	5 424 000	5 798 178
Trinidad & Tobago	548 000	674 800	681 600	654 000	647 700
USA	50 861 000	50 978 000	50 058 000	44 533 000	48 314 617
Argentina	2 662 700	3 336 325	2 967 771	2 259 028	1 993 047
Brazil	23 649 551	24 620 700	21 401 000	22 920 500	23 382 100
Chile	775 961	678 623	675 406	703 356	873 032
Colombia	309 040	297 346	322 899	305 431	307 900
Paraguay	62 724	61 364	53 929	67 642	92 136
Peru	214 329	254 482	121 745	231 256	148 036
Venezuela	3 194 734	2 901 458	3 031 814	3 475 918	3 919 630
China	57 040 000	58 200 000	62 380 000	67 650 000	75 890 000
India	11 735 000	12 080 000	12 645 000	14 176 000	15 126 000
Iran (a)	1 012 311	1 170 842	1 768 611	2 544 838	2 757 721
Japan	79 295 000	80 197 000	80 144 351	79 985 000	73 144 000
Korea, Dem. P.R. of	* 5 900 000	* 5 900 000	* 5 900 000	* 6 000 000	* 6 000 000
Korea, Republic of	12 577 754	14 948 751	15 333 742	18 546 017	19 238 122
Pakistan	944 518	912 915	1 013 138	1 032 733	1 048 000
Taiwan	25 092	29 904	59 570	18 487	13 770
Australia	5 730 000	6 094 000	6 125 000	5 647 000	6 388 000
World total	538 900 000	545 900 000	533 000 000	508 700 000	504 600 000

Note(s):

(1) The data in this table include sponge iron and direct reduced iron (DRI), where these have been separately identified

(a) Years ended 20 March following that stated

(b) Excluding data from August to December for the Republic of Croatia

(c) Years ended 30 June of that stated



## Production of Steel Ingots and Castings

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	18 950 000	18 740 000	17 840 700	16 474 400	16 211 900
Belgium	11 220 797	10 952 815	11 719 159	11 334 883	10 337 352
Denmark	650 000	624 000	610 000	632 000	591 000
France	19 122 361	19 334 696	19 015 731	18 434 148	17 960 513
Germany, Federal Republic of	41 023 000	41 073 000	38 434 000	42 169 000	39 711 000
Greece	959 000	957 000	999 000	980 000	924 000
Irish Republic	271 000	324 000	330 000	322 000	265 000
Italy	23 760 369	25 212 942	25 466 928	25 112 000	24 835 000
Luxembourg	3 660 890	3 720 920	3 560 290	3 379 440	3 068 463
Netherlands	5 517 900	5 680 600	5 411 800	5 171 300	5 439 000
Portugal	812 000	762 000	744 000	541 000	768 000
Spain	11 886 000	12 765 000	12 936 000	12 932 000	12 254 000
Austria	4 560 072	4 717 595	4 241 448	3 897 392	3 600 380
Bulgaria	2 875 000	2 899 000	2 184 453	1 615 000	1 552 000
Czechoslovakia	15 379 000	15 465 000	14 775 000	12 071 000	11 140 000
Finland	1 802 900	1 877 641	1 899 130	1 975 373	1 996 573
German Democratic Republic	8 131 200	7 828 800	5 546 000	—	—
Hungary	3 583 000	3 356 000	2 963 000	1 930 000	1 541 000
Norway	897 441	685 241	376 416	437 604	446 234
Poland	16 873 000	15 094 000	13 625 000	10 432 000	9 835 000
Romania	14 314 000	14 411 000	9 761 000	7 110 000	5 376 000
Soviet Union	163 037 000	160 096 000	154 414 000	132 839 000	117 953 000
Sweden	4 779 000	4 697 000	4 454 000	4 252 000	4 358 000
Switzerland	988 000	916 000	963 000	955 000	1 050 000
Turkey	8 009 073	7 043 745	9 412 894	9 397 697	10 342 916
Yugoslavia	4 487 156	4 500 111	3 608 285	(c) 2 176 000	1 366 000
Algeria	1 301 000	943 000	767 000	838 000	* 850 000
Angola	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Egypt	2 025 000	2 114 000	2 247 000	2 556 000	2 524 000
Libya	* 10 000	* 10 000	492 000	718 000	822 000
Nigeria	139 344	* 150 000	131 390	137 000	* 140 000
South Africa	8 522 000	8 973 000	8 619 000	9 358 000	9 062 000
Tunisia	158 600	188 000	176 800	193 000	181 500
Zimbabwe	598 000	569 000	580 318	581 000	559 000
Canada	14 865 714	15 458 139	12 280 736	12 987 433	13 936 000
Cuba	320 500	314 200	255 000	180 130	133 900
Dominican Republic	75 327	54 855	36 839	39 299	32 628
Mexico	7 778 655	7 851 601	8 733 917	7 963 744	8 459 429
Trinidad & Tobago	361 200	340 100	364 500	439 700	552 800
USA	90 650 000	88 852 000	89 726 000	79 738 000	84 322 000
Argentina	3 623 546	3 882 758	3 635 635	2 971 670	2 679 900
Brazil	24 656 918	25 055 100	20 566 600	22 617 300	23 934 000
Chile	908 900	799 681	771 795	807 069	1 012 758
Colombia	712 274	711 368	701 406	651 980	656 782
Paraguay	62 273	54 679	47 798	60 862	85 954
Peru	429 689	363 881	269 950	403 766	343 244
Uruguay	29 971	37 150	38 172	41 245	55 153
Venezuela	3 165 192	2 941 824	2 997 549	3 304 299	4 263 273
Bangladesh (b)	70 036	86 274	75 029	57 520	* 44 000
China	59 430 000	61 587 000	66 350 000	71 000 000	80 940 000
Hong Kong	* 120 000	* 150 000	* 150 000	* 150 000	* 150 000
India	12 682 000	12 542 000	14 963 000	17 100 000	18 117 000
Indonesia	2 054 000	2 383 000	2 892 000	3 250 000	3 171 072
Iran	1 003 582	1 148 175	1 583 606	2 406 099	3 081 311
Israel	99 000	100 000	135 000	120 000	109 000
Japan	105 681 000	107 908 000	110 331 331	109 649 146	98 132 000
Jordan	* 200 000	176 500	179 100	200 300	243 700
Korea, Dem. P.R. of	* 6 830 000	* 6 930 000	* 7 000 000	* 7 000 000	* 7 000 000
Korea, Republic of	19 118 000	21 873 000	23 125 000	26 001 000	28 054 000
Malaysia	* 925 000	* 1 000 000	* 1 100 000	* 1 130 000	* 1 559 000
Pakistan	* 1 200 000	* 1 200 000	* 1 200 000	* 1 200 000	* 1 000 000
Philippines	* 500 000	* 550 000	* 600 000	* 605 000	* 497 000
Qatar	527 000	563 000	564 000	564 000	588 059
Saudi Arabia	1 614 000	1 768 000	1 790 000	1 783 000	1 866 000
Singapore	432 000	495 000	489 000	510 000	482 000
Syria	* 70 000	* 70 000	* 70 000	* 70 000	* 70 000

**Production of Steel Ingots and Castings**

tonnes

Country	1988	1989	1990	1991	1992
Taiwan	8 288 000	9 047 000	9 747 000	10 973 000	10 705 000
Thailand	552 000	689 421	684 678	711 134	779 156
Vietnam	74 100	85 000	102 000	183 000	219 000
Australia (a)	6 399 000	6 735 000	6 666 000	6 017 000	6 461 000
New Zealand	538 000	718 000	791 000	800 000	632 219
World total	776 000 000	781 000 000	769 000 000	735 000 000	721 000 000

## Note(s):

(1) The figures in this table refer to crude steel and cast semi-manufactures are not included

(a) Including recovery from scrap

(b) Years ended 30 June of that stated

(c) Excluding data from August to December for the Republic of Croatia

## Production of Ferro-alloys

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ferro-manganese	107 300	142 700	143 400	178 400	136 500
Belgium					
Ferro-manganese	* 95 000	* 95 000	* 90 000	* 90 000	* 90 000
France					
Blast furnace ferro-alloys					
Spiegeleisen & ferro-manganese	323 945	346 295	319 930	237 679	* 300 000
Electric furnace ferro-alloys (h)					
Ferro-chrome & ferro-silico-chrome	12 000	17 000	25 000	23 100	6 694
Ferro-silico-manganese	* 60 000	67 000	62 000	63 400	63 100
Ferro-silicon	* 196 000	125 390	117 490	105 800	98 100
Ferro-titanium & Fe-W,Fe-Mo,Fe-V (a)	(c) ...	2 600	4 300	3 920	3 900
Other ferro-alloys	* 60 000	* 42 500	* 23 200	* 42 500	* 120 000
Silicon metal	70 000	72 000	63 500	63 600	66 000
Germany, Federal Republic of					
Blast furnace ferro-alloys					
Spiegeleisen & ferro-manganese (g)	274 000	305 000	* 250 000	* 220 000	* 190 000
Electric furnace ferro-alloys					
Ferro-chrome	34 900	* 33 350	* 37 500	* 33 650	26 520
Ferro-manganese & ferro-silico-manganese	* 35 000	* 45 000	* 38 000	* 40 000	* 30 000
Ferro-silicon	* 50 000	* 55 000	* 46 000	* 50 000	* 20 000
Other ferro-alloys	* 62 000	* 66 000	* 54 000	* 40 000	* 30 000
Greece					
Electric furnace ferro-alloys					
Ferro-chrome	44 147	43 579	30 345	* 10 500	—
Ferro-nickel	50 500	41 200	* 60 500	64 020	* 65 000
Italy					
Blast furnace ferro-alloys					
Ferro-manganese	27 169	26 738	30 842	10 814	11 000
Electric furnace ferro-alloys					
Ferro-chrome	77 123	81 331	53 000	47 192	60 315
Ferro-manganese	12 280	14 220	11 000	14 000	17 000
Ferro-silico-manganese	66 959	46 868	84 000	103 000	101 000
Ferro-silicon	51 131	65 171	40 000	13 000	3 000
Ferro-titanium & ferro-silico-titanium	2 636	1 653	2 000	1 000	1 000
Calcium silicide	15 047	11 153	14 000	9 000	6 000
Silicon metal	* 18 000	* 19 000	13 000	6 000	10 000
Portugal					
Electric furnace ferro-alloys					
Ferro-manganese	* 10 000	13 170	14 080	16 070	14 545
Ferro-silico-manganese	* 5 000	...	...	...	...
Silicon metal	* 2 500	...	...	...	...
Spain					
Electric furnace ferro-alloys					
Ferro-chrome	* 25 400	* 29 000	* 15 000	* 6 000	—
Ferro-manganese	* 48 000	* 50 000	* 52 220	* 50 000	* 50 000
Ferro-silico-manganese	* 38 000	* 40 000	* 38 440	* 40 000	* 40 000
Ferro-silicon	* 36 000	* 38 000	* 37 500	* 40 000	* 40 000
Other ferro-alloys	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Silicon metal	10 700	11 500	* 9 000	* 9 000	* 10 000
Albania					
Electric furnace ferro-alloys					
Ferro-chrome	38 700	38 800	23 000	25 300	21 600
Austria					
Electric furnace ferro-alloys	20 000	15 000	12 000	* 12 000	* 12 000
Bulgaria					
Electric furnace ferro-alloys					
Ferro-manganese & ferro-silico-manganese	* 31 000	* 30 000	—	—	—
Ferro-silicon	* 15 000	* 14 000	* 14 000	* 14 000	* 10 000
Other ferro-alloys	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Czechoslovakia					
Electric furnace ferro-alloys					
Ferro-chrome	29 183	29 844	31 866	33 860	37 756
Ferro-manganese	60 766	63 518	64 205	* 60 000	* 60 000
Ferro-silico-manganese	* 34 000	* 37 000	* 37 000	* 30 000	* 30 000
Ferro-silicon	22 730	20 997	20 474	* 15 000	* 15 000
Other ferro-alloys	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Silicon metal	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000

**Production of Ferro-alloys**

tonnes

Country	1988	1989	1990	1991	1992
<b>Finland</b>					
Electric furnace ferro-alloys					
Ferro-chrome & ferro-silico-chrome	154 827	135 997	155 495	195 612	196 870
<b>German Democratic Republic</b>					
Electric furnace ferro-alloys					
Ferro-chrome	* 22 000	* 22 000	* 21 000	—	—
Ferro-manganese & ferro-silico-manganese	* 67 000	* 67 000	* 65 000	—	—
Ferro-silicon	* 25 000	* 25 000	* 24 000	—	—
Other ferro-alloys	* 13 600	* 13 000	* 12 000	—	—
Silicon metal	* 3 400	* 3 000	* 3 000	—	—
<b>Hungary</b>					
Electric furnace ferro-alloys					
Ferro-silicon	10 074	10 224	11 270	3 977	* 4 000
Other ferro-alloys	* 1 000	* 1 000	* 1 000	* 500	* 500
Silicon metal	* 2 000	* 2 000	* 2 000	* 1 000	* 1 000
<b>Iceland</b>					
Electric furnace ferro-alloys					
Ferro-silicon	70 061	72 008	62 791	47 872	51 413
<b>Norway</b>					
Electric furnace ferro-alloys					
Ferro-chrome	—	—	* 60 000	* 83 000	102 000
Ferro-manganese	231 903	200 761	213 266	173 212	202 680
Ferro-silico-manganese	232 465	243 816	193 411	226 737	213 106
Ferro-silicon	382 279	401 116	460 431	413 764	367 034
Other ferro-alloys	17 035	* 14 000	* 14 000	* 14 000	* 14 000
Silicon metal	88 854	100 194	76 601	71 530	68 024
<b>Poland</b>					
Blast furnace ferro-alloys					
Spiegeleisen	1 078	906	140	—	80
Ferro-manganese	91 117	90 267	71 000	57 400	43 400
Electric furnace ferro-alloys					
Ferro-chrome	36 316	28 222	13 700	1 300	35 300
Ferro-manganese & ferro-silico-manganese	4 066	1 427	5 400	9 200	4 800
Ferro-silicon	82 114	83 210	88 600	60 100	36 100
Other ferro-alloys	65 632	60 718	33 100	39 600	30 800
Silicon metal	* 10 000	* 10 000	* 10 000	9 000	* 9 000
<b>Romania</b>					
Electric furnace ferro-alloys					
Ferro-chrome	23 430	26 849	20 633	20 380	6 977
Ferro-manganese	* 80 000	* 80 000	* 80 000	* 70 000	27 130
Ferro-silico-manganese	* 40 000	* 40 000	* 40 000	* 20 000	28 159
Ferro-silicon	* 50 000	* 50 000	* 50 000	* 30 000	23 318
Silicon metal	* 4 500	* 4 400	* 4 000	* 4 000	* 2 000
<b>Soviet Union</b>					
Blast furnace ferro-alloys					
Spiegeleisen	18 000	18 000	17 000	* 15 000	* 15 000
Ferro-manganese	604 000	609 000	281 000	235 000	* 200 000
Electric furnace ferro-alloys					
Ferro-chrome	* 1 050 000	828 000	* 700 000	* 700 000	* 800 000
Ferro-silico-chrome	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Ferro-manganese	453 500	414 100	* 410 000	* 370 000	* 350 000
Ferro-silico-manganese	* 1 300 000	* 1 300 000	* 1 300 000	* 1 100 000	* 1 100 000
Ferro-nickel	* 90 000	* 90 000	* 90 000	* 85 000	* 45 000
Ferro-phosphorus	25 000	29 000	30 000	31 000	* 30 000
Ferro-silicon	* 1 911 800	* 1 872 600	* 1 860 000	* 1 600 000	* 1 700 000
Other ferro-alloys	* 160 000	* 160 000	* 160 000	* 140 000	* 130 000
Silicon metal	* 65 000	* 65 000	* 65 000	* 60 000	* 60 000
<b>Sweden</b>					
Electric furnace ferro-alloys					
Ferro-chrome	143 055	133 984	110 945	117 773	133 076
Ferro-silicon	20 622	20 996	18 670	18 627	15 451
Silicon metal	17 059	13 421	10 258	...	—
<b>Switzerland</b>					
Electric furnace ferro-alloys					
Ferro-silicon	* 3 000	* 3 000	* 3 000	* 3 000	* 3 000
Silicon metal	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000

## Production of Ferro-alloys

tonnes

Country	1988	1989	1990	1991	1992
<b>Turkey</b>					
Electric furnace ferro-alloys					
Ferro-chrome	54 030	59 715	62 439	85 693	83 170
Ferro-silicon	5 200	4 970	5 225	1 736	1 250
<b>Yugoslavia</b>					
Electric furnace ferro-alloys					
Ferro-chrome	93 349	90 429	82 687	* 91 000	77 518
Ferro-silico-chrome	3 688	3 815	4 199	* 3 000	* 3 000
Ferro-manganese	45 078	33 869	31 822	* 20 000	* 35 000
Ferro-silico-manganese	46 804	52 737	60 601	* 50 000	* 30 000
Ferro-nickel	15 047	17 102	11 850	(b) 11 775	* 12 000
Ferro-silicon	120 522	122 153	103 188	* 80 000	* 75 000
Other ferro-alloys	11 450	11 199	11 297	* 10 000	* 6 000
Silicon metal	25 830	15 897	12 661	* 10 000	* 8 000
<b>Egypt (i)</b>					
Electric furnace ferro-alloys					
Ferro-silicon	7 806	* 7 800	7 922	36 042	36 038
<b>South Africa</b>					
Ferro-chrome (d)	993 685	1 035 973	1 022 026	1 149 200	770 600
Ferro-manganese	446 894	394 045	403 559	259 944	269 807
Ferro-silico-manganese	247 701	258 000	234 000	235 000	242 000
Ferro-silicon	87 247	92 804	78 150	68 332	63 892
Other ferro-alloys	* 1 000	* 2 000	* 1 000	* 1 000	* 1 000
Silicon metal	38 960	36 301	35 731	39 791	34 528
<b>Zimbabwe</b>					
Electric furnace ferro-alloys					
Ferro-chrome	224 000	209 807	204 140	186 774	190 994
Ferro-silico-chrome	29 000	25 000	16 612	27 755	20 282
Ferro-manganese	2 620	6 250	1 100	...	...
Ferro-silicon	...	2 290	1 640	...	...
<b>Canada</b>					
Electric furnace ferro-alloys					
Ferro-manganese (f)	* 190 000	* 185 000	* 185 000	* 45 000	—
Ferro-silicon	111 622	* 120 000	* 110 000	* 90 000	* 80 000
Silicon metal	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
<b>Dominican Republic</b>					
Electric furnace ferro-alloys					
Ferro-nickel	76 275	85 424	74 009	74 813	71 417
<b>Mexico</b>					
Electric furnace ferro-alloys					
Ferro-chrome	9 295	2 569	275	72	61
Ferro-manganese	165 487	168 042	186 329	147 259	131 203
Ferro-silico-manganese	80 223	98 852	70 685	67 090	57 456
Ferro-silicon	16 553	9 474	6 998	5 836	...
Other ferro-alloys	699	79	87	105	107
<b>USA</b>					
Ferro-chrome	109 504	137 997	(d) 108 932	(d) 68 327	(d) 60 945
Ferro-silico-chrome (e)	10 141	8 847	...	...	...
Ferro-nickel	—	682	7 333	14 251	18 167
Ferro-phosphorus	60 220	53 546	46 018	36 135	25 098
Ferro-silicon	449 328	475 255	433 726	338 154	346 290
Other ferro-alloys	167 803	117 591	137 892	175 131	164 403
Silicon metal	149 094	136 531	140 792	145 275	158 550
<b>Argentina</b>					
Electric furnace ferro-alloys					
Ferro-manganese	19 737	24 441	24 344	26 337	4 524
Ferro-silico-manganese	11 610	21 160	21 805	14 564	30 790
Ferro-silicon	30 539	35 667	23 641	14 437	8 073
Other ferro-alloys	5 952	5 805	6 310	5 400	3 600
Silicon metal	15 800	* 10 000	* 10 000	* 10 000	* 10 000

**Production of Ferro-alloys**

tonnes

Country	1988	1989	1990	1991	1992
<b>Brazil</b>					
Electric furnace ferro-alloys					
Ferro-calcium-silicon	31 519	33 020	27 520	21 708	22 756
Ferro-chrome	130 024	113 267	83 753	82 225	91 100
Ferro-silico-chrome	9 177	8 938	4 973	4 524	6 759
Ferro-silico-magnesium	17 000	15 864	10 340	10 168	10 565
Ferro-manganese	180 588	180 668	170 504	169 103	178 937
Ferro-silico-manganese	193 490	208 262	216 779	272 046	299 995
Ferro-molybdenum	427	332	69	47	—
Ferro-nickel	33 930	34 997	34 257	34 069	33 470
Ferro-niobium	19 106	16 378	16 643	18 959	16 303
Ferro-phosphorus	1 469	1 928	1 278	864	32
Ferro-silicon	267 538	286 994	229 408	190 864	243 838
Ferro-titanium	549	430	125	126	4
Ferro-vanadium	261	302	44	41	—
Other ferro-alloys	926	1 414	509	103	104
Silicon metal	79 287	116 779	131 614	106 002	93 734
<b>Chile</b>					
Electric furnace ferro-alloys					
Ferro-chrome	2 212	2 840	1 868	2 509	2 110
Ferro-manganese	6 899	7 250	3 587	6 779	7 460
Ferro-silico-manganese	681	180	985	1 676	1 504
Ferro-molybdenum	1 191	2 990	2 283	2 673	2 310
Ferro-silicon	5 686	6 370	4 662	5 516	3 830
<b>Colombia</b>					
Ferro-nickel	41 672	41 446	43 847	50 150	49 814
<b>Venezuela</b>					
Ferro-silico-manganese	33 760	32 387	30 594	30 590	32 115
Ferro-silicon	51 363	54 873	53 422	54 327	43 632
<b>China</b>					
Ferro-chrome	* 170 000	* 180 000	* 200 000	* 160 000	* 280 000
Ferro-manganese	* 309 000	* 360 000	* 370 000	* 390 000	* 400 000
Ferro-silico-manganese	* 220 000	* 240 000	* 240 000	* 250 000	* 270 000
Ferro-silicon	* 787 600	* 900 000	* 900 000	* 950 000	* 1 000 000
Other ferro-alloys	* 597 400	* 702 000	* 690 000	* 800 000	* 750 000
<b>India</b>					
Electric furnace ferro-alloys					
Ferro-chrome	140 262	133 522	130 041	129 749	* 135 000
Ferro-silico-chrome	2 769	11 384	7 316	8 614	* 9 000
Ferro-manganese	138 331	149 139	203 311	200 902	* 200 000
Ferro-silico-manganese	52 895	75 469	60 426	58 672	* 55 000
Ferro-silicon	46 721	73 751	64 035	56 940	* 60 000
Other ferro-alloys	445	386	314	285	...
Silicon metal	686	* 800	2 045	747	...
<b>Indonesia</b>					
Electric furnace ferro-alloys					
Ferro-nickel	26 852	26 058	26 089	25 025	24 653
<b>Japan</b>					
Electric furnace ferro-alloys					
Ferro-calcium-silicon	1 360	808	514	410	426
Ferro-chrome	304 642	333 978	303 838	278 522	275 615
Ferro-manganese	378 351	394 055	452 434	463 722	361 941
Ferro-silico-manganese	106 970	122 192	77 465	87 229	96 360
Ferro-molybdenum	2 656	2 784	3 366	3 729	3 261
Ferro-nickel	242 276	275 341	234 311	295 422	237 350
Ferro-niobium	649	737	984	710	919
Ferro-silicon	73 767	74 936	62 599	62 362	37 656
Ferro-tungsten	91	77	46	61	71
Ferro-vanadium	3 776	3 127	3 706	3 847	3 005
Other ferro-alloys	1 761	3 578	3 462	3 560	4 507
<b>Korea, Dem. P.R. of</b>					
Ferro-manganese	* 70 000	* 70 000	* 70 000	* 70 000	* 70 000
Ferro-silicon	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Other ferro-alloys	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
<b>Korea, Republic of</b>					
Electric furnace ferro-alloys					
Ferro-manganese	75 924	85 329	84 000	94 893	102 000
Ferro-silicon	8 909	4 582	2 000	18 912	84 000
Other ferro-alloys	89 966	101 818	99 000	74 173	* 74 000

## Production of Ferro-alloys

tonnes

Country	1988	1989	1990	1991	1992
Philippines					
Electric furnace ferro-alloys					
Ferro-chrome	* 73 000	* 82 000	* 56 000	23 730	* 27 400
Ferro-silicon	...	* 9 000	* 10 000	* 10 000	* 10 000
Taiwan					
Electric furnace ferro-alloys					
Ferro-manganese	25 822	30 623	43 631	40 110	37 802
Ferro-silico-manganese	30 745	26 510	20 587	12 801	3 991
Ferro-silicon	19 601	19 277	15 501	6 252	2 606
Thailand					
Electric furnace ferro-alloys					
Ferro-silico-manganese	3 532	4 831	4 511	3 938	4 275
Australia					
Electric furnace ferro-alloys					
Ferro-manganese	58 000	* 67 000	* 70 000	* 55 000	* 55 000
Ferro-silico-manganese	44 000	* 55 000	* 65 000	* 65 000	* 65 000
Ferro-silicon	* 18 000	* 20 000	* 20 000	* 20 000	* 20 000
Silicon metal	* 8 000	* 9 000	* 33 000	* 30 000	* 30 000
New Caledonia					
Electric furnace ferro-alloys					
Ferro-nickel	136 203	132 261	117 800	119 808	108 889

(a) Ti, W, Mo, V content of ferro-titanium, ferro-tungsten, ferro-molybdenum and ferro-vanadium

(b) Excluding data from August to December for the Republic of Croatia

(c) Included with 'other ferro-alloys'

(d) Including ferro-silico-chrome

(e) Including other chromium alloys and chromium metal

(f) Including ferro-silico-manganese

(g) Including ferro-silicon

(h) Including alumino-thermic ferro-alloys

(i) Years ended 30 June of that stated

**Exports of Iron, Steel and Ferro-alloys**

tonnes

Country	1988	1989	1990	1991	1992
<b>United Kingdom</b>					
Pig iron	22 888	20 470	21 069	16 449	15 678
Sponge & powder	5 360	5 048	3 831	2 712	4 364
Ferro-chrome	648	850	776	1 607	1 892
Ferro-manganese	9 756	38 238	41 389	70 992	59 640
Ferro-silico-manganese	2 820	673	181	801	1 112
Ferro-molybdenum	6 661	6 853	5 282	5 083	5 490
Ferro-nickel	8	76	5	14	18
Ferro-niobium	486	804	811	1 040	846
Ferro-phosphorus	987	603	135	236	167
Ferro-silicon	2 387	2 072	1 670	3 725	3 748
Ferro-titanium & ferro-silico-titanium	11 857	11 241	11 244	9 241	10 591
Ferro-vanadium	38	60	231	79	146
Other ferro-alloys	4 730	5 349	8 210	10 936	6 472
Ingots, blooms, billets	1 690 357	1 485 518	1 309 675	1 401 463	1 220 702
Scrap	3 607 032	3 227 433	3 198 385	3 247 234	2 797 717
<b>Belgium-Luxembourg</b>					
Pig iron	15 096	19 596	13 167	5 519	13 244
Sponge & powder	4 599	3 408	2 200	2 120	1 511
Ferro-chrome	3 651	4 982	2 130	4 117	2 594
Ferro-manganese	24 332	45 843	22 624	34 671	8 983
Ferro-silico-manganese	13 529	8 940	3 609	7 934	11 459
Ferro-silicon	3 121	3 802	2 439	6 641	2 493
Ferro-titanium & ferro-silico-titanium	1 321	745	330	102	60
Other ferro-alloys	1 190	411	431	833	1 140
Ingots, blooms, billets	665 459	579 510	834 846	850 993	487 060
Scrap	912 898	1 049 884	869 401	1 045 097	1 202 135
<b>Denmark</b>					
Ingots, blooms, billets	2 428	1 019	6 109	15 514	16 265
Scrap	298 246	278 990	310 713	290 582	353 767
<b>France</b>					
Pig iron	54 513	40 340	10 350	7 654	19 451
Spiegeleisen	480	356	678	1 063	774
Sponge & powder	1 116	2 931	1 357	2 084	2 135
Ferro-chrome	48 263	12 895	21 658	22 779	7 180
Ferro-silico-magnesium	9 389	10 240	7 289	6 894	7 159
Ferro-manganese	31 963	21 586	25 657	57 673	57 678
Ferro-silico-manganese	26 290	45 002	51 138	56 408	42 607
Ferro-molybdenum	2 199	2 433	3 272	3 001	3 062
Ferro-nickel	3 720	4 325	3 240	1 801	77
Ferro-silicon	46 946	40 739	29 007	40 018	35 881
Ferro-titanium & ferro-silico-titanium	464	490	776	689	499
Ferro-vanadium	2	1	30	37	6
Ferro-silico-zirconium	1 809	1 221	197	1 111	105
Other ferro-alloys	29 702	28 789	23 949	17 704	19 445
Ingots, blooms, billets	966 753	887 352	1 072 482	1 255 209	1 000 310
Scrap	3 691 713	4 260 050	3 674 956	3 420 340	3 506 595
<b>Germany, Federal Republic of</b>					
Pig iron	389 558	408 299	599 402	390 561	298 643
Sponge & powder	40 202	38 199	29 962	21 627	22 397
Ferro-chrome	44 660	49 274	53 371	46 597	51 909
Ferro-silico-chrome	3 980	4 230	4 336	2 960	1 450
Ferro-silico-magnesium	5 630	6 628	5 441	4 433	5 832
Ferro-manganese	81 314	95 635	79 251	56 031	38 011
Ferro-silico-manganese	5 482	7 156	8 754	9 352	4 983
Ferro-molybdenum	214	261	401	288	297
Ferro-nickel	1 067	306	1 114	924	1 564
Ferro-niobium	927	913	591	769	905
Ferro-phosphorus	4 342	6 342	6 586	5 619	4 607
Ferro-silicon	80 618	70 524	66 481	57 914	54 375
Ferro-titanium & ferro-silico-titanium	1 211	1 311	1 011	1 575	1 757
Ferro-tungsten & ferro-silico-tungsten	33	28	41	86	36
Ferro-vanadium	2 977	2 672	2 498	2 181	2 054
Other ferro-alloys	2 147	3 933	2 620	6 483	8 695
Silicon metal	7 684	5 910	5 740	4 763	7 047
Ingots, blooms, billets	1 818 774	1 477 699	1 080 407	1 318 948	1 447 789
Scrap	4 891 361	5 054 061	5 198 929	7 251 020	8 441 147



## Exports of Iron, Steel and Ferro-alloys

tonnes

Country	1988	1989	1990	1991	1992
Greece					
Ferro-chrome	30 609	46 605	25 120	16 484	8 368
Ferro-nickel	—	—	—	203	—
Ingots, blooms, billets	40 262	50 026	49 228	38 713	24 186
Irish Republic					
Scrap	32 411	33 827	26 045	18 048	16 069
Italy					
Pig iron	34 970	48 104	37 895	46 336	37 310
Sponge & powder	3 256	8 545	9 551	9 573	10 589
Ferro-chrome	25 221	34 721	15 681	4 015	9 827
Ferro-silico-chrome	1 439	298	1 089	558	936
Ferro-silico-magnesium	1 215	(c) ...	(c) ...	283	140
Ferro-manganese	5 120	4 125	3 974	7 904	9 598
Ferro-silico-manganese	3 291	9 463	13 541	26 816	13 800
Ferro-silicon	16 969	22 008	6 427	3 457	3 959
Ferro-titanium & ferro-silico-titanium	1 518	1 909	1 222	965	318
Other ferro-alloys	3 567	4 857	12 347	3 414	1 188
Silicon metal	5 224	6 200	4 348	2 875	6 975
Ingots, blooms, billets	169 148	366 385	484 524	253 036	371 980
Scrap	27 517	29 334	19 496	11 538	13 319
Netherlands					
Pig iron	3 737	2 045	828	2 719	1 387
Sponge & powder	215	586	452	722	208
Ferro-chrome	—	4 750	3 355	1 299	197
Ferro-manganese	112	3 117	132	272	470
Ferro-silico-manganese	303	—	—	—	545
Ferro-molybdenum	387	475	464	389	189
Ferro-silicon	363	959	325	342	269
Ferro-titanium & ferro-silico-titanium	1 375	1 571	208	424	—
Ferro-vanadium	58	46	—	—	—
Other ferro-alloys	1 208	721	203	339	249
Silicon metal	3 708	1 962	4 884	5 108	5 568
Ingots, blooms, billets	1 539 677	1 118 510	1 152 225	1 025 923	1 067 400
Scrap	2 649 981	2 815 350	2 620 517	3 530 954	3 249 515
Portugal					
Ferro-silicon	(c) ...	(c) ...	8 139	3 916	913
Other ferro-alloys	4 025	266	825	371	—
Scrap	13 340	21 023	14 776	32 980	17 714
Spain					
Pig iron	61 304	62 568	8 559	133	13
Ferro-chrome	13 716	9 064	2 620	1 895	128
Ferro-manganese	14 268	24 190	20 441	16 248	23 812
Ferro-silico-manganese	8 470	12 386	21 074	12 650	10 008
Ferro-silicon	13 700	11 392	9 826	7 425	3 722
Other ferro-alloys	1 227	505	215	231	177
Silicon metal	1 666	1 542	213	298	465
Ingots, blooms, billets	578 933	169 533	81 121	222 950	283 523
Scrap	56 960	28 897	22 644	25 486	25 753
Albania					
Ferro-chrome	36 600	39 100	31 300	(f)* 15 400	(f)* 8 500
Austria					
Pig iron	44	69	6 904	13 346	7 613
Ferro-alloys	18 792	19 638	22 049	19 808	22 211
Ingots & blooms	15 145	16 801	13 957	9 394	18 644
Scrap	47 222	95 982	342 438	503 860	399 936
Bulgaria					
Pig iron	6 000	...	7 000	4 000	6 000
Ferro-alloys	8 000	16 000	13 000	6 000	...
Ingots, blooms, billets	273 000	142 000	75 000	63 000	...
Scrap (f)	* 98 800	* 59 200	* 18 900	* 27 300	* 120 700
Czechoslovakia					
Ferro-chrome (f)	* 600	* 2 500	* 2 300	* 16 700	* 44 100
Ferro-manganese (f)	* 15 000	* 15 400	* 17 000	* 38 000	* 6 500
Other ferro-alloys (f)	* 2 000	* 2 600	* 6 000	* 4 800	* 1 600
Blooms	676 000	615 000	664 000	731 000	(f)* 442 800
Scrap (f)	* 247 700	* 356 800	* 427 300	* 346 000	* 899 200

**Exports of Iron, Steel and Ferro-alloys**

tonnes

Country	1988	1989	1990	1991	1992
<b>Finland</b>					
Ferro-chrome & ferro-silico-chrome	90 148	77 338	105 199	118 172	103 236
Ingots, blooms, billets	183 501	143 228	117 487	110 225	110 579
Scrap	1 660	1 265	1 765	57 090	39 397
<b>German Democratic Republic</b>					
Pig iron	5 000	5 000	* 5 000	—	—
Ferro-silicon (f)	* 10 000	* 9 800	* 18 100	—	—
Other ferro-alloys (f)	* 500	* 1 600	* 8 300	—	—
Ingots, blooms, billets (f)	* 970 800	* 932 700	* 792 400	—	—
Scrap (f)	* 86 800	* 144 100	* 108 300	—	—
<b>Hungary</b>					
Pig iron	—	42 484	18 329	3 000	4 174
Ferro-alloys	7 746	10 044	11 964	...	—
Ingots, blooms, billets	9 969	15 528	51 617	82 000	...
Scrap	151 311	111 472	220 356	382 000	474 680
<b>Iceland</b>					
Ferro-silicon	73 236	64 192	67 150	53 452	56 898
Scrap	4 508	3 655	4 435	86	4 649
<b>Malta</b>					
Scrap	9 803	10 713	...	...	9 000
<b>Norway</b>					
Pig iron	31 149	52 146	50 132	58 633	(f)* 56 800
Ferro-chrome	—	4 077	55 126	85 645	(f)* 104 800
Ferro-manganese	204 475	168 475	173 402	145 128	(f)* 158 600
Ferro-silico-manganese	199 570	222 649	197 615	205 186	195 630
Ferro-silicon	365 882	361 468	400 627	371 616	351 646
Other ferro-alloys	13 313	15 531	14 598	12 559	13 244
Silicon metal	75 166	80 682	73 841	60 827	65 610
Ingots, blooms, billets	70 100	19 377	10 184	22 782	62 362
Scrap	21 373	19 977	12 146	15 662	12 058
<b>Poland</b>					
Pig iron & ferro-alloys	201 160	302 171	800 040	196 938	92 799
Ingots, blooms, billets	287 000	378 400	1 423 000	22 932	1 639 723
Scrap	346 956	439 935	424 572	181 207	1 240 000
<b>Romania</b>					
Ingots, blooms, billets	(f)* 56 200	9 055	(f)* 6 600	(f)* 1 000	9 714
Scrap	(f)* 600	(f)* 2 400	(f)* 9 400	(f)* 18 300	134 095
<b>Soviet Union</b>					
Pig iron	6 141 279	6 516 801	6 276 170	(h) 3 198 000	(h) 1 931 000
Sponge & powder (f)	* 126 100	* 376 300	* 345 400	* 318 100	* 207 800
Ferro-alloys	838 937	860 215	837 389	(h) 490 000	(h) 203 000
Ingots, blooms, billets	(f)* 1 934 000	(f)* 1 692 200	(f)* 1 619 100	(f)* 1 579 400	(h) 4 603 913
Scrap	3 240 000	2 737 000	1 302 000	(h) 368 000	(h) 433 000
<b>Sweden</b>					
Pig iron	12 193	13 808	5 270	9 487	31 728
Sponge & powder	119 908	120 896	124 929	121 354	128 564
Ferro-chrome	96 031	99 347	93 305	18 879	91 386
Ferro-manganese	867	762	792	538	984
Ferro-silico-manganese	146	86	91	60	109
Ferro-molybdenum	27	229	90	112	112
Ferro-niobium	14	22	59	74	85
Ferro-silicon	14 931	13 681	13 301	11 648	10 171
Ferro-titanium & ferro-silico-titanium	11	53	17	121	33
Ferro-vanadium	42	66	55	17	20
Other ferro-alloys	163	140	163	255	657
Silicon metal	14 554	12 229	8 391	1 464	353
Ingots, blooms, billets	430 403	330 964	239 482	338 092	289 282
Scrap	87 491	141 806	122 257	236 760	66 484
<b>Switzerland</b>					
Pig iron	1 618	1 160	528	155	342
Sponge & powder	620	582	515	556	640
Ferro-alloys	359	673	242	387	75
Ingots, blooms, billets	25 477	7 049	16 234	38 922	47 177
Scrap	78 092	66 836	66 058	70 198	66 809

## Exports of Iron, Steel and Ferro-alloys

tonnes

Country	1988	1989	1990	1991	1992
Turkey					
Pig iron	101 548	31 890	179 091	192 918	88 142
Ferro-chrome	59 451	46 238	64 488	78 469	74 205
Ingots, blooms, billets	1 280 185	1 123 806	1 229 900	984 698	1 648 568
Scrap	7 407	4 431	6 586	9 749	12 378
Yugoslavia					
Pig iron	8 409	23 810	35 941	(g) —	...
Ferro-chrome	69 806	73 894	78 409	(g) —	...
Ferro-manganese	15 244	7 897	14 604	(g) —	...
Ferro-silico-manganese	33 741	43 110	54 834	(g) —	...
Ferro-nickel	12 818	15 650	11 479	(g) 11 622	...
Ferro-silicon	77 417	84 635	74 991	(g) —	...
Other ferro-alloys	4 351	5 066	4 158	(g) 59	...
Silicon metal	18 463	9 654	8 687	(g) —	...
Ingots, blooms, billets	141 314	70 621	111 971	(g) 15 898	...
Scrap	489 426	237 178	253 691	(g) 34 910	...
Algeria					
Pig iron	120 230	108 371	302 690	273 625	...
Scrap	142 267	71 028	10 293	30 889	...
Ivory Coast					
Scrap	11 233	...	...	...	...
Morocco					
Scrap	91 430	96 144	84 052	52 628	39 126
Senegal					
Scrap	7 893	13 150	10 934	...	...
South Africa					
Pig iron (f)	* 397 000	* 211 800	* 144 100	* 164 000	* 297 500
Ferro-chrome	948 400	950 479	907 100	967 208	663 749
Ferro-manganese	625 500	497 500	504 927	* 400 000	* 430 000
Ferro-silicon	40 601	24 373	26 376	17 409	25 488
Silicon metal	38 636	34 646	30 241	32 204	38 078
Ingots, blooms, billets (f)	* 425 100	* 426 400	* 499 800	* 409 400	* 747 600
Scrap (f)	* 55 200	* 62 800	* 31 500	* 78 300	* 121 600
Tunisia					
Scrap	16 198	1 805	5 220	5 217	2 731
Zimbabwe					
Ferro-chrome	195 442	...	195 699	(a) 184 719	(a) 186 188
Ferro-silico-chrome	24 213	...	22 084	...	...
Ingots, blooms, billets	261 351	...	210 814	237 583	215 627
Scrap	9 501	...	3 755	...	...
Canada					
Pig iron	358 237	418 406	215 177	84 254	55 013
Sponge & powder	216 634	50 524	39 445	33 542	45 394
Ferro-chrome	1 661	38	573	343	150
Ferro-manganese	26 592	21 893	15 041	13 657	373
Ferro-silico-manganese	65	1 589	7 734	17 530	147
Ferro-silicon	30 249	32 505	53 532	34 047	30 003
Other ferro-alloys	6 591	969	587	600	1 032
Silicon metal	20 638	16 564	14 811	13 072	20 893
Ingots, blooms, billets	180 608	293 291	327 343	306 994	268 615
Scrap	1 682 288	899 642	1 371 712	1 076 549	1 118 548
Cuba					
Scrap	* 60 000	* 90 000	* 90 000	...	...
Dominican Republic					
Ferro-nickel	82 877	81 852	78 094	75 028	70 348
Mexico					
Ferro-manganese	43 025	34 372	51 598	(c) ...	(c) ...
Ferro-silico-manganese	42 148	46 971	24 976	(c) ...	(c) ...
Other ferro-alloys	4 986	4 285	218	69 861	58 761
Ingots, blooms, billets	77 400	247 142	569 764	430 926	872 808
Scrap	21 124	30 297	41 139	42 382	47 059
Trinidad & Tobago					
Sponge	151 568	233 157	442 035	159 996	128 182
Ingots, blooms, billets	47 546	13 705	9 976	...	...

**Exports of Iron, Steel and Ferro-alloys**

tonnes

Country	1988	1989	1990	1991	1992
<b>USA</b>					
Pig iron	66 539	13 962	16 767	18 748	35 611
Sponge & powder	17 157	23 217	62 875	21 917	34 000
Ferro-chrome & ferro-silico-chrome	9 913	11 413	10 414	12 393	13 056
Ferro-manganese	3 219	8 301	8 105	15 334	16 802
Ferro-silico-manganese	4 406	5 127	2 707	3 861	10 813
Ferro-molybdenum	88	128	328	405	573
Ferro-nickel	...	351	2 295	1 903	4 055
Ferro-niobium	...	168	851	916	919
Ferro-phosphorus	19 380	22 588	6 003	2 934	2 136
Ferro-silicon	26 684	50 460	52 109	52 621	59 661
Ferro-vanadium	571	512	350	193	374
Other ferro-alloys	11 899	7 452	4 818	3 776	3 169
Silicon metal	9 674	4 976	9 478	9 190	9 536
Ingots, blooms, billets	55 914	355 376	452 642	640 504	392 713
Scrap	9 167 339	11 189 000	11 610 081	9 342 023	9 219 692
<b>Argentina</b>					
Ferro-silicon	16 202	17 429	12 784	...	...
Other ferro-alloys	5 414	5 907	19 259	...	13 103
Ingots, blooms, billets	177 639	410 836	228 835	115 111	...
<b>Brazil</b>					
Pig iron	2 538 069	2 992 389	3 490 235	2 497 476	2 454 236
Ferro-chrome	37 007	24 099	16 477	27 100	23 936
Ferro-manganese	50 727	28 985	65 292	61 190	47 337
Ferro-nickel	10 412	12 838	15 960	21 678	15 363
Ferro-niobium	14 352	15 996	13 539	13 557	16 467
Fe-silico-spiegeleisen & silico-manganese	60 419	66 859	91 975	128 393	155 836
Ferro-silicon	211 397	223 528	199 899	157 711	191 863
Other ferro-alloys	19 902	14 545	27 283	19 055	23 084
Silicon metal	65 996	90 086	116 773	84 750	73 071
Ingots, blooms, billets	4 669 658	5 624 235	3 522 523	4 438 689	4 640 251
<b>Chile</b>					
Ferro-alloys	7 512	8 680	5 881	6 505	5 972
Ingots, blooms, billets	22 740	1 998	68 282	72 202	98 156
Scrap	12 586	226	28 857	12 964	458
<b>Colombia</b>					
Ferro-nickel	41 461	33 838	46 372	48 214	48 049
<b>Venezuela</b>					
Sponge & powder	376 762	659 390	453 649	551 085	714 102
Ferro-silico-manganese	4 462	4 650	9 476	5 967	13 597
Ferro-silicon	40 305	36 392	56 004	54 543	30 271
Ingots, blooms, billets	140 240	192 578	273 886	655 730	751 030
Scrap	—	1 331	13 838	77 029	160 006
<b>Bahrain</b>					
Scrap	33 164	40 468	57 916	27 458	...
<b>China</b>					
Pig iron	2 337 078	532 537	375 897	624 210	619 035
Ferro-chrome	(c) ...	(c) ...	11 463	29 768	60 544
Ferro-manganese	(c) ...	(c) ...	70 497	73 722	79 582
Ferro-silico-manganese	(c) ...	(c) ...	97 303	165 847	170 748
Ferro-molybdenum	(c) ...	(c) ...	6 629	4 957	4 409
Ferro-silicon	(c) ...	(c) ...	244 286	319 997	278 561
Ferro-titanium & ferro-silico-titanium	(c) ...	(c) ...	749	125	51
Ferro-tungsten & ferro-silico-tungsten	(c) ...	(c) ...	6 031	3 589	2 068
Ferro-vanadium	(c) ...	(c) ...	548	100	39
Other ferro-alloys	459 869	193 259	10 822	24 309	27 126
Silicon metal	...	...	...	...	155 735
Ingots, blooms, billets	17 752	77 067	520 982	851 312	594 958
Scrap	685 994	185 007	112 469	81 324	72 947
<b>Cyprus</b>					
Scrap (b)	...	33 822	14 644	12 988	17 038
<b>Hong Kong</b>					
Pig iron (b)	4 735	337	1 651	225	447
Ferro-manganese (b)	4 297	8 585	10 340	14 791	2 813
Ferro-silicon (b)	82 494	38 408	42 066	64 630	26 758
Other ferro-alloys (b)	9 753	18 697	33 079	47 787	43 162
Ingots, blooms, billets	34 934	7 444	1 643	3 123	1 638
of which: Re-exports	6 601	3 670	1 643	3 103	1 638
Scrap	428 310	474 286	479 971	489 570	582 143

## Exports of Iron, Steel and Ferro-alloys

Country	1988	1989	1990	1991	1992
India (d)					
Pig iron	871	880	719	579	17 148
Ferro-chrome	89 973	65 282	63 619	107 856	133 167
Ferro-manganese	3 400	3 017	19 574	19 656	11 181
Ferro-silico-manganese	(c) ...	(c) ...	(c) ...	2 564	14 229
Other ferro-alloys	13 144	7 247	1 975	54 445	11 572
Ingots, blooms, billets	9 240	7 297	879 841	13 609	105 504
Scrap	35 483	29 448	87 124	62 555	35 845
Indonesia					
Sponge & powder	138 315	53 686	67 990	86 588	93 152
Ferro-nickel	...	25 238	27 709	20 846	25 689
Ferro-silicon	829	4 322	2 646	180	29
Ingots, blooms, billets	41 180	31 452	55 531	229 374	203 996
Scrap	5 025	421	847	2 166	5 064
Iran					
Pig iron (f)	* 75 100	* 138 200	* 66 600	* 111 900	* 10 000
Israel					
Scrap (f)	* 2 500	* 2 800	* 10 700	* 2 200	* 2 300
Japan					
Pig iron	21 787	3 536	702	36	264 266
Sponge & powder	11 771	14 986	18 917	17 281	15 656
Ferro-chrome	4 450	1 123	2 811	1 928	1 367
Ferro-manganese	12 849	15 055	5 631	5 025	8 388
Ferro-silico-manganese	1 000	2 498	1 069	65	86
Ferro-silicon	4 868	2 764	3 780	4 676	4 662
Ferro-vanadium	25	188	145	2	8
Other ferro-alloys	5 604	5 615	4 605	5 292	5 368
Ingots, blooms, billets	159 424	146 584	42 728	64 541	325 737
Scrap	415 616	586 786	396 403	361 704	1 720 465
Korea, Dem. P.R. of					
Pig iron (f)	* 64 400	* 47 600	* 24 800	* 28 100	* 33 400
Ferro-alloys (f)	* 7 100	* 7 100	* 4 000	* 8 200	* 6 800
Ingots, blooms, billets (f)	* 27 200	* 20 900	* 59 100	* 11 700	* 35 600
Scrap (f)	* 24 800	* 21 300	* 20 000	* 16 100	* 36 200
Korea, Republic of					
Pig iron	76 397	238	827	6 073	118
Ferro-manganese	—	2 209	1 429	6	—
Ferro-silico-manganese	—	1 622	940	—	—
Other ferro-alloys	302	300	752	...	21
Ingots, blooms, billets	353 291	804 078	331 064	435 773	469 998
Scrap	40 440	19 272	39 576	20 328	16 187
Kuwait					
Scrap	30 839	29 220	87 714	5 628	76 311
Macao					
Scrap	6 090	6 131	6 806	10 072	15 081
Malaysia					
Sponge & powder	428 005	402 152	754 394	515 961	729 000
Ingots, blooms, billets	49 533	118 300	...	19 591	251 411
Scrap	80 913	75 276	* 75 000	78 090	101 973
Pakistan (e)					
Pig iron	—	20 550	...	1 500	—
Scrap	1 709	3 842	2 091	55 471	968
Philippines					
Ferro-chrome	—	—	—	13 504	8 278
Ferro-silicon	8 415	3 762	2 384	4 390	260
Other ferro-alloys	61 514	64 695	61 183	7 354	1 278
Scrap	1 974	1 673	2 538	1 713	2 027
Saudi Arabia					
Scrap	124 161	139 781	166 379	24 486	...
Singapore					
Pig iron	922	583	5 934	4 609	4 708
of which: Re-exports	853	583	5 641	4 589	4 588
Ferro-alloys	2 682	8 484	9 379	9 518	5 431
of which: Re-exports	2 682	8 484	9 377	8 485	3 721
Ingots & blooms	311	1 786	3 099	3 443	10 540
of which: Re-exports	291	1 669	2 586	821	5 878
Scrap	265 389	238 193	299 875	237 813	251 001
Sri Lanka					
Scrap	19 423	28 699	60 719	24 204	25 689

**Exports of Iron, Steel and Ferro-alloys**

tonnes

Country	1988	1989	1990	1991	1992
Taiwan					
Pig iron	1 581	580	851	290	447
Ferro-chrome	1 186	2 568	2 460	67	0
Ferro-manganese	1	274	62	9	0
Ferro-silicon	318	1 694	751	1 756	1 691
Other ferro-alloys	3 494	237	56	763	1 159
Ingots, blooms, billets	280 814	302 749	204 667	46 069	31 275
Scrap	75 239	51 724	68 731	68 745	64 214
Thailand					
Scrap	6 318	7 216	7 000	10 434	14 306
Australia					
Pig iron	24 789	24 000	—	—	—
Ferro-manganese	41 000	27 000	43 000	20 000	46 000
Other ferro-alloys	44 507	49 000	57 000	61 000	77 000
Ingots, blooms, billets	375 000	351 000	710 000	747 000	841 000
Scrap	999 747	875 000	1 173 000	1 410 000	955 000
New Caledonia					
Ferro-nickel	131 500	126 100	126 479	112 700	110 600
New Zealand (e)					
Ingots, blooms, billets	95 845	53 403	2 057	16 036	350
Scrap	2 412	30 265	10 000	68 833	38 651

## Note(s):

- (1) In this table the term 'ingots, blooms, billets' corresponds to items 672.4,6,7 and 8 of the Standard International Trade Classification (Revision 3) which includes those of alloy and high carbon steel
  - (a) Including ferro-silico- chrome
  - (b) Re-exports
  - (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
  - (g) Data for the Federal Republic of Yugoslavia only
  - (h) Data for the Russian Federation only

## Imports of Iron, Steel and Ferro-alloys

Country	1988	1989	1990	1991	1992
<b>United Kingdom</b>					
Pig iron	192 706	225 051	207 495	110 866	149 631
Sponge & powder	19 739	18 444	16 927	16 890	16 990
Ferro-chrome & ferro-silico-chrome	103 334	112 025	69 764	76 381	78 478
Ferro-silico-magnesium	(d) ...	(d) ...	(d) ...	7 584	9 479
Ferro-manganese	67 918	53 097	45 685	31 717	35 160
Ferro-silico-manganese	32 285	39 086	35 809	31 156	32 297
Ferro-molybdenum	600	638	502	227	286
Ferro-nickel	17 757	19 347	19 439	17 710	17 611
Ferro-niobium	536	459	472	511	603
Ferro-phosphorus	3 887	3 606	2 945	3 456	3 212
Ferro-silicon	74 087	86 594	99 511	82 864	77 609
Ferro-titanium & ferro-silico-titanium	929	625	1 464	1 122	5 190
Ferro-tungsten & ferro-silico-tungsten	94	89	189	95	182
Ferro-vanadium	565	821	631	674	801
Other ferro-alloys	11 535	7 897	7 244	2 029	1 929
Silicon metal	43 027	41 663	44 337	39 258	41 887
Ingots, blooms, billets	344 972	387 079	341 848	285 842	233 601
Scrap	91 733	102 726	81 876	95 803	69 395
<b>Belgium-Luxembourg</b>					
Pig iron	254 369	325 069	106 529	89 511	111 888
Sponge & powder	10 331	11 047	8 742	7 290	5 969
Ferro-chrome	70 994	83 259	95 093	92 456	93 212
Ferro-silico-chrome	2 455	2 667	2 806	4 153	2 121
Ferro-manganese	64 233	50 938	47 496	64 373	53 594
Ferro-silico-manganese	44 216	38 859	44 363	46 312	45 400
Ferro-molybdenum	1 389	2 101	2 882	1 408	957
Ferro-nickel	9 037	13 818	20 934	23 235	38 134
Ferro-niobium	395	586	530	604	564
Ferro-phosphorus	28 247	6 260	518	1 082	1 687
Ferro-silicon	31 673	34 749	36 955	36 944	38 880
Ferro-titanium & ferro-silico-titanium	623	838	402	424	347
Ferro-vanadium	128	279	487	398	248
Other ferro-alloys	4 720	6 844	5 354	4 799	2 301
Ingots, blooms, billets	1 702 942	1 130 849	909 382	1 146 454	1 019 594
Scrap	1 902 586	1 974 729	1 885 114	2 003 383	2 082 995
<b>Denmark</b>					
Pig iron	113 331	120 269	109 313	107 625	74 119
Sponge & powder	2 073	2 550	2 624	2 261	2 411
Ferro-chrome & ferro-silico-chrome	47	149	113	50	68
Ferro-manganese	1 901	2 360	2 523	2 474	2 453
Ferro-silico-manganese	5 863	4 842	2 807	4 601	4 706
Ferro-silicon	3 696	4 475	3 629	3 725	3 105
Other ferro-alloys	578	1 288	1 155	984	768
Ingots, blooms, billets	19 460	102 633	40 542	10 055	8 689
Scrap	116 745	105 855	74 306	124 708	96 494
<b>France</b>					
Pig iron	278 735	272 959	313 103	355 682	327 131
Sponge & powder	14 155	16 429	13 811	14 031	36 538
Ferro-chrome	181 077	180 031	210 925	191 798	189 945
Ferro-silico-chrome	225	107	205	196	57
Ferro-silico-magnesium	2 776	5 144	4 357	3 462	3 479
Ferro-manganese	64 119	86 508	83 503	78 707	44 033
Ferro-silico-manganese	51 409	45 141	43 734	60 285	48 550
Ferro-molybdenum	2 093	2 086	2 704	2 213	2 037
Ferro-nickel	54 373	47 359	46 932	38 403	33 728
Ferro-niobium	1 035	1 094	1 025	1 163	1 245
Ferro-phosphorus	2 874	3 423	3 244	2 861	2 586
Ferro-silicon	57 591	59 029	70 176	69 861	78 070
Ferro-titanium & ferro-silico-titanium	1 882	2 582	3 554	4 028	3 441
Ferro-tungsten & ferro-silico-tungsten	596	601	335	332	305
Ferro-vanadium	1 103	851	725	672	745
Other ferro-alloys	4 605	6 541	6 516	5 360	9 207
Silicon metal	13 067	13 662	13 619	13 825	14 386
Ingots, blooms, billets	585 446	551 950	477 143	521 444	357 345
Scrap	800 987	866 003	998 821	1 115 033	1 217 225

**Imports of Iron, Steel and Ferro-alloys**

tonnes

Country	1988	1989	1990	1991	1992
<b>Germany, Federal Republic of</b>					
Pig iron	237 575	278 108	286 490	329 215	285 769
Sponge & powder	29 846	30 771	27 751	32 985	41 603
Ferro-chrome	363 146	391 344	327 314	328 189	328 645
Ferro-silico-chrome	20 807	19 147	12 002	16 716	14 985
Ferro-silico-magnesium	2 527	4 414	4 121	2 885	2 157
Ferro-manganese	109 637	99 084	126 247	130 868	130 186
Ferro-silico-manganese	124 442	117 149	104 628	129 579	140 259
Ferro-molybdenum	7 285	8 098	7 934	8 205	8 255
Ferro-nickel	82 134	96 373	89 529	78 848	65 132
Ferro-niobium	2 532	2 579	2 158	2 628	2 412
Ferro-phosphorus	11 321	14 376	11 673	15 722	8 544
Ferro-silicon	217 871	209 066	224 201	192 881	189 382
Ferro-titanium & ferro-silico-titanium	5 434	5 390	5 120	5 459	6 181
Ferro-tungsten & ferro-silico-tungsten	1 343	1 400	1 479	657	617
Ferro-vanadium	2 068	2 692	2 720	2 385	2 527
Other ferro-alloys	8 445	9 480	6 365	6 295	9 893
Silicon metal	76 658	85 348	83 578	82 842	73 447
Ingots, blooms, billets	1 802 890	1 971 363	1 870 893	1 355 829	1 204 752
Scrap	1 477 132	1 336 498	1 117 563	835 073	811 502
<b>Greece</b>					
Pig iron	10 000	83 692	95 474	65 636	40 356
Ferro-manganese	—	6 507	4 991	4 298	2 931
Ferro-silico-manganese	3 710	7 157	8 261	6 509	2 295
Ferro-silicon	2 200	3 858	3 502	3 662	1 675
Other ferro-alloys	1 338	333	625	2 140	529
Ingots, blooms, billets	310 438	846 680	684 166	989 162	855 774
Scrap	425 451	428 486	525 948	928 733	280 312
<b>Irish Republic</b>					
Pig iron	3 027	322	553	189	1 519
Ferro-alloys	3 904	4 793	4 513	4 051	9 335
Ingots, blooms, billets	2 412	1 868	2 813	4 372	5 226
Scrap	179 594	220 254	217 004	199 033	158 181
<b>Italy</b>					
Pig iron	670 820	896 775	1 025 362	831 180	941 098
Spiegeleisen	136	134	351	547	200
Sponge & powder	205 139	282 626	305 122	224 995	116 298
Ferro-chrome	90 748	98 759	96 745	90 005	108 716
Ferro-silico-chrome	1 488	1 237	977	61	39
Ferro-silico-magnesium	3 013	(d) ...	(d) ...	5 851	5 558
Ferro-manganese	93 278	90 884	78 210	77 901	91 461
Ferro-silico-manganese	38 200	59 610	51 761	73 414	85 781
Ferro-molybdenum	2 489	2 776	2 953	2 901	3 113
Ferro-nickel	20 595	16 441	16 078	18 109	24 945
Ferro-niobium	1 165	1 187	761	1 069	984
Ferro-silicon	60 269	61 169	65 562	70 089	96 154
Ferro-titanium & ferro-silico-titanium	807	1 125	1 010	1 940	2 166
Ferro-tungsten & ferro-silico-tungsten	230	340	259	299	108
Ferro-vanadium	1 087	821	887	865	1 259
Other ferro-alloys	4 976	12 480	11 359	4 354	4 649
Silicon metal	16 261	22 499	19 144	16 781	15 499
Ingots, blooms, billets	2 001 890	1 799 746	1 788 367	1 513 236	1 297 968
Scrap	5 064 738	5 746 755	5 809 352	6 037 965	6 259 036
<b>Netherlands</b>					
Pig iron	63 364	67 384	61 336	58 484	55 959
Sponge & powder	2 054	4 797	4 691	2 586	1 606
Ferro-chrome	1 913	7 442	8 084	2 015	4 777
Ferro-manganese	18 764	17 969	17 450	17 100	18 394
Ferro-silico-manganese	7 261	6 360	7 050	2 794	2 478
Ferro-molybdenum	459	431	544	483	274
Ferro-nickel	109	36	100	19	527
Ferro-niobium	63	94	104	48	65
Ferro-phosphorus	461	281	254	896	467
Ferro-silicon	7 340	9 411	8 085	7 642	5 761
Ferro-titanium & ferro-silico-titanium	1 599	1 787	288	543	496
Ferro-vanadium	113	67	62	56	48
Other ferro-alloys	1 463	2 006	1 440	2 380	2 138
Silicon metal	6 935	5 432	8 824	8 880	8 674
Ingots, blooms, billets	86 257	79 324	77 461	72 363	41 233
Scrap	768 885	1 114 052	1 173 659	2 023 223	2 038 355



## Imports of Iron, Steel and Ferro-alloys

Country	1988	1989	1990	1991	1992
Portugal					
Pig iron	21 673	10 401	16 967	14 811	25 395
Ferro-manganese	(d) ...	(d) ...	5 851	5 300	2 002
Ferro-silicon	3 502	3 164	6 328	6 637	4 793
Other ferro-alloys	8 977	9 307	5 239	1 432	4 982
Ingots, blooms, billets	8 557	12 271	14 450	6 398	10 939
Scrap	181 385	150 013	82 398	63 764	23 061
Spain					
Pig iron	138 379	175 041	204 566	200 898	140 126
Sponge & powder	35 009	36 238	60 077	109 465	126 812
Ferro-chrome	68 969	79 635	100 362	93 510	85 031
Ferro-silico-chrome	2 094	998	1 184	1 612	2 529
Ferro-manganese	9 065	8 472	15 893	19 462	24 840
Ferro-silico-manganese	9 995	4 929	19 450	31 231	33 601
Ferro-molybdenum	724	884	1 362	1 371	1 019
Ferro-nickel	24 597	19 459	32 041	29 916	21 910
Ferro-niobium	119	144	145	141	115
Ferro-phosphorus	1 175	1 909	1 398	1 486	1 440
Ferro-silicon	5 429	20 498	16 234	25 727	33 169
Ferro-titanium & ferro-silico-titanium	401	694	699	477	286
Ferro-tungsten & ferro-silico-tungsten	81	56	29	66	28
Ferro-vanadium	261	274	283	307	305
Other ferro-alloys	4 165	5 213	4 728	5 077	4 605
Silicon metal	1 354	813	1 903	3 813	1 870
Ingots, blooms, billets	95 725	247 317	94 572	130 305	106 545
Scrap	4 472 483	4 475 559	4 332 121	4 315 796	4 259 542
Albania					
Pig iron	10 800	4 400	7 800	...	...
Austria					
Pig iron	42 274	66 875	49 187	34 710	25 984
Sponge & powder	6 686	6 602	6 909	6 380	6 606
Ferro-chrome	22 202	21 969	19 428	13 073	15 013
Ferro-silico-chrome	655	641	401	187	417
Ferro-manganese	23 887	23 899	22 182	16 651	13 917
Ferro-silico-manganese	6 907	5 103	5 419	11 475	10 153
Ferro-molybdenum	191	274	354	130	270
Ferro-nickel	1 305	1 369	1 456	7	—
Ferro-niobium & ferro-niobium-tantalum	275	306	46	120	192
Ferro-silicon	21 452	20 732	19 642	13 928	11 204
Ferro-titanium & ferro-silico-titanium	487	414	311	344	295
Ferro-tungsten & ferro-silico-tungsten	648	888	795	203	175
Ferro-vanadium	177	286	137	168	118
Other ferro-alloys	1 955	2 092	1 733	1 755	1 871
Silicon metal	4 201	4 544	4 924	4 585	5 871
Ingots & blooms	222 415	204 440	328 694	309 605	329 314
Scrap	101 539	88 183	54 561	49 791	165 043
Bulgaria					
Pig iron	368 458	260 931	309 000	35 000	9 000
Ferro-manganese	3 000	6 000	8 000	5 000	...
Other ferro-alloys	24 000	25 000	29 000	3 000	...
Ingots, blooms, billets	...	232 000	46 000	20 000	...
Czechoslovakia					
Pig iron	675 000	671 000	668 000	101 000	113 000
Ferro-chrome & ferro-silico-chrome (g)	* 1 000	* 1 200	* 500	* 3 200	* 2 100
Ferro-titanium & ferro-silico-titanium (g)	* 800	* 600	* 400	* 50	* 200
Other ferro-alloys (g)	* 120 300	* 120 700	* 121 200	* 101 300	* 52 000
Ingots, blooms, billets	153 000	14 000	2 000	1 000	...
Scrap (g)	* 13 900	* 13 600	* 10 900	* 152 400	* 336 000
Finland					
Pig iron	8 937	18 638	52 285	8 414	7 272
Sponge & powder	1 696	531	638	446	220
Ferro-chrome & ferro-silico-chrome	1 863	1 992	2 163	2 013	2 425
Ferro-manganese	5 955	8 811	10 802	8 827	5 399
Ferro-silico-manganese	16 472	21 700	20 023	15 000	22 587
Ferro-molybdenum	639	784	844	820	1 086
Ferro-nickel	24 091	19 704	30 718	29 154	56 265
Ferro-silicon	8 422	10 826	13 123	11 612	14 961
Ferro-titanium & ferro-silico-titanium	387	343	419	205	374
Ferro-vanadium	211	199	289	98	164
Other ferro-alloys	979	959	1 025	1 047	1 302
Ingots, blooms, billets	76 839	162 894	150 928	129 438	107 937
Scrap	16 096	33 499	45 774	45 641	53 111

## Imports of Iron, Steel and Ferro-alloys

tonnes

Country	1988	1989	1990	1991	1992
German Democratic Republic					
Pig iron	1 280 100	1 300 800	* 1 300 000	—	—
Sponge & powder (g)	* 14 100	* 11 800	* 6 500	—	—
Scrap	900 000	900 000	* 900 000	—	—
Hungary					
Pig iron	351 122	344 366	213 605	98 000	33 641
Ferro-chrome	11 250	(d) ...	10 409	(d) ...	534
Ferro-manganese	36 416	(d) ...	30 675	(d) ...	2 945
Ferro-molybdenum	200	278	52	(d) ...	62
Ferro-silicon	8 146	(d) ...	13 257	(d) ...	6 692
Other ferro-alloys	14 662	66 528	* 10 000	30 000	6 624
Scrap	5 046	80 103	602 886	121 000	67 546
Malta					
Ingots, blooms, billets	6 124	6 786	...	...	...
Norway					
Pig iron	2 249	4 573	5 601	5 363	3 637
Sponge & powder	2 560	2 449	696	19 292	25 695
Ferro-chrome	719	1 021	854	639	485
Ferro-manganese	2 001	9 741	3 704	9 463	6 196
Ferro-silico-manganese	2 691	3	309	2 643	4 908
Ferro-silicon	1 477	2 928	1 625	5 357	1 954
Other ferro-alloys	399	430	578	976	397
Ingots, blooms, billets	7 673	61 256	170 550	135 533	149 969
Scrap	163 664	60 767	22 605	95 326	133 373
Poland					
Pig iron & ferro-alloys	1 369 961	1 292 699	1 361 234	129 891	107 876
Ingots, blooms, billets	29 000	23 000	11 400	1 482	3 232
Scrap	2 241	3 040	4 350	775	...
Romania					
Pig iron	93 000	98 000	95 000	5 000	2 987
Sponge & powder (g)	* 3 300	* 1 100	* 500	* 1 200	...
Ferro-alloys	126 300	138 400	123 000	15 000	33 095
Ingots, blooms, billets	...	231 636	206 000	79 000	116 725
Soviet Union					
Pig iron	105 894	—	4 120	...	...
Ferro-alloys	29 340	13 528	3 001	...	...
Scrap (g)	* 54 000	* 44 000	* 40 000	* 41 200	...
Sweden					
Pig iron	70 591	50 633	43 400	28 544	16 171
Sponge & powder	2 983	6 059	3 511	2 486	3 231
Ferro-chrome	44 625	41 554	46 069	38 772	46 342
Ferro-silico-chrome	2 455	2 453	1 379	1 369	2 392
Ferro-manganese	31 104	27 035	25 012	19 907	20 403
Ferro-silico-manganese	17 366	14 755	11 478	12 298	14 748
Ferro-molybdenum	2 033	3 478	3 292	2 513	2 412
Ferro-nickel	9 275	12 179	12 863	10 927	13 330
Ferro-niobium	266	371	368	342	514
Ferro-silicon	24 146	23 284	22 838	19 521	18 391
Ferro-titanium & ferro-silico-titanium	1 886	1 391	1 634	1 140	1 549
Ferro-tungsten & ferro-silico-tungsten	697	860	705	241	177
Ferro-vanadium	1 098	1 151	1 040	892	1 131
Other ferro-alloys	2 426	2 798	2 949	2 331	2 333
Silicon metal	...	1 111	1 346	1 420	1 805
Ingots, blooms, billets	122 357	119 821	87 180	53 551	50 190
Scrap	801 197	625 494	246 894	165 652	281 514
Switzerland					
Pig iron	42 596	46 556	46 886	34 712	35 709
Sponge & powder	4 941	5 255	5 313	4 884	4 645
Ferro-aluminium	373	573	806	682	662
Ferro-chrome	701	1 015	1 307	1 040	1 035
Ferro-manganese	4 568	4 646	5 372	3 820	3 800
Ferro-silico-manganese	6 375	7 664	7 318	8 828	9 112
Ferro-silicon	7 157	6 691	6 071	5 329	6 231
Other ferro-alloys	1 398	1 257	1 386	1 077	1 029
Silicon metal	2 214	3 759	4 421	4 301	1 608
Ingots, blooms, billets	97 977	121 259	124 340	88 912	90 098
Scrap	85 587	152 116	135 922	227 043	348 521

## Imports of Iron, Steel and Ferro-alloys

Country	1988	1989	1990	1991	1992
<b>Turkey</b>					
Pig iron	149 754	192 152	148 094	240 761	449 490
Sponge & powder	32 793	24 125	19 894	39 462	42 800
Ferro-manganese	35 965	51 081	32 047	30 099	40 187
Ferro-silico-manganese	31 892	27 975	48 830	49 750	61 041
Ferro-silicon	24 783	29 276	32 409	26 950	20 566
Other ferro-alloys	1 286	5 466	4 718	3 159	4 154
Ingots, blooms, billets	871 221	1 005 176	521 941	791 694	987 784
Scrap	3 036 709	4 422 413	3 649 790	4 442 548	4 989 316
<b>Yugoslavia</b>					
Pig iron	39 119	111 241	93 256	(b) 13 516	...
Sponge & powder	1 866	2 104	1 584	(b) 382	...
Ferro-chrome	6 067	3 481	2 970	(b) 987	...
Ferro-silico-chrome	677	3 053	3 963	(b) —	...
Ferro-manganese	1 561	2 997	6 856	(b) 1 078	...
Ferro-silicon	959	4 286	5 013	(b) 1 662	...
Other ferro-alloys	2 851	2 982	2 527	(b) 175	...
Ingots, blooms, billets	699 687	718 371	720 305	(b) 137 112	...
Scrap	749 456	665 019	412 800	(b) 53 055	...
<b>Algeria</b>					
Pig iron	16 352	3 319	3 768	7 454	...
Ferro-chrome	—	184	200	(d) ...	...
Ferro-manganese	7 322	3 569	464	(d) ...	...
Ferro-silico-manganese	200	390	29	(d) ...	...
Ferro-silicon	5 687	4 626	6 861	4 323	...
Ferro-vanadium	70	30	18	(d) ...	...
Other ferro-alloys	459	235	144	1 853	...
Ingots, blooms, billets	277	5 928	2 588	23 379	...
<b>Egypt</b>					
Ferro-alloys	11 800	8 000	17 800	15 000	17 293
Ingots & billets	66 394	86 791	...	...	236 686
Scrap	11 772	34 029	...	...	109 817
<b>Kenya</b>					
Ingots & blooms	52 614	...	47 994	...	...
<b>Mauritius</b>					
Pig iron & ingots	25 410	33 073	...	23 614	24 556
<b>Morocco</b>					
Pig iron	3 318	1 512	3 339	5 200	15 958
Ferro-chrome	60	80	69	11	...
Ferro-manganese & ferro-silico-manganese	186	126	188	249	181
Ferro-silicon	197	122	92	167	166
Ingots, blooms, billets	371 698	440 491	412 117	418 095	341 550
Scrap	36	81	2 320	1 856	3 169
<b>Nigeria</b>					
Ferro-manganese	3 000	3 500	4 000	2 000	...
<b>Rwanda</b>					
Ingots	36 578	28 726	21 022	...	...
<b>South Africa</b>					
Ferro-molybdenum	699	...	...	...	...
<b>Tanzania</b>					
Pig iron & ferro-alloys	6 381	1 747	...	...	...
Ingots & blooms	3 802	17 228	...	...	...
<b>Togo</b>					
Ingots, blooms, billets	3 716	5 300	4 618	...	...
<b>Tunisia</b>					
Pig iron	2 351	3 202	5 640	2 567	1 565
Ferro-alloys	1 719	1 829	1 778	1 617	1 925
Ingots, blooms, billets	79 214	28 188	46 601	54 435	57 949
Scrap	598	3 022	2 183	1 880	3 526
<b>Zimbabwe</b>					
Ferro-manganese	147	300	546	500	...
Ferro-silicon	669	...	31	...	...
Other ferro-alloys	131	...	59	...	...

## Imports of Iron, Steel and Ferro-alloys

Country	1988	1989	1990	1991	1992
<b>Canada</b>					
Pig iron	9 022	15 196	3 667	23 199	26 565
Sponge & powder	8 555	5 989	5 752	6 225	13 752
Ferro-calcium-silicon	740	1 968	1 707	1 896	1 714
Ferro-chrome	48 879	48 550	43 202	46 255	34 855
Ferro-silico-chrome	2 914	2 441	1 192	895	546
Ferro-manganese & spiegeleisen	35 346	44 840	29 364	46 087	49 920
Fe-silico-manganese & silico-spiegeleisen	17 260	13 096	17 143	15 525	24 137
Ferro-molybdenum	345	1 150	581	544	493
Ferro-nickel	3 060	2 993	2 524	1 521	1 437
Ferro-niobium	1 196	1 066	1 108	1 466	1 120
Ferro-phosphorus	2 207	1 062	576	1 208	672
Ferro-silicon	20 275	20 925	20 504	21 944	30 169
Ferro-titanium & ferro-silico-titanium	643	438	533	302	328
Ferro-vanadium	271	371	300	187	362
Other ferro-alloys	7 134	4 029	2 340	1 705	1 578
Ingots, blooms, billets	1 346 115	653 858	277 327	147 468	270 890
Scrap	1 185 699	1 460 467	1 002 519	809 349	1 231 467
<b>Costa Rica</b>					
Ingots, blooms, billets	56 805	65 020	71 324	45 824	74 275
<b>Cuba</b>					
Pig iron	184 792	239 544	...	...	...
Scrap	* 90 000	* 90 000	* 75 000	...	...
<b>El Salvador</b>					
Ingots, blooms, billets	21 119	10 361	13 047	17 632	...
Scrap	3 241	24 932	14 129	11 017	...
<b>Guatemala</b>					
Ingots, blooms, billets	23 952	59 010	33 884	37 260	92 821
<b>Jamaica</b>					
Ingots, blooms, billets	23 307	32 030	12 086	31 996	17 926
<b>Mexico</b>					
Pig iron	28 882	51 073	51 707	23 544	15 230
Sponge & powder	2 662	368 467	305 300	223 656	3 773
Ferro-silicon	3 503	8 844	14 078	16 584	14 337
Other ferro-alloys	6 725	7 600	10 215	9 141	18 877
Ingots, blooms, billets	7 554	7 876	19 314	192 987	154 753
Scrap	834 539	656 304	737 234	561 675	514 369
<b>Panama</b>					
Ingots, blooms, billets	6 926	6 919	8 700	25 313	35 620
<b>USA</b>					
Pig iron	640 456	443 115	347 384	434 453	496 761
Sponge & powder	176 327	226 000	384 483	476 386	572 398
Ferro-chrome	422 813	343 734	415 882	402 767	408 733
Ferro-silico-chrome	9 710	6 803	3 801	5 301	9 379
Ferro-manganese	485 566	429 982	379 728	314 764	306 163
Ferro-silico-manganese	207 098	229 687	222 742	260 317	257 577
Ferro-molybdenum	2 288	1 410	1 401	1 454	1 722
Ferro-nickel	40 440	33 889	41 767	39 857	35 122
Ferro-niobium	2 957	3 880	2 919	3 282	3 767
Ferro-silicon	210 759	174 688	237 757	177 617	246 828
Ferro-titanium & ferro-silico-titanium	1 552	2 008	1 960	1 186	1 356
Ferro-tungsten & ferro-silico-tungsten	899	552	659	690	575
Ferro-vanadium	134	697	305	524	767
Ferro-zirconium	676	443	—	288	1
Other ferro-alloys	...	2 112	2 878	23 162	24 208
Silicon metal	42 191	45 204	66 344	43 206	32 801
Ingots, blooms, billets	2 111 496	1 997 432	2 146 494	1 872 859	2 126 841
Scrap	927 024	1 015 614	1 291 535	1 072 164	1 302 702
<b>Argentina</b>					
Pig iron	111 282	2 413	250	107 000	8 678
Ferro-chrome	2 799	(d) ...	(d) ...	(d) ...	2 746
Ferro-manganese	3 917	2 392	2 109	1 000	1 881
Ferro-silicon	204	49	62	(d) ...	417
Other ferro-alloys	141	2 765	2 466	3 300	1 360
Blooms & billets	119 674	80 930	...	44 364	170 382
Scrap	2 507	10 951	19 286	20 000	23 525
<b>Brazil</b>					
Sponge & powder	3 182	5 377	2 799	1 694	3 191
Ferro-chrome	199	2 229	11 210	10 170	9 131
Other ferro-alloys	474	1 246	4 761	14 841	7 599
Scrap	86 587	342 277	113 236	88 553	99 000

## Imports of Iron, Steel and Ferro-alloys

Country	1988	1989	1990	1991	1992
Colombia					
Ferro-chrome	705	589	520	674	1 531
Ferro-manganese	7 181	5 844	4 973	3 740	3 866
Ferro-silico-manganese	3 420	1 862	468	1 447	2 947
Ferro-silicon	2 935	3 125	1 747	2 367	2 452
Other ferro-alloys	833	2 920	779	1 044	1 045
Ingots, blooms, billets	4 972	49 972	28 407	9 858	65 025
Scrap	157 008	204 887	73 161	104 478	187 258
Ecuador					
Ingots, blooms, billets	155 198	153 190	126 214	142 925	...
Peru					
Ferro-chrome	167	523	475	360	...
Ferro-manganese	1 821	1 306	1 660	493	...
Ferro-silico-manganese	607	3	458	347	...
Ferro-silicon	565	275	544	717	...
Scrap	127 157	77 680	67 400	...	...
Suriname					
Ferro-alloys	2 125	5 099	7 637	* 7 000	...
Ingots, blooms, billets	2 058	2 712	3 564	6 518	...
Scrap	2 600	6 759	6 680	* 3 000	...
Uruguay					
Ferro-alloys	598	908	632	512	765
Ingots, blooms, billets	9 551	9 009	2 520	2 599	6 566
Venezuela					
Sponge & powder	111 696	331 422	105 494	62 630	...
Ferro-chrome	852	701	405	531	349
Ferro-manganese	37 948	30 403	26 476	16 028	...
Ferro-vanadium	373	522	462	239	(d) ...
Other ferro-alloys	1 102	285	267	1 366	5 117
Silicon metal	4 180	3 921	1 575	1 164	856
Ingots, blooms, billets	46 623	97 818	5 288	109 978	4 488
Scrap	383 797	122 027	150 000	...	84 237
Abu Dhabi					
Scrap	10 690	...	7 600	2 021	5 673
Bahrain					
Blooms & billets	30 122	49 531	42 772	52 490	...
Bangladesh (a)					
Pig iron	54 249	27 352	79 222	25 565	...
Ferro-alloys	108 964	9 824	28 272	12 403	...
Scrap	4 405	45 983	76 111	...	...
China					
Pig iron	869 911	686 053	1 307 132	363 037	153 501
Ferro-alloys	710	5 499	373	6 890	8 710
Ingots, blooms, billets	151 137	193 479	446 694	324 768	1 808 986
Scrap	154 393	119 923	183 353	238 924	1 243 143
Cyprus					
Pig iron	697	1 940	1 077	137	1 243
Hong Kong					
Pig iron	7 892	3 711	2 332	6 723	15 247
Ferro-manganese	8 731	8 923	12 189	14 089	5 711
Ferro-silicon	96 300	35 836	39 514	60 641	21 172
Other ferro-alloys	13 433	21 319	36 455	49 435	28 361
Ingots, blooms, billets	189 684	108 297	139 318	143 112	60 153
Scrap	86 071	76 445	81 961	140 641	208 026
India (e)					
Pig iron	164 771	394 697	244 744	205 126	102 451
Sponge & powder	157 716	69 990	56 426	3 053	1 068
Ferro-chrome & ferro-silico-chrome	48	1 484	207	194	689
Ferro-manganese & ferro-silico-manganese	95	410	273	88	59
Ferro-nickel	20 545	13 217	16 119	14 928	12 517
Ferro-silicon	858	6 609	1 930	954	433
Other ferro-alloys	1 295	995	980	1 710	1 628
Ingots, blooms, billets	39 109	19 428	32 913	18 400	20 860
Scrap	2 120 305	2 256 444	3 152 368	1 515 437	3 039 920

**Imports of Iron, Steel and Ferro-alloys**

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Country	1988	1989	1990	1991	1992
<b>Indonesia</b>					
Pig iron	125 082	176 604	168 259	106 456	255 178
Sponge & powder	75 903	105 593	158 786	184 477	184 873
Ferro-manganese	6 760	21 438	17 719	27 531	15 590
Ferro-silico-manganese	9 754	11 298	13 841	21 403	26 561
Ferro-silicon	331	1 401	7 879	8 991	6 959
Other ferro-alloys	355	343	810	1 290	1 245
Ingots, blooms, billets	321 261	362 889	756 620	517 136	338 191
Scrap	584 708	703 413	1 177 669	1 187 093	1 244 041
<b>Iran (f)</b>					
Ferro-alloys	5 743	15 269	...	...	...
Ingots, blooms, billets	307 003	643 651	37 985	...	...
<b>Israel</b>					
Ferro-alloys (g)	* 700	* 700	* 1 500	* 900	* 600
Ingots, blooms, billets	41 537	63 703	253 872	253 000	...
Scrap (g)	* 1 400	* 1 200	* 1 300	* 5 600	* 700
<b>Japan</b>					
Pig iron	2 823 811	2 212 128	3 184 495	3 226 332	1 296 109
Sponge & powder	39 395	48 563	81 140	141 856	171 358
Ferro-chrome	473 707	477 080	441 672	578 073	459 608
Ferro-silico-chrome	17 511	14 018	6 690	10 622	8 863
Ferro-manganese	27 383	21 786	43 268	32 563	25 525
Ferro-silico-manganese	158 410	274 282	195 282	241 271	193 746
Ferro-molybdenum	1 486	1 322	1 600	1 975	1 854
Ferro-nickel	48 664	52 073	41 941	45 925	32 626
Ferro-niobium	3 360	3 590	3 516	4 526	4 187
Ferro-phosphorus	8 198	7 838	6 591	9 262	7 962
Ferro-silicon	539 846	406 901	476 482	484 772	437 554
Ferro-titanium & ferro-silico-titanium	2 569	1 968	2 260	2 498	2 703
Ferro-tungsten & ferro-silico-tungsten	488	743	835	416	509
Ferro-vanadium	595	238	431	807	1 014
Other ferro-alloys	14 309	13 124	12 130	14 031	11 269
Silicon metal	132 840	135 422	131 310	138 206	146 962
Ingots, blooms, billets	559 218	727 731	1 022 601	1 307 894	615 128
Scrap	1 790 558	1 157 107	1 048 189	820 643	328 113
<b>Jordan</b>					
Pig iron	3 348	14 952	219	—	—
Ingots, blooms, billets	169 992	136 463	185 433	189 525	257 046
Scrap	1 256	1 244	9 961	4 948	5 034
<b>Korea, Dem. P.R. of</b>					
Ferro-manganese (g)	* 1 500	* 2 000	* 12 000	* 10 400	* 11 700
Other ferro-alloys (g)	* 16 400	* 7 600	* 9 100	* 10 800	* 6 200
<b>Korea, Republic of</b>					
Pig iron	2 780 749	1 063 395	980 970	773 336	1 068 769
Sponge & powder	7 510	18 983	101 305	247 328	283 370
Ferro-chrome	16 290	60 775	76 931	90 148	110 026
Ferro-silico-chrome	18	490	1 820	6 060	8 300
Ferro-manganese	3 743	4 296	7 868	9 046	26 630
Ferro-silico-manganese	(d) ...	2 572	4 420	9 424	16 657
Ferro-molybdenum	946	1 030	919	879	530
Ferro-nickel	946	18 882	18 541	23 617	31 500
Ferro-phosphorus	1 355	911	1 347	2 064	2 889
Ferro-silicon	68 440	63 890	67 781	82 533	86 481
Ferro-vanadium	492	226	377	444	516
Other ferro-alloys	5 474	2 437	2 187	2 735	3 273
Silicon metal	4 554	4 988	6 921	7 320	7 916
Ingots & blooms	631 587	394 082	1 135 774	2 162 806	2 011 357
Scrap	3 892 465	4 062 390	3 875 997	3 261 377	3 136 886
<b>Malaysia</b>					
Pig iron	46 597	66 165	110 283	100 109	162 967
Spiegeleisen	3 015	4 070	1 082	3 346	2 154
Ferro-manganese	17 221	7 611	15 873	9 007	14 269
Ferro-silico-manganese	5 396	5 851	4 999	5 277	10 098
Ferro-silicon	4 424	6 074	6 419	5 553	7 832
Other ferro-alloys	1 047	2 199	1 447	3 392	3 219
Ingots, blooms, billets	127 858	149 860	224 662	345 665	420 707
Scrap	488 551	718 172	734 297	1 010 549	704 920

## Imports of Iron, Steel and Ferro-alloys

Country	1988	1989	1990	1991	1992
<b>Pakistan (a)</b>					
Pig iron	1 431	...	3 321	1 152	984
Ferro-manganese	16 611	...	15 464	16 921	8 387
Ferro-silicon	10 775	...	8 664	8 075	11 776
Other ferro-alloys	1 503	...	1 869	7 759	1 760
Ingots, blooms, billets	25 905	...	35 031	58 836	28 622
Scrap	659 009	...	321 846	482 991	763 805
<b>Philippines</b>					
Pig iron	73 395	55 660	63 759	47 876	13 700
Ferro-manganese	3 963	5 674	2 524	2 072	2 780
Ferro-silico-manganese	1 219	3 373	918	796	104
Ferro-silicon	159	329	1 037	316	2 390
Other ferro-alloys	325	720	590	389	495
Ingots, blooms, billets	552 892	843 766	669 499	549 314	1 045 641
Scrap	93 803	152 045	64 679	127 771	52 270
<b>Qatar</b>					
Scrap	13 812	13 041	3 242	5 453	979
<b>Saudi Arabia</b>					
Pig iron	1 850	45 728	4 687	19 730	...
Ingots, blooms, billets	11 166	5 758	45 249	18 748	...
Scrap	540 553	191 021	312 970	488 290	...
<b>Singapore</b>					
Pig iron	115 846	174 822	72 838	131 320	94 524
Sponge & powder	2 117	4 440	19 313	7 292	149
Ferro-manganese	1 184	3 876	2 403	3 135	3 220
Ferro-silicon	4 347	11 995	9 618	11 181	9 693
Other ferro-alloys	9 890	330	384	458	437
Ingots & blooms	172 602	260 686	164 955	244 252	133 522
Scrap	182 054	196 577	220 910	148 592	147 334
<b>Sri Lanka</b>					
Ingots, blooms, billets	32 358	...	39 685	45 490	48 880
<b>Syria</b>					
Ingots, blooms, billets	...	...	38 725	...	...
Scrap	...	...	12 881	...	...
<b>Taiwan</b>					
Pig iron	738 696	583 082	578 375	853 410	817 656
Sponge & powder	9 028	16 063	114 042	47 225	72 570
Ferro-chrome	51 194	41 341	35 182	57 246	48 045
Ferro-manganese	23 895	18 982	21 120	19 348	29 411
Ferro-silico-manganese	(d) ...	3 991	12 430	31 272	42 222
Ferro-molybdenum	(d) ...	328	434	433	291
Ferro-niobium	(d) ...	163	431	324	205
Ferro-silicon	33 591	23 556	36 207	41 412	41 504
Ferro-vanadium	(d) ...	159	330	396	378
Other ferro-alloys	1 454	1 709	1 059	2 162	1 689
Silicon metal	5 331	...	11 266	18 017	12 566
Ingots, blooms, billets	2 130 564	2 251 534	2 461 379	3 837 135	5 443 382
Scrap	1 255 740	1 552 971	1 286 723	2 262 211	1 845 489
<b>Thailand</b>					
Pig iron	92 954	80 216	103 869	78 381	149 113
Sponge & powder	18 242	11 542	14 304	522	5 524
Ferro-chrome	697	333	505	472	363
Ferro-manganese	6 769	6 723	6 783	5 484	9 376
Ferro-silico-manganese	1 277	817	901	1 411	2 426
Ferro-silicon	7 609	6 009	6 452	7 634	10 306
Other ferro-alloys	225	335	380	305	1 396
Ingots, blooms, billets	160 568	268 682	979 645	891 557	1 223 831
Scrap	1 158 249	1 081 294	1 101 356	501 015	865 435
<b>Australia</b>					
Pig iron (a)	5 185	15 984	26 571	...	4 576
Sponge & powder (a)	4 590	4 528	4 702	3 352	3 631
Ferro-chrome (a)	12 201	9 459	4 748	5 446	6 692
Ferro-manganese (a)	(c) 4 780	3 712	5 058	4 611	7 054
Ferro-silico-manganese (a)	646	292	205	232	914
Ferro-molybdenum (a)	314	178	18 453	228	318
Ferro-silicon (a)	10 792	14 098	21 508	19 331	13 232
Other ferro-alloys (a)	(c) 3 032	2 042	2 022	1 457	1 371
Ingots & billets	132 649	185 000	94 000	241 000	16 000
Scrap (a)	13 772	1 967	2 019	2 208	1 382

**Imports of Iron, Steel and Ferro-alloys**

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Country	1988	1989	1990	1991	1992
Fiji					
Ingots, blooms, billets	5 744	4 950	...	...	...
New Zealand (a)					
Pig iron	100	96	5 473	157	64
Ferro-manganese	1 388	1 018	1 749	1 934	2 121
Ferro-silicon	1 806	2 353	2 213	3 003	3 161
Other ferro-alloys	1 677	2 021	2 012	1 555	1 451
Ingots, blooms, billets	10 350	116	17 170	2 309	3 955
Scrap	3 066	71	223	10	245

## Note(s):

- (1) In this table the term 'ingots, blooms, billets' corresponds to items 672.4,6,7 and 8 of the Standard International Trade Classification (Revision 3) which includes those of alloy and high carbon steel
- (a) Years ended 30 June of that stated
- (b) Data for the Federal Republic of Yugoslavia only
- (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



## Production of Kaolin

Country	1988	1989	1990	1991	1992
United Kingdom (a)	3 276 795	3 139 672	3 037 486	2 911 484	(l) 2 502 224
Belgium	* 40 000	* 35 000	* 35 000	* 30 000	* 30 000
Denmark	39 554	16 029	17 423	17 057	3 503
France	337 000	281 000	370 130	343 800	334 000
Germany, Federal Republic of (g)	612 000	673 000	601 000	598 000	578 000
Greece	127 395	67 234	169 986	189 235	201 705
Italy	71 522	64 196	67 321	57 871	* 50 000
Portugal	101 365	115 114	108 392	149 788	* 120 000
Spain (c)	589 000	380 636	* 375 000	* 350 000	448 000
Albania	8 200	10 053	8 256	2 000	* 500
Austria	89 491	85 310	81 265	72 361	64 733
Bulgaria	220 000	203 000	186 467	* 180 000	* 180 000
Czechoslovakia (h)	579 000	557 000	533 000	526 000	505 000
Finland	5 494	5 718	7 026	6 879	6 700
German Democratic Republic	* 165 000	* 150 000	* 115 000	—	—
Hungary (c)	34 901	28 612	22 000	19 000	7 000
Poland	69 530	61 604	48 100	44 100	42 400
Romania	* 400 000	* 400 000	* 250 000	* 200 000	* 150 000
Soviet Union	* 2 000 000	* 2 000 000	* 1 800 000	* 1 600 000	* 1 300 000
Turkey	204 478	238 251	251 182	186 517	185 675
Yugoslavia	218 673	254 949	198 513	(k)* 190 000	(m) 111 782
Algeria	17 800	17 944	17 993	21 460	20 844
Burundi	4 021	4 305	5 281	6 682	9 688
Egypt (d)	124 122	121 515	149 000	151 548	95 693
Madagascar	365	1 315	485	496	756
South Africa	152 500	139 711	132 421	134 485	131 765
Tanzania	1 666	1 534	2 021	1 738	1 360
Mexico	162 415	141 519	156 140	167 238	144 121
USA (e)	8 973 089	8 973 668	9 143 000	9 575 000	8 064 000
Argentina	93 871	45 598	33 684	47 115	43 722
Brazil (b)	867 902	911 780	765 826	* 850 000	* 900 000
Chile	54 464	58 512	32 416	63 083	59 083
Colombia (j)	408 141	540 000	* 540 000	* 900 000	* 900 000
Ecuador	3 399	14 660	7 883	12 015	18 395
Paraguay	76 000	74 000	* 74 000	* 74 000	* 74 000
Peru	8 849	* 7 000	* 8 000	7 100	5 500
Venezuela	24 357	16 076	14 636	38 882	40 811
Bangladesh (d)	10 097	7 092	7 223	7 338	2 317
China	* 500 000	* 500 000	* 600 000	* 700 000	* 700 000
India (i)	107 381	110 505	104 000	113 000	* 110 000
Indonesia	147 109	170 000	160 098	139 915	230 550
Iran	* 150 000	* 150 000	* 150 000	150 473	* 150 000
Israel	30 600	33 280	42 212	53 000	* 53 000
Japan	167 771	155 073	164 802	129 942	122 948
Jordan	23 452	38 600	38 800	46 200	34 446
Korea, Republic of	774 000	1 134 000	1 446 598	1 755 225	1 856 157
Malaysia	116 869	108 347	152 972	186 699	244 573
Pakistan	40 422	39 907	46 947	44 738	42 180
Philippines	5 063	18 172	...	...	...
Sri Lanka	7 097	15 760	7 734	7 622	6 759
Taiwan	81 879	98 115	105 084	92 970	103 071
Thailand (h)	223 252	176 558	208 348	256 276	304 480

**Production of Kaolin**

tonnes

Country	1988	1989	1990	1991	1992
Australia (c) (f)	159 067	* 185 000	* 200 000	* 190 000	* 180 000
New Zealand	29 649	26 324	25 435	21 338	27 520
World total	22 700 000	22 800 000	22 800 000	23 600 000	21 500 000

## Note(s):

- (1) In addition to the countries listed, Lebanon and Vietnam are believed to produce kaolin
- (a) Sales
- (b) Including beneficiated and directly shipped material
- (c) Including 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) Beneficiated; excludes directly used natural kaolin
- (j) Crude
- (k) Excluding data from August to December for the Republic of Croatia
- (l) Dry weight
- (m) Data for the Federal Republic of Yugoslavia only

**Exports of Kaolin**

Country	1988	1989	1990	1991	1992
United Kingdom	2 902 034	2 708 127	2 596 334	2 518 303	(d) 2 168 572
Belgium-Luxembourg	77 279	96 598	121 240	123 909	139 226
Denmark	598	551	548	504	491
France	248 253	267 080	267 938	247 032	256 761
Germany, Federal Republic of	191 564	207 572	220 059	262 325	279 886
Greece	22 855	33 873	39 998	34 620	24 179
Italy	46 940	44 291	49 785	35 324	31 178
Netherlands	140 380	124 064	153 738	166 336	170 451
Portugal	2 538	10	171	49	30
Spain	165 960	130 312	162 726	144 875	147 504
Austria	48 568	50 040	39 967	34 931	28 270
Bulgaria (a)	* 32 900	* 24 300	* 23 800	* 20 400	* 19 000
Czechoslovakia	414 000	388 000	358 000	366 000	(a)* 228 300
German Democratic Republic	136 668	138 340	...	—	—
Hungary	6 888	...	7 091	...	...
Soviet Union (a)	* 30 000	* 26 100	* 17 600	* 1 200	* 5 700
Sweden	1 706	639	1 935	974	1 412
Turkey	12 113	57 077	48 814	50 761	63 994
USA	2 143 157	2 338 688	2 827 196	2 887 608	3 003 994
Brazil	315 003	307 768	292 446	343 006	335 476
China	(a)* 290 800	(a)* 448 800	(a)* 266 000	(a)* 683 400	376 978
Hong Kong	263 611	325 633	213 896	323 580	400 154
of which: Re-exports	251 611	321 788	213 896	323 580	400 154
India (b)	9 068	16 646	7 790	25 727	18 175
Indonesia	82 682	121 468	129 661	125 125	137 851
Japan	7 061	7 145	7 377	11 353	11 245
Korea, Republic of	48 180	46 854	37 776	37 660	34 419
Malaysia	52 621	83 903	108 316	131 305	111 952
Thailand	7 218	4 160	8 592	13 117	16 952
Australia (c)	...	97 974	126 263	149 647	132 262
New Zealand (c)	...	21 289	20 144	24 107	18 692

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

(b) Years ended 31 March following that stated

(c) Years ended 30 June of that stated

(d) Dry weight

## Imports of Kaolin

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	8 265	9 061	16 925	28 460	25 724
Belgium-Luxembourg	489 747	430 852	462 223	405 980	438 736
Denmark	24 776	28 727	24 929	22 703	15 910
France	373 662	378 275	404 983	418 671	401 173
Germany, Federal Republic of	1 000 595	1 070 985	1 005 860	889 568	918 086
Greece	25 879	30 820	28 514	25 078	28 857
Italy	675 185	696 289	685 915	703 283	752 479
Netherlands	465 546	451 417	478 972	496 870	545 943
Portugal	25 763	29 225	47 342	56 695	63 211
Spain	232 606	271 650	297 883	281 997	361 606
Austria	140 888	140 850	188 342	183 517	214 418
Bulgaria (c)	* 2 900	* 2 600	* 400	* 100	* 300
Czechoslovakia (c)	* 6 300	* 5 500	* 5 100	* 2 300	* 700
Finland	950 300	932 299	967 917	937 236	1 017 452
German Democratic Republic	4 400	2 600	...	—	—
Hungary	60 158	54 303	33 969	...	14 474
Norway	88 665	99 475	106 511	102 280	93 813
Poland	160 137	144 564	102 810	58 006	(c)* 53 300
Romania (c)	* 24 100	* 24 500	* 15 500	* 11 000	* 9 000
Sweden	441 103	352 788	374 746	399 834	350 992
Switzerland	111 219	111 432	102 766	87 827	76 765
Turkey	9 433	15 387	16 258	22 262	32 510
Yugoslavia	83 307	80 977	76 352	(f) 14 285	...
Algeria (d)	6 591	6 396	12 870	...	...
Morocco	7 757	9 790	12 380	10 559	...
South Africa	40 539	32 209	27 100	20 904	24 426
Tunisia	26 291	28 144	30 223	34 036	45 176
Zimbabwe (e)	1 904	...	1 671	...	...
Canada	389 724	431 516	506 432	520 562	530 735
Mexico	110 688	107 638	104 613	114 174	111 189
USA	7 601	3 106	3 067	3 373	4 221
Argentina	24 135	18 100	...	18 100	20 463
Brazil	844	1 153	1 132	1 194	1 119
Chile	(c)* 3 400	12 276	12 544	10 334	14 307
Colombia	9 133	7 803	8 797	9 887	12 459
Ecuador	1 760	4 702	2 284	4 054	756
Peru	3 094	1 158	819	1 035	...
Uruguay	4 934	...	...	4 770	5 682
Venezuela	31 061	9 898	20 373	21 153	30 851
Bangladesh (b)	84 308	9 243	7 674	9 144	...
China	(c)* 4 300	(c)* 4 800	(c)* 9 500	(c)* 10 500	10 310
Cyprus	17 558	16 317	20 728	17 850	7 876
Hong Kong	265 948	388 503	208 669	274 369	310 295
Indonesia	35 301	50 646	56 787	56 301	69 595
Iran (a)	8 448	12 823	25 528	(c)* 14 400	(c)* 17 200
Israel (c)	* 8 900	* 11 600	* 10 700	* 10 000	* 10 400
Japan	970 491	1 029 809	1 167 957	1 253 735	1 153 223
Korea, Republic of	148 077	145 944	171 319	222 853	205 494
Malaysia	944	7 996	...	24 366	27 787
Pakistan (b)	8 293	...	7 044	6 715	9 526
Philippines	22 913	25 147	13 474	21 676	21 996
Saudi Arabia	3 398	2 061	4 280	4 092	...
Taiwan	149 557	358 541	568 628	844 865	1 015 464
Thailand	26 666	27 709	33 047	40 742	44 628
Australia (b)	12 345	17 174	11 896	11 331	7 119
New Zealand (b)	8 642	10 174	10 094	8 780	9 045

(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

(e) Including fuller's earth

(f) Data for the Federal Republic of Yugoslavia only

## Mine Production of Lead

tonnes (metal content)

Country	1988	1989	1990	1991	1992
United Kingdom	1 185	2 161	1 377	241	...
France	2 000	1 060	1 141	1 745	—
Germany, Federal Republic of (a)	17 900	9 300	8 600	7 300	2 100
Greece	25 900	25 100	26 200	31 700	28 300
Irish Republic	32 500	32 100	35 300	39 900	42 900
Italy	16 503	14 600	15 600	14 000	18 000
Spain	74 672	62 783	61 472	49 200	31 000
Austria	3 315	2 345	2 187	1 915	1 715
Bulgaria	60 000	49 500	45 200	40 600	39 600
Czechoslovakia	2 814	2 670	2 997	3 375	* 2 000
Finland	1 924	2 552	2 424	2 531	923
Greenland	23 000	24 000	16 000	—	—
Norway	2 957	3 841	3 241	3 945	3 767
Poland	64 000	65 900	61 300	65 300	70 100
Romania	* 36 200	* 39 400	* 25 100	* 16 200	* 16 700
Soviet Union	* 270 000	* 260 000	* 238 900	* 289 900	* 275 200
Sweden	91 579	88 967	98 259	91 127	105 295
Turkey	10 212	14 138	18 371	12 100	9 900
Yugoslavia	103 286	105 161	99 148	84 500	* 40 000
Algeria	2 300	1 700	1 100	1 100	900
Congo	760	—	—	—	—
Kenya	700	500	700	600	300
Morocco	75 079	66 629	71 822	77 531	78 716
Namibia	24 446	23 389	19 386	16 058	14 855
South Africa	90 233	78 171	69 417	76 262	75 806
Tunisia	2 200	1 700	1 780	800	800
Zambia	12 356	12 300	12 094	9 800	6 100
Canada	366 564	276 065	241 277	276 528	343 808
Honduras	11 195	5 936	4 237	8 719	9 561
Mexico	171 337	163 017	177 279	160 406	172 563
USA	394 000	420 200	496 500	476 900	407 500
Argentina	28 549	26 650	23 365	23 697	17 956
Bolivia	12 531	15 728	19 913	20 810	20 002
Brazil	13 802	14 155	8 809	7 273	4 241
Chile	1 359	1 241	1 120	1 050	298
Peru (a)	149 037	192 213	187 827	199 811	194 225
China	311 600	341 400	315 300	352 000	330 200
India	23 300	25 000	25 500	25 000	30 500
Iran (b)	17 000	10 500	9 200	16 900	12 400
Japan	22 090	18 595	18 727	18 329	18 839
Korea, Dem. P.R. of	* 90 000	* 70 000	* 60 000	* 80 000	* 70 000
Korea, Republic of	14 457	16 535	14 857	12 633	13 628
Myanmar	6 000	5 200	2 300	4 800	2 700
Thailand	42 998	36 008	32 431	24 332	17 327
Australia	462 170	495 000	565 000	579 000	577 000
World total	3 200 000	3 100 000	3 100 000	3 200 000	3 100 000

(a) Recoverable

(b) Years ended 20 March following that stated

Lead

**Production of Refined Lead**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	373 845	349 983	329 378	311 014	346 795
Belgium (a)	126 561	109 442	106 809	110 684	116 297
France	257 916	267 300	270 476	297 779	287 060
Germany, Federal Republic of	345 100	349 900	348 700	362 500	354 300
Greece	15 100	8 099	—	—	—
Irish Republic	11 700	12 000	15 000	11 600	12 000
Italy	177 700	180 800	170 900	207 600	186 000
Netherlands	39 500	41 500	44 100	35 100	23 500
Portugal	7 000	7 000	4 000	4 000	7 400
Spain	120 800	113 300	124 000	110 400	62 100
Austria	25 047	24 042	23 511	22 679	23 930
Bulgaria	* 101 000	* 101 500	* 66 600	* 56 200	* 53 100
Czechoslovakia	26 045	26 008	23 665	17 835	23 900
German Democratic Republic	39 600	40 100	45 500	—	—
Poland	90 700	78 200	64 800	50 776	53 700
Romania	* 43 400	* 41 100	* 20 700	* 17 300	* 14 900
Soviet Union	* 450 000	* 440 000	* 459 100	* 397 000	* 360 000
Sweden	85 373	75 396	76 137	88 003	91 189
Switzerland	1 500	1 500	5 700	5 200	5 700
Turkey	11 000	7 000	9 000	8 500	5 100
Yugoslavia	109 888	97 237	82 000	(c) 69 186	54 400
Algeria	4 000	4 000	3 000	3 000	3 000
Kenya	2 200	2 300	2 400	2 000	2 300
Morocco	71 000	66 200	66 900	72 700	71 400
Namibia	44 447	44 183	35 129	33 367	31 655
Nigeria	3 800	3 700	4 900	5 400	6 000
South Africa	36 200	36 900	31 200	30 500	29 000
Zambia	6 385	4 600	4 700	3 500	3 400
Zimbabwe	* 3 000	* 3 000	* 1 000	* 2 800	* 2 600
Canada	268 076	242 845	183 645	212 366	252 885
Jamaica	* 1 000	* 1 000	—	—	—
Mexico	238 100	235 000	234 800	216 100	256 600
Trinidad & Tobago	—	* 1 000	* 1 500	* 1 500	* 1 000
USA (b)	1 090 483	1 253 052	1 290 479	1 194 559	1 182 246
Argentina	28 840	* 24 500	* 20 100	* 25 000	* 29 700
Brazil	71 092	64 516	56 624	* 45 000	* 45 000
Colombia	* 5 000	* 4 800	* 5 200	* 4 600	* 4 400
Peru	56 523	73 402	69 305	75 922	82 488
Venezuela	13 100	14 200	14 000	15 000	15 000
China	241 400	341 400	363 900	320 000	366 400
India	28 722	34 729	38 837	47 800	63 700
Indonesia	7 000	10 000	16 000	18 000	* 20 000
Iran	10 000	9 000	10 000	8 000	8 000
Japan	339 971	333 359	327 153	332 263	330 161
Korea, Dem. P.R. of	* 45 000	* 70 000	* 65 000	* 65 000	* 65 000
Korea, Republic of	92 444	66 013	62 761	48 520	67 671
Malaysia	15 000	16 000	16 000	24 000	28 500
Myanmar (d)	3 198	2 717	1 550	3 500	2 100
Pakistan	* 2 000	* 3 000	* 3 000	* 3 000	* 3 000
Philippines	11 400	13 600	12 100	16 700	19 100
Taiwan	67 300	58 200	26 600	17 000	20 000
Thailand	15 614	18 711	15 861	12 843	18 906
United Arab Emirates	* 1 000	* 2 000	* 2 000	* 5 000	* 3 700
Australia	204 000	210 000	224 000	239 000	232 000
New Zealand	5 000	5 000	5 000	5 000	5 000
World total	5 500 000	5 600 000	5 500 000	5 300 000	5 400 000

Note(s):

(1) 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) Excluding Pb content of primary antimonial lead

(c) Excluding data from August to December for the Republic of Croatia

(d) Years ended 31 March following that stated

## Exports of Lead

Lead  
tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ores & concentrates	1 290	5 295	1 424	873	2 539
Unwrought	93 038	80 270	88 530	89 666	92 503
Unwrought alloys	17 912	29 127	29 476	27 561	26 982
Scrap	17 177	29 320	20 663	23 910	15 741
Belgium-Luxembourg					
Unwrought	55 869	62 218	43 424	46 123	55 582
Unwrought alloys	5 662	6 919	7 038	7 713	7 008
Scrap	19 025	19 341	14 077	20 689	41 503
Denmark					
Unwrought	935	464	134	235	106
Unwrought alloys	371	445	1 009	169	248
Scrap	14 122	13 980	14 392	16 370	14 404
France					
Unwrought	51 760	52 180	40 707	47 775	58 427
Unwrought alloys	24 115	21 396	21 670	24 438	20 035
Scrap	5 456	12 692	9 389	4 029	6 744
Germany, Federal Republic of					
Ore	4 729	237	—	4	28
Unwrought	64 406	55 935	41 861	38 768	26 822
Unwrought alloys	31 422	28 336	29 896	35 657	29 987
Scrap	9 725	11 020	14 813	23 479	20 530
Greece					
Ore	—	—	—	5 100	—
Unwrought (a)	1 000	10 098	52	102	385
Irish Republic					
Ores & concentrates	49 516	58 501	59 881	66 540	67 637
Unwrought (a)	353	103	74	644	397
Scrap	3 651	4 596	4 776	3 520	3 641
Italy					
Ore	14 418	30 518	19 660	12 725	287
Unwrought	38 983	25 434	10 360	25 372	18 755
Unwrought alloys	2 359	1 530	2 561	4 640	1 956
Scrap	702	1 392	1 287	2 654	2 762
Netherlands					
Unwrought	6 382	7 220	5 585	5 037	7 168
Unwrought alloys	9 731	13 012	12 093	12 826	4 636
Scrap	20 917	21 649	26 534	25 768	37 431
Portugal					
Ore	987	992	1 140	1 730	728
Spain					
Ore	69 589	59 890	56 468	50 858	66 830
Unwrought (a)	14 219	18 077	19 600	7 876	1 668
Scrap	824	796	825	3 522	6 676
Austria					
Unwrought (a)	7 272	4 658	4 830	2 377	3 859
Scrap	1 601	3 554	10 727	1 632	1 392
Bulgaria					
Unwrought (a) (f)	* 8 900	* 5 200	* 4 500	* 6 800	* 7 300
Scrap (f)	...	...	* 1 000	* 3 600	* 2 900
Czechoslovakia					
Ores & concentrates (f)	* 5 800	* 5 800	* 6 300	* 7 800	* 3 300
Finland					
Ore	4 277	5 677	2 629	4 632	1 650
Unwrought (a)	184	316	183	47	281
Scrap	9 751	11 546	13 934	10 977	12 282
Greenland					
Ores & concentrates	34 314	35 564	27 573	—	—
Hungary					
Scrap	1 837	1 332	3 650	...	...
Norway					
Ore	4 378	6 680	6 567	7 367	4 286
Scrap	9 080	10 166	9 797	10 054	10 502
Poland					
Ores & concentrates	17 011	24 078	33 407	19 153	50 669
Unwrought	10 810	7 310	6 025	9 860	17 587
Soviet Union					
Unwrought (a) (f)	* 19 800	* 29 800	* 38 500	* 54 400	* 18 600
Sweden					
Ore	60 885	71 419	80 258	60 502	71 449
Unwrought	57 117	36 806	40 601	54 695	58 720
Unwrought alloys	12 415	12 314	11 077	10 483	8 423
Scrap	3 379	875	253	531	432

Lead

**Exports of Lead**

tonnes

Country	1988	1989	1990	1991	1992
Switzerland					
Unwrought (a)	3 484	2 111	1 584	943	1 857
Scrap	14 799	14 526	13 402	16 679	13 563
Turkey					
Ore (e)	2 909	6 810	5 303	755	950
Yugoslavia					
Concentrates	7 000	17 038	16 039	(i) 5 639	...
Unwrought (a)	21 757	27 897	31 015	(i) 13 159	...
Algeria					
Ore	5 303	3 680	2 913	...	...
Morocco					
Ore	43 487	31 663	30 432	14 908	19 024
Unwrought	62 528	62 004	59 596	60 690	62 017
Namibia					
Unwrought	42 534	44 652	35 581	35 045	31 385
South Africa					
Concentrates (b)	91 470	81 541	82 508	84 225	83 041
Unwrought (f)	* 13 400	* 12 100	* 10 300	* 2 100	* 2 600
Scrap (f)	* 200	* 100	* 50	* 300	...
Tunisia					
Ore	5 000	1 500	3 700	1 500	1 700
Unwrought	240	1 055	(a) 922	(a) 680	...
Scrap	407	980	1 429	—	...
Zambia					
Unwrought	3 528	1 103	30	1 300	100
Canada					
Ore (b) (g)	199 830	168 743	219 248	190 672	205 776
Unwrought	199 588	123 357	116 133	114 838	172 473
Scrap	9 214	15 686	17 950	5 238	6 608
Honduras					
Ores & concentrates (b)	11 195	5 416	4 237	8 719	9 561
Mexico					
Ores & concentrates	12 567	6 671	3 080	233	944
Unwrought	105 228	94 399	111 680	92 537	103 337
Scrap	2 291	1 402	934	208	776
USA					
Ores & concentrates (b)	143 007	173 762	175 235	186 350	230 352
of which: Re-exports	122 105	116 724	118 635	98 488	158 065
Unwrought	6 419	23 846	53 134	73 902	58 109
Unwrought alloys	1 137	4 725	7 048	22 433	7 819
Scrap	81 888	51 933	72 000	89 539	61 561
Argentina					
Ores & concentrates	9 812	19 635	23 899	17 300	6 599
Bolivia					
Ore	19 600	35 055	35 233	32 667	32 669
Chile					
Ores & concentrates	5 291	1 489	1 147	...	—
Peru					
Ores & concentrates	179 574	206 436	219 750	266 653	232 673
Unwrought (a)	31 749	57 001	58 480	57 802	47 370
China					
Ore	58 829	19 198	1 978	5 451	15 212
Unwrought (a)	11 856	1 839	37 980	15 935	89 876
Hong Kong					
Unwrought (a)	5 691	2 071	17 380	2 135	6 716
of which: Re-exports	5 627	1 926	17 035	2 115	6 716
Scrap	3 266	3 476	2 737	6 740	2 735
Indonesia					
Unwrought	20	4 668	10 863	8 215	5 734
Unwrought alloys	—	237	5 740	8 463	14 276
Iran (c)					
Ore	19 675	19 130	3 500	(f)* 17 200	(f)* 11 100
Japan					
Unwrought (a)	1 286	1 407	1 425	906	4 336
Scrap	23 998	23 971	25 528	25 261	20 614
Korea, Dem. P.R. of					
Unwrought (a) (f)	* 11 500	* 6 000	* 4 800	* 14 700	* 8 700



## Exports of Lead

Lead  
tonnes

Country	1988	1989	1990	1991	1992
Korea, Republic of					
Ore	—	4 560	12 350	750	—
Unwrought (a)	3 504	5 493	4 635	5 968	8 612
Scrap	1 068	1 234	2 433	4 067	3 000
Myanmar (d)					
Unwrought	3 350	1 243	100	40	...
Saudi Arabia					
Scrap	17 638	20 124	20 407	3 689	...
Singapore					
Unwrought (a)	23 072	7 494	16 897	11 964	6 042
of which: Re-exports	22 113	6 688	16 859	11 894	5 742
Scrap	8 131	7 535	5 210	7 429	5 744
of which: Re-exports	519	164	357	173	193
Taiwan					
Unwrought	4 422	8 650	3 521	1 171	121
Unwrought alloys	26 458	10 654	13 170	6 786	1 328
Thailand					
Ore	59 665	48 984	34 379	34 586	12 690
Australia					
Ores & concentrates	181 000	114 000	126 000	134 000	200 000
Unwrought					
Base bullion (b)	191 112	* 175 000	* 188 000	188 000	233 000
Refined (a)	159 387	140 000	176 117	176 016	187 014
Scrap (h)	37 312	30 737	28 868	30 255	21 491

### Note(s):

(1) In this table the term 'unwrought' lead corresponds to item 685.1 of the Standard International Trade Classification (Revision 3) 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

(g) Including Pb content of zinc concentrates

(h) Years ended 30 June of that stated

(i) Data for the Federal Republic of Yugoslavia only

## Lead

## Imports of Lead

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ores & concentrates	39 222	30 117	37 158	...	...
Unwrought	210 321	216 033	185 666	203 136	205 703
Unwrought alloys	5 466	3 276	5 072	1 324	4 362
Scrap	8 837	8 704	16 192	5 512	7 070
Belgium-Luxembourg					
Ore	114 018	101 958	101 231	82 066	84 345
Unwrought	24 451	27 099	22 577	24 743	19 162
Unwrought alloys	12 109	10 341	9 602	7 859	8 090
Scrap	12 357	12 383	12 098	18 703	40 701
Denmark					
Unwrought	4 595	2 566	2 175	2 910	2 359
Unwrought alloys	4 033	2 797	3 667	2 420	2 891
Scrap	152	680	826	723	997
France					
Ore	190 105	186 920	175 294	182 263	172 664
Unwrought	34 823	35 299	37 043	32 317	34 821
Unwrought alloys	12 081	12 391	17 414	10 482	7 277
Scrap	21 444	31 541	40 087	69 056	74 846
Germany, Federal Republic of					
Ore	235 442	222 361	205 979	175 821	199 795
Unwrought	87 138	109 792	112 265	141 134	134 115
Unwrought alloys	25 476	28 071	30 235	26 037	18 082
Scrap	30 397	29 934	27 641	24 321	21 866
Greece					
Unwrought (a)	6 844	9 707	17 602	10 386	5 383
Irish Republic					
Unwrought (a)	1 030	1 940	4 553	12 269	9 444
Scrap	10 141	13 106	11 371	9 851	10 361
Italy					
Ore	96 713	112 015	79 409	127 314	112 739
Unwrought	102 477	95 800	107 619	65 972	67 644
Unwrought alloys	14 230	13 278	15 783	17 611	14 311
Scrap	16 168	7 697	9 118	3 614	1 633
Netherlands					
Unwrought	28 876	29 601	32 898	36 124	30 836
Unwrought alloys	5 808	5 767	6 179	7 738	10 579
Scrap	19 317	19 554	20 185	21 236	16 582
Portugal					
Unwrought (a)	27 839	21 805	22 991	26 723	27 971
Spain					
Ore	57 867	58 214	42 335	53 158	81
Unwrought	4 785	7 199	6 083	15 215	42 889
Unwrought alloys	5 364	5 868	6 567	6 524	9 533
Scrap	6 865	7 880	11 680	4 635	2 598
Austria					
Ore	6 884	17 947	17 836	6 588	3 305
Unwrought (a)	36 714	38 902	41 770	46 382	43 853
Scrap	3 023	2 637	3 453	3 439	4 410
Bulgaria					
Ore (f)	* 25 500	* 23 600	* 12 500	* 7 000	...
Czechoslovakia					
Unwrought (a)	20 000	18 000	16 000	12 000	...
Finland					
Unwrought	7 869	8 081	9 231	7 449	4 712
Unwrought alloys	4 221	5 146	4 572	4 867	3 014
German Democratic Republic					
Unwrought (a) (f)	* 30 700	* 20 800	* 11 300	—	—
Scrap (f)	* 5 500	* 11 300	* 3 800	—	—
Hungary					
Unwrought & semi-manufactures	9 267	7 416	5 072	...	5 519
Norway					
Unwrought	6 865	8 283	4 539	1 978	3 639
Unwrought alloys	3 300	3 415	1 888	390	445
Poland					
Unwrought	—	—	2 493	7 838	6 090
Soviet Union					
Ore (f)	* 17 200	* 14 300	* 12 800	* 8 000	* 24 800
Unwrought (a) (f)	* 13 400	* 100	* 100	* 100	...

# Imports of Lead

Lead  
tonnes

Country	1988	1989	1990	1991	1992
Sweden					
Ore	3 301	1	—	4 001	6 000
Unwrought	2 228	1 395	2 793	1 592	1 515
Unwrought alloys	658	986	963	480	191
Scrap	23 287	17 359	19 979	29 506	34 318
Switzerland					
Unwrought (a)	9 803	7 174	7 893	9 612	6 827
Turkey					
Unwrought (a)	15 753	10 039	13 714	18 938	19 034
Scrap	2 036	2 345	713	1 651	1 537
Yugoslavia					
Concentrates	33 696	6 044	6 173	(h) 1 088	...
Unwrought (a)	18 083	32 121	26 938	(h) 2 267	...
Scrap	1 272	3 127	7 144	(h) 744	...
Algeria					
Unwrought	6 951	7 324	4 247	12 302	...
Unwrought alloys	3 399	3 162	5 050	7 030	...
Egypt					
Unwrought & scrap	19 071	8 406	12 700	16 100	13 898
Madagascar					
Unwrought (a)	100	174	81	363	91
Morocco					
Ore	...	36 052	29 519	28 571	22 218
Unwrought alloys	283	205	177	858	974
Namibia					
Concentrates (b)	24 820	19 771	20 997	14 753	11 704
Nigeria					
Unwrought (a)	1 000	1 500	1 500	1 500	...
South Africa					
Ore	30 971	21 493	31 298	15 843	8 437
Unwrought	2 421	455	223	43	1 497
Unwrought alloys	1 218	308	38	41	...
Scrap	3 088	1 387	5 271	2 150	...
Tunisia					
Unwrought	3 713	4 079	(a) 3 764	(a) 4 497	(a) 5 370
Canada					
Ores & concentrates (b) (g)	14 565	28 392	45 105	14 828	24 116
Unwrought	14 690	11 130	11 682	7 921	7 745
Scrap	36 741	26 660	34 831	58 044	50 538
Cuba					
Unwrought (i)	2 078	1 494	933	963	1 614
Mexico					
Ores & concentrates	22 846	36 797	15 058	53 909	37 874
Unwrought & scrap	4 530	1 750	2 692	1 617	820
USA					
Ores & concentrates (b)	235 034	204 802	144 226	133 639	263 806
Unwrought					
Base bullion	6 586	5 189	2 864	281	71
Other	132 073	96 674	78 802	102 322	171 185
Alloys	16 268	21 319	12 819	15 184	20 823
Scrap	6 938	11 261	12 251	4 021	6 782
Brazil					
Ore	25 047	38 503	30 222	30 672	35 548
Unwrought (a)	2 642	2 261	1 008	15 153	9 315
Scrap	31 135	18 865	24 511	18 208	10 780
Chile					
Unwrought (a)	2 563	1 877	1 774	2 370	2 633
Colombia					
Unwrought (a)	2 633	2 616	2 231	2 052	4 027
Uruguay					
Unwrought	1 848	1 900	1 500	944	660
Venezuela					
Unwrought (a)	8 721	5 503	6 740	9 320	9 518
Scrap	6 217	1 244	1 931	801	1 488
China					
Unwrought (a)	4 577	36 374	1 773	168	1 741
Scrap	(f)* 2 400	(f)* 6 200	665	511	5 712

## Lead

**Imports of Lead**

tonnes

Country	1988	1989	1990	1991	1992
Hong Kong					
Unwrought (a)	7 781	5 544	18 327	2 583	8 549
Scrap	1 461	2 241	3 949	4 923	1 532
India (c)					
Ore	20 530	32 064	33 794	19 340	50 704
Unwrought	35 007	48 194	38 829	23 243	8 651
Unwrought alloys	2 316	3 910	1 073	906	139
Scrap	9 949	11 395	7 107	2 302	6 728
Indonesia					
Unwrought	10 070	10 126	12 996	16 948	28 057
Unwrought alloys	5 269	4 172	2 498	5 755	7 179
Scrap	752	11 988	35 822	46 424	60 328
Iran (d)					
Unwrought	6 673	14 000	17 000	20 000	...
Israel					
Unwrought	1 318	1 041	1 300	600	...
Japan					
Ore	279 537	298 964	279 535	304 054	270 197
Unwrought	51 991	59 917	71 499	72 566	51 913
Unwrought alloys	23 783	23 176	27 542	39 973	27 819
Korea, Dem. P.R. of					
Unwrought (a) (f)	* 4 400	* 2 100	* 1 600	* 3 200	* 600
Korea, Republic of					
Unwrought	76 109	85 701	93 117	119 169	117 448
Unwrought alloys	11 072	11 287	14 263	18 895	25 980
Scrap	53 902	41 971	47 711	17 434	3 661
Malaysia					
Unwrought (a)	14 798	20 492	25 368	24 670	38 572
Scrap	4 558	2 541	...	6 078	2 076
Pakistan (e)					
Unwrought (a)	3 525	...	5 159	...	4 955
Philippines					
Unwrought (a)	4 723	8 362	3 769	6 303	7 327
Scrap	12 394	13 959	15 243	85	78
Singapore					
Unwrought (a)	26 405	12 247	37 190	12 953	39 867
Scrap	3 913	4 387	3 044	5 005	4 538
Syria					
Unwrought & scrap	1 200	300	112	300	...
Taiwan					
Unwrought	16 317	23 634	58 325	74 720	90 985
Unwrought alloys	2 608	2 752	5 706	6 998	8 003
Scrap	80 956	72 741	34 251	11 350	505
Thailand					
Unwrought	12 037	13 879	12 747	19 512	24 524
Unwrought alloys	939	1 437	1 591	6 017	6 050
Scrap	11 790	11 212	7 592	16 293	13 191
Australia					
Ores & concentrates (e)	59 489	27 551	21 793	47 304	30 106
New Zealand (e)					
Unwrought (a)	3 544	3 321	2 406	2 178	1 448

## Note(s):

(1) In this table the term 'unwrought' lead corresponds to item 685.1 of the Standard International Trade Classification (Revision 3) 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) BGS estimates, based on known exports from certain countries

(g) Including Pb content of zinc concentrates

(h) Data for the Federal Republic of Yugoslavia only

(i) Exports from Mexico

**Production of Lithium Minerals**

Country	1988	1989	1990	1991	1992
Portugal					
Lepidolite	14 109	16 275	20 775	18 970	* 15 000
Soviet Union	* 55 000	* 55 000	* 55 000	* 50 000	* 45 000
Namibia	1 642	1 398	1 268	1 152	1 162
Zimbabwe	15 073	20 647	19 053	9 186	12 837
Canada	* 11 300	* 8 700	* 9 200	* 11 300	* 10 000
USA (a) (b)	* 4 000	* 4 500	...	...	...
Argentina	119	104	69	287	620
Brazil					
Amblygonite	25	159	38	* 100	* 100
Petalite	1 115	1 133	334	* 1 200	* 1 200
Spodumene	331	296	103	* 300	* 300
Chile (c)	7 332	7 508	9 082	8 575	10 823
China	* 15 000	* 15 000	* 15 000	* 15 500	* 15 500
Australia					
Spodumene	27 396	* 40 000	* 40 000	* 40 000	* 43 000
World total (Li content)	* 7 900	* 8 700	* 9 000	* 8 600	* 8 500

(a) Li content

(b) Mostly spodumene

(c) Carbonate

## Lithium

**Exports of Lithium**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Oxides	201	221	275	269	226
Carbonate	548	734	594	607	716
Belgium-Luxembourg					
Oxides	99	—	41	83	21
France					
Oxides	100	3	1	20	4
Germany, Federal Republic of					
Oxides	712	745	724	609	509
Carbonate	1 371	1 819	1 685	1 670	2 113
Netherlands					
Oxides	17	40	18	80	73
Carbonate	64	61	36	50	120
Spain					
Lithium minerals	392	187	—	—	11 985
Soviet Union					
Oxides (a)	* 30	* 150	* 340	* 230	* 200
Carbonate (a)	* 300	* 400	* 600	* 200	* 340
Yugoslavia					
Carbonate	138	130	17	(c) —	...
Namibia					
Lithium minerals	2 220	1 515	1 210	1 019	1 048
South Africa					
Lithium minerals (a)	* 400	...	...	...	...
Zimbabwe					
Lithium minerals	17 976	...	20 149	20 714	15 207
USA					
Oxides	3 788	4 731	3 147	3 079	2 913
Carbonate	7 168	9 068	9 333	9 380	8 206
Chile					
Carbonate	7 153	8 102	8 228	8 262	10 276
China					
Oxides	(a)* 800	(a)* 600	(a)* 1 000	(a)* 1 100	1 598
Carbonate	(a)* 1 400	(a)* 1 000	(a)* 1 600	(a)* 1 600	1 609
Australia					
Lithium minerals (b)	...	29 593	35 664	34 489	44 412

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

(b) Years ended 30 June of that stated

(c) Data for the Federal Republic of Yugoslavia only

**Imports of Lithium**

Country	1988	1989	1990	1991	1992
United Kingdom					
Oxides	630	692	764	3 526	2 661
Carbonate	2 066	1 958	1 932	2 019	2 006
Belgium-Luxembourg					
Oxides	198	151	143	163	125
Carbonate	271	312	326	399	354
France					
Oxides	388	378	371	389	371
Carbonate	624	778	805	714	866
Germany, Federal Republic of					
Oxides	1 631	966	779	1 538	1 974
Carbonate	4 368	5 972	5 490	6 362	6 280
Italy					
Oxides	369	154	184	342	213
Carbonate	626	926	956	846	1 070
Netherlands					
Oxides	65	165	181	137	194
Carbonate	469	513	666	595	868
Spain					
Lithium minerals	325	606	622	797	659
Oxides	127	139	197	109	189
Carbonate	313	415	333	336	352
Finland					
Carbonate	93	97	121	3	26
Sweden					
Carbonate	100	101	98	124	61
Yugoslavia					
Carbonate	168	134	37	(b) 0	...
South Africa					
Lithium minerals	838	1 303	330	797	...
Oxides	138	102	135	123	162
Canada					
Carbonate	1 522	1 561	1 587	1 184	1 046
USA					
Lithium minerals	14 361	...	...	...	...
Carbonate	...	3 326	4 197	3 110	4 052
Brazil					
Lithium minerals	—	1 242	2 974	3 348	...
Oxides	503	401	321	231	...
Carbonate	237	207	273	240	...
India (c)					
Oxides	431	362	296	299	440
Carbonate	132	89	63	64	108
Japan					
Oxides	935	1 020	1 036	1 025	988
Carbonate	3 318	3 933	3 835	4 136	4 137
Korea, Republic of					
Oxides	152	129	149	194	298
Carbonate	513	455	621	694	674
Taiwan					
Carbonate	...	216	230	181	157
Australia					
Oxides (a)	221	141	159	101	141

(a) Years ended 30 June of that stated

(b) Data for the Federal Republic of Yugoslavia only

(c) Years ended 31 March following that stated

**Production of Magnesite**

tonnes

Country	1988	1989	1990	1991	1992
Greece	1 104 523	890 105	701 096	560 373	471 220
Spain	467 816	470 000	* 460 000	* 420 000	* 400 000
Austria	1 121 585	1 204 942	1 179 162	960 589	995 347
Czechoslovakia	631 000	642 000	561 000	328 000	* 350 000
Poland	23 867	24 133	23 300	8 100	12 900
Soviet Union	* 1 825 000	* 1 825 000	* 1 600 000	* 1 400 000	* 1 100 000
Turkey	1 125 844	1 343 893	845 124	1 152 337	1 124 475
Yugoslavia	382 000	364 000	268 000	(e) 228 000	* 195 000
South Africa	74 088	75 695	114 182	98 782	60 085
Zimbabwe	30 121	33 423	32 639	23 295	9 022
Canada (b)	* 170 000	* 180 000	* 190 000	* 200 000	* 190 000
Brazil (c)	402 463	425 834	345 415	* 350 000	* 400 000
Colombia	17 760	20 425	19 300	18 768	18 840
China	* 2 000 000	* 2 000 000	2 400 000	* 2 600 000	* 2 600 000
India	507 873	479 530	544 000	539 000	550 000
Iran (a)	2 777	6 967	1 405	29 291	* 30 000
Korea, Dem. P.R. of	* 1 500 000	* 1 500 000	* 1 500 000	* 1 600 000	* 1 600 000
Nepal (d)	45 000	27 978	—	—	—
Pakistan	3 766	8 750	4 274	5 191	* 5 500
Philippines	—	4 796	* 700	* 700	* 700
Australia	62 848	65 000	* 65 000	* 100 000	* 250 000
World total	11 500 000	11 600 000	10 900 000	10 600 000	10 400 000

## Note(s):

(1) In addition to the countries listed, Bulgaria, Egypt, Kenya, New Caledonia and USA are believed to produce magnesite

(a) Years ended 20 March following that stated

(b) Officially described as magnesitic dolomite and brucite

(c) Including beneficiated and directly shipped material

(d) Years ended 15 July of that stated

(e) Excluding data from August to December for the Republic of Croatia



## Exports of Magnesite and Magnesita

Country	1988	1989	1990	1991	1992
United Kingdom					
Magnesite	4 028	446	376	2 010	3 765
Magnesia	72 917	89 209	75 144	57 638	36 250
Belgium-Luxembourg					
Magnesite	994	195	373	3 037	4 543
Magnesia	2 112	5 232	7 022	2 080	1 508
France					
Magnesite	450	573	81	45	270
Magnesia	21 704	19 580	19 523	25 386	21 007
Germany, Federal Republic of					
Magnesite	3 024	1 930	2 048	2 366	3 888
Magnesia	62 622	70 082	66 059	73 373	66 375
Greece					
Magnesite	15 867	12 220	8 879	4 181	6 838
Magnesia	258 077	294 267	236 487	210 203	187 892
Irish Republic (a)	* 81 700	* 82 300	* 68 300	* 62 000	* 68 700
Italy					
Magnesite	3 342	3 686	4 013	4 068	3 550
Magnesia	109 355	126 301	119 678	96 259	106 940
Netherlands					
Magnesite	2 224	3 881	5 457	5 967	8 302
Magnesia	37 570	44 756	47 970	58 384	63 392
Spain					
Magnesite	13 851	15 311	20 937	9 516	10 540
Magnesia	82 954	80 628	76 785	69 519	69 448
Austria					
Magnesite	58	219	347	81	82
Magnesia	150 026	165 686	166 604	143 687	125 193
Czechoslovakia					
Magnesite	306 000	248 000	583 000	111 000	(a)* 69 200
Finland					
Magnesia	33	30	519	22	3
Norway					
Magnesite	161	155	177	78	1 279
Magnesia	3 332	3 108	4 074	3 297	2 568
Soviet Union (a)	* 5 800	* 4 500	* 6 200	* 5 100	* 6 500
Sweden					
Magnesite	185	518	116	186	167
Magnesia	346	532	176	101	351
Turkey					
Magnesite	80 806	143 456	117 529	114 440	62 118
Magnesia	133 913	141 682	110 996	120 384	106 660
Yugoslavia					
Magnesia	7 365	16 027	12 646	(e) 6 197	...
South Africa (a)	* 3 600	* 3 200	* 5 400	* 1 500	...
Zimbabwe	25 479	...	29 738	...	...
Canada					
Magnesia	67 133	56 335	61 337	63 978	63 279
Mexico					
Magnesia	59 076	84 716	64 128	61 230	64 729
USA					
Magnesite	...	10 384	8 009	8 595	5 997
Magnesia	(d) 43 715	43 016	105 476	102 632	88 546
Brazil					
Magnesia	110 745	55 596	92 409	40 735	118 638
China	(a)* 828 700	(a)* 953 600	1 305 566	1 540 389	2 035 530
Hong Kong (c)	42 105	28 609	13 143	8 049	10 740
India (b)					
Magnesite	533	22	70	1	—
Magnesia	4 220	5 018	4 158	3 363	1 817
Israel					
Magnesia	31 260	37 881	43 627	44 270	32 972
Japan					
Magnesite	307	307	791	309	401
Magnesia	102 459	121 575	94 564	89 937	77 512

**Exports of Magnesite and Magnesia**

tonnes

Country	1988	1989	1990	1991	1992
Korea, Dem. P.R. of (a)	* 265 200	* 204 800	* 185 600	* 147 800	* 162 300
Singapore	1 561	337	1 010	590	2 381
of which: Re-exports	261	205	138	112	342
Australia (f)	2 706	5 322	3 350	5 115	17 503

## Note(s):

- (1) The term 'magnesia', as used here, includes dead-burned, sintered and caustic-burned (caustic calcined) material
- (a) BGS estimates, based on known imports into certain countries
- (b) Years ended 31 March following that stated
- (c) Re-exports
- (d) Including magnesite
- (e) Data for the Federal Republic of Yugoslavia only
- (f) Years ended 30 June of that stated

## Imports of Magnesite and Magnesia

Country	1988	1989	1990	1991	1992
United Kingdom					
Magnesite	16 323	15 186	22 406	29 771	27 579
Magnesia	148 654	141 713	130 355	143 188	148 380
Belgium-Luxembourg					
Magnesite	823	2 867	1 738	959	15 323
Magnesia	21 514	29 963	27 835	27 114	178 175
Denmark					
Magnesite	1 315	2 259	5 730	7 218	4 727
Magnesia	14 148	22 414	9 746	9 222	8 051
France					
Magnesite	5 844	987	1 368	745	1 728
Magnesia	208 410	217 807	206 689	209 522	192 790
Germany, Federal Republic of					
Magnesite	18 405	10 417	18 598	15 609	13 201
Magnesia	440 801	494 566	508 324	526 083	570 510
Greece					
Magnesite	43 214	80 301	92 623	57 401	39 690
Magnesia	17 442	1 465	1 420	6 185	523
Irish Republic					
Magnesite	16 448	25 310	30 643	23 503	13 447
Magnesia	10 923	12 050	15 197	11 521	17 025
Italy					
Magnesite	29 313	29 137	16 640	16 891	18 457
Magnesia	77 492	94 558	86 147	93 468	81 751
Netherlands					
Magnesite	12 284	4 061	2 743	4 167	6 822
Magnesia	75 357	89 672	107 093	101 936	103 605
Portugal					
Magnesite	356	1 032	1 466	1 589	1 752
Magnesia	2 612	2 789	1 996	2 606	2 567
Spain					
Magnesite	41	913	883	372	302
Magnesia	63 963	80 214	77 236	73 124	82 975
Austria					
Magnesite	590	594	607	148	62
Magnesia	136 281	142 720	134 806	145 167	174 186
Bulgaria (b)	* 7 100	* 7 100	* 17 200	* 2 100	* 2 100
Finland					
Magnesite	1 254	1 525	956	1 520	3 156
Magnesia	5 473	6 270	6 192	5 053	8 724
German Democratic Republic (b)	* 35 100	* 34 400	* 33 900	—	—
Hungary					
Magnesia	80 606	76 494	50 729	...	...
Norway					
Magnesite	5 866	4 442	2 358	1 642	1 541
Magnesia	2 283	4 715	1 870	3 584	10 727
Poland					
Magnesia	253 417	164 065	174 067	64 871	(b)* 40 800
Romania (b)	* 33 700	* 44 800	* 58 100	* 40 500	* 42 700
Soviet Union					
Magnesite	538 627	542 392	...	(f) 94 041	(f) 90 350
Sweden					
Magnesite	17 686	23 191	12 864	22 308	13 738
Magnesia	20 946	21 605	16 663	10 302	15 673
Switzerland					
Magnesite	1 053	438	368	379	518
Magnesia	5 416	6 037	5 967	5 813	4 837
Turkey					
Magnesia	238	2	20	4 944	2 337
Yugoslavia					
Magnesite	5	19 893	17 760	(e) 15 333	...
Magnesia	10 358	10 679	8 034	(e) 1 794	...
Algeria					
Magnesia	857	1 294	1 893	1 334	...
Egypt	34 312	21 386	...	...	...
Morocco					
Magnesia	171	204	185	128	...
South Africa					
Magnesite	28 144	27 437	35 108	22 153	7 939
Magnesia	57 083	67 917	79 649	79 743	63 320
Tunisia					
Magnesia	938	731	853	1 130	1 088

**Imports of Magnesite and Magnesia**

tonnes

Country	1988	1989	1990	1991	1992
Canada					
Magnesite	28 851	125 657	96 714	71 341	66 111
Magnesia	110 169	86 166	99 827	87 006	67 780
Mexico					
Magnesite	137	277	8 611	7 447	4 555
Magnesia	14 861	20 576	23 939	24 266	27 635
USA					
Magnesite	8 170	8 372	1 957	1 956	3 182
Magnesia	272 934	290 302	243 932	258 126	296 986
Argentina					
Magnesia	24 428	20 766	15 855	17 200	11 742
Brazil					
Magnesia	1 089	1 852	1 875	2 572	4 534
Chile					
Magnesia	9 425	(b)* 8 600	9 947	12 820	9 817
Colombia	867	1 917	1 779	6 435	7 055
Peru					
Magnesia	7 128	3 599	...	1 477	...
Venezuela					
Magnesia	80 289	57 286	70 990	79 734	61 015
Bangladesh (a)	10 762	1 585	1 234	...	...
Hong Kong	47 463	30 370	14 808	10 592	15 559
India (c)					
Magnesite	34	124	7 304	2 142	2 133
Magnesia	69 106	82 977	72 284	77 319	85 532
Indonesia					
Magnesite	...	191	466	1 372	10 016
Magnesia	(d) 6 664	16 603	19 149	15 156	13 171
Israel (b)	* 3 200	* 2 400	* 1 200	* 2 200	* 2 200
Japan					
Magnesite	12 199	735	1 381	2 270	6 525
Magnesia	387 973	429 395	372 014	421 934	385 528
Korea, Republic of					
Magnesite	3 870	489	2 384	365	1 974
Magnesia	85 371	91 281	80 494	97 192	99 662
Malaysia					
Magnesite	11 696	13 840	...	16 254	12 238
Pakistan (a)					
Magnesite	940	...	488	103	1 432
Magnesia	589	...	700	402	30 617
Philippines					
Magnesite	...	...	8 430	3 303	3 182
Magnesia	(d) 24 143	(d) 14 211	620	10 161	8 390
Singapore	8 397	25 020	16 007	21 035	16 595
Taiwan					
Magnesite	...	4 491	123	237	4 266
Magnesia	(d) 66 069	51 080	60 921	79 350	77 225
Thailand					
Magnesite	18 229	28 127	20 563	18 852	29 513
Magnesia	3 332	3 586	4 515	6 817	4 763
Australia					
Magnesite (a)	14 307	18 335	16 926	8 942	13 593
Magnesia (a)	2 414	3 389	935	10 191	13 746
New Zealand (a)					
Magnesite	3 962	6 633	3 779	991	1 026
Magnesia	3 727	6 681	5 436	4 706	15 973

## Note(s):

(1) The term 'magnesite', as used here, includes dead-burned, sintered and caustic-burned (caustic calcined) material

(a) Years ended 30 June of that stated

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

(c) Years ended 31 March following that stated

(d) Including magnesite

(e) Data for the Federal Republic of Yugoslavia only

(f) Data for the Russian Federation only

## Production of Manganese Ore

Country		1988	1989	1990	1991	1992
Greece	(50%)	3 725	3 034	5 400	5 000	5 000
Italy	(30%)	9 701	5 899	6 654	8 350	8 200
Austria (e)		44 273	46 483	43 141	39 925	30 752
Bulgaria	(30%)	35 000	32 000	39 000	* 35 000	* 35 000
Czechoslovakia	(17%) (d)	* 900	* 900	* 900	...	...
Hungary	(30%)	80 983	84 247	60 000	30 000	18 000
Romania	(22%)	* 65 000	* 60 000	* 55 000	* 50 000	* 45 000
Soviet Union	(35%)	9 100 000	9 100 000	8 500 000	7 240 000	* 7 009 000
Turkey	(40%)	* 8 900	* 8 900	* 8 900	* 8 900	* 8 900
Yugoslavia	(34%)	40 100	38 770	50 863	* 40 000	* 15 000
Gabon	(50%)	2 254 135	2 592 407	2 422 968	1 620 388	1 556 000
Ghana	(40%)	230 900	334 200	382 100	485 100	279 019
Morocco	(50%)	30 000	33 680	49 450	59 255	49 120
South Africa						
Metallurgical	(40%)	3 896 810	4 805 343	4 318 306	3 098 613	2 374 613
Chemical	(55%)	125 717	78 680	83 784	47 447	89 022
Zambia	(45%)	502	351	721	662	292
Mexico	(38%)	443 600	394 400	365 400	206 500	362 500
USA	(10%) (a)	* 8 000	* 8 000	* 8 000	...	...
Argentina	(20%)	9 339	5 884	3 338	4 823	1 500
Brazil	(40%) (b)	1 990 646	2 225 413	2 790 372	* 2 000 000	* 2 000 000
Chile	(33%)	43 655	43 806	39 697	43 767	49 857
China	(30%)	3 200 000	3 330 000	4 060 000	5 158 000	5 592 300
India	(35%) (c)	1 332 629	1 334 214	1 393 000	1 401 000	* 1 800 000
Indonesia	(50%)	10 278	9 076	9 472	13 253	* 13 000
Iran	(30%) (f)	74 630	80 953	54 404	49 690	38 475
Philippines	(48%)	2 251	3 002	15 001	4 064	3 224
Thailand	(45%)	7 947	11 044	16 652	11 032	7 827
Australia	(48%)	1 986 000	2 119 000	1 932 000	1 389 000	1 252 000
World total		25 000 000	26 800 000	26 700 000	23 100 000	22 700 000

## Note(s):

- (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 believed to produce manganese ore

- (a) Shipments of manganiferous iron ore only
- (b) Including beneficiated and direct shipping ore
- (c) Including ore grading 54% to less than 35% Mn
- (d) Manganiferous iron ore
- (e) Mn content of domestic iron ore
- (f) Years ended 20 March following that stated

## Manganese

**Exports of Manganese**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ore (a)	419	778	394	491	132
Metal	1 813	2 520	1 697	...	...
Belgium-Luxembourg					
Ore	1 431	4 282	335	12 857	14 208
Metal	1 778	2 206	2 489	1 881	1 749
France					
Ore (a)	95 584	94 956	52 873	87 341	143 667
Metal	7 294	6 823	4 825	3 961	4 819
Germany, Federal Republic of					
Ore (a)	2 934	5 978	11 066	6 807	17 565
Metal	407	1 012	1 502	1 679	3 037
Netherlands					
Ore	57 035	56 447	45 429	48 876	47 942
Metal	1 313	1 780	1 983	2 050	2 681
Portugal					
Ore	—	4 240	8 348	8 226	—
Bulgaria					
Ore	12 200	14 000	83 000	7 000	...
Hungary					
Ore	8 400	2 100	2 000	2 000	...
Norway					
Ore	10 000	8 000	31 027	27 772	—
Soviet Union					
Ore	982 000	895 000	128 000	(f) 249 898	(f) —
Sweden					
Metal	273	150	60	112	58
Turkey					
Ore	—	10 271	11 671	30	8 500
Yugoslavia					
Ore	—	946	5 046	(e) —	...
Gabon					
Ore	2 381 900	2 244 000	2 205 000	1 833 000	...
Ghana					
Ore	294 960	284 000	295 000	290 000	(c)* 292 400
Morocco					
Ore	47 371	45 843	44 584	44 108	39 821
South Africa					
Ore	2 735 023	2 974 999	2 160 002	1 661 518	1 394 606
Metal	...	36 500	32 154	...	...
Mexico					
Ore	169 127	127 227	65 263	22 717	32 168
USA					
Ore	67 498	51 880	82 928	211 252	13 287
Metal	9 496	5 350	6 100	5 305	5 244
Brazil					
Ore	1 048 546	1 034 735	923 916	854 006	476 859
China					
Ore	40 250	28 769	27 998	19 498	4 987
Metal	(c)* 3 500	(c)* 7 600	42 524	34 600	29 390
India (d)					
Ore (b)	307 656	364 706	317 504	265 291	210 052
Indonesia					
Ore (a)	5 720	16 020	67 027	3 004	5 120
Singapore					
Ore	15 833	9 598	9 699	10 412	8 150
of which: Re-exports	15 833	9 598	6 411	1 482	723

**Exports of Manganese**

Country	1988	1989	1990	1991	1992
Australia Ore	1 553 000	* 1 620 000	* 1 600 000	* 1 020 000	* 835 000

## Note(s):

- (1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) Including manganiferous iron ore
- (b) Including ferruginous manganese ore
- (c) BGS estimates, based on known imports into certain countries
- (d) Years ended 31 March following that stated
- (e) Data for the Federal Republic of Yugoslavia only
- (f) Data for the Russian Federation only

## Manganese

**Imports of Manganese**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ore (b)	195 457	275 509	318 303	355 271	395 613
Metal	2 859	4 574	4 274	3 726	4 704
Belgium-Luxembourg					
Ore	232 668	308 522	164 337	138 151	149 821
Metal	3 207	3 439	3 166	2 781	2 968
Denmark					
Ore	410	477	184	264	237
Metal	57	833	1 672	434	260
France					
Ore (b)	1 485 591	850 594	754 626	719 715	902 486
Metal	2 198	3 376	3 274	3 220	4 433
Germany, Federal Republic of					
Ore (b)	514 446	546 351	368 591	252 537	285 849
Metal	7 150	9 113	9 581	11 492	13 649
Greece					
Ore	82	24	22 751	24 491	23 931
Metal	278	181	229	274	1 122
Irish Republic					
Ore (b)	27 467	36 977	22 729	32 476	33 605
Italy					
Ore (b)	280 344	390 049	348 450	240 852	85 086
Metal	2 680	1 978	2 248	2 069	2 798
Netherlands					
Ore	53 425	55 961	71 157	65 905	50 123
Metal	2 203	2 362	2 263	1 750	2 793
Portugal					
Ore (c)	2 410	2 166	10 258	12 024	2 844
Spain					
Ore	199 519	328 520	262 314	56 007	74 349
Metal	679	782	959	991	1 645
Austria					
Ore	270	528	801	488	102
Metal	402	429	429	1 484	192
Bulgaria					
Ore	46 700	20 000	...	...	...
Czechoslovakia					
Ore	484 000	871 000	951 000	217 000	...
Finland					
Ore	1 266	16 828	17 830	8 452	28 599
German Democratic Republic					
Ore (a)	27 400	26 600	...	—	—
Norway					
Ore	847 235	724 558	713 174	498 782	619 431
Metal	1 263	1 355	1 294	1 288	1 438
Poland					
Ore	693 211	575 223	106 183	151 833	158 277
Romania					
Ore	205 000	205 000	224 000	43 000	81 988
Sweden					
Ore	11 683	13 398	217	27 531	8 867
Metal	1 593	2 040	1 254	1 862	2 234
Switzerland					
Metal	493	685	629	519	613
Turkey					
Ore	1 496	1 107	1 408	1 314	460
Yugoslavia					
Ore	138 587	128 877	131 645	(g) —	...
Cameroon					
Ore	2 800	2 360	2 500	2 400	...
Ivory Coast					
Ore	2 750	...	...	...	...
Kenya					
Ore (b)	3 150	2 000	2 400	2 000	...
South Africa					
Ore	5 381	6 780	8 631	7 426	6 813
Zimbabwe					
Ore	248	...	8 896	...	...



## Imports of Manganese

Country	1988	1989	1990	1991	1992
Canada					
Ore (a)	124 282	79 047	62 831	7 324	7 611
Metal	4 086	5 225	4 268	3 712	3 326
Mexico					
Ore	140 333	167 578	137 416	80 713	...
Trinidad & Tobago					
Ore	2 111	3 071	2	—	...
USA					
Ore	443 581	587 818	308 650	220 914	241 538
Metal	10 957	14 731	12 972	15 883	13 951
Argentina					
Ore	78 395	66 325	97 301	73 800	61 083
Brazil					
Ore	32 749	6 937	0	295	70
Metal	1 710	1 736	799	946	1 847
Colombia					
Ore	9 576	3 359	7 777	9 447	13 531
Venezuela					
Ore	80 413	64 702	31 629	97 006	57 898
China					
Ore	276 690	424 803	357 021	560 947	635 114
Metal	...	...	468	303	261
Hong Kong					
Ore	629	580	959	762	1 493
India (e)					
Ore	4 860	1 093	3 471	3 087	2 676
Metal	1 095	3 915	4 978	1 994	731
Indonesia					
Ore (b)	1 680	1 370	2 803	2 705	3 642
Israel					
Ore (d)	* 1 300	* 1 300	* 1 700	* 1 100	* 2 000
Japan					
Ore (b)	1 922 113	1 939 002	1 646 743	1 663 589	1 054 360
Metal	9 893	10 739	13 687	17 931	19 948
Korea, Dem. P.R. of					
Ore (d)	* 134 500	* 61 400	* 49 100	* 93 300	* 31 500
Korea, Republic of					
Ore	391 811	508 323	393 118	442 785	397 923
Metal	697	823	891	1 158	1 039
Malaysia					
Ore	933	985	...	1 233	5 135
Philippines					
Ore (b)	3 209	22 244	20 224	15 002	4 474
Saudi Arabia					
Ore	19 509	8 535	5 737	98 385	...
Singapore					
Ore	51 062	26 180	80 014	46 630	16 411
Taiwan					
Ore	170 943	196 032	141 392	125 004	26 718
Australia					
Ore (f)	2 035	2 393	1 008	860	21
Metal (f)	1 794	2 634	1 346	1 246	1 465

## Note(s):

(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Mn content

(b) Including manganiferous iron ore

(c) Including ferruginous manganese ore

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

(e) Years ended 31 March following that stated

(f) Years ended 30 June of that stated

(g) Data for the Federal Republic of Yugoslavia only

## Mercury

**Production of Mercury**

kilograms

Country	1988	1989	1990	1991	1992
Spain	1 614 586	967 083	713 300	52 100	36 000
Czechoslovakia	168 000	131 000	126 000	75 000	60 000
Finland	97 026	202 470	109 176	110 435	74 596
Soviet Union	* 850 000	* 850 000	* 800 000	* 750 000	* 570 000
Turkey	97 359	96 000	66 000	25 000	5 000
Yugoslavia	70 000	51 000	37 000	* 35 000	* 7 000
Algeria	662 000	587 000	637 000	431 000	476 000
Mexico	345 000	651 000	735 000	340 000	21 000
USA	* 419 000	* 454 000	562 000	58 000	64 000
China	* 900 000	1 208 000	930 000	800 000	600 000
World total	5 200 000	5 200 000	4 700 000	2 700 000	2 000 000

**Exports of Mercury**

Country	1988	1989	1990	1991	1992
United Kingdom	66 572	128 462	176 377	108 335	79 967
Belgium-Luxembourg	2 600	5 400	36 500	50 100	199 600
Denmark	4 200	1 700	6 200	—	3 000
France	323 800	105 000	38 000	112 000	87 000
Germany, Federal Republic of	72 900	121 800	75 600	374 200	97 200
Italy	38 700	68 000	21 000	67 900	82 600
Netherlands	96 000	74 000	154 000	68 000	44 000
Spain	699 000	696 000	475 000	832 000	898 000
Austria	2 900	700	700	1 500	2 400
Finland	94 000	188 000	103 000	110 000	89 000
Norway	63 000	29 000	259 000	8 000	29 000
Sweden	8 000	59 000	45 000	79 000	59 000
Switzerland	2 960	3 832	32 575	11 263	3 131
Turkey	182 812	306 011	—	—	—
Yugoslavia	27 000	5 000	2 000	(c) 0	...
Algeria	527 848	857 012	400 610	679 000	...
Canada	48 701	14	33 165	50 858	64 481
Mexico	142 377	91 189	23 186	328	1 881
USA	(a)* 137 000	222 560	311 622	588 204	994 441
China	(a)* 847 000	(a)* 321 000	329 713	62 940	52 487
Hong Kong (b)	80 993	73 468	116 121	123 783	476 724
Japan	191 150	205 027	103 997	8 676	2 646
Singapore	2 542	5 844	7 405	5 995	19 079
of which: Re-exports	2 542	5 844	7 304	5 945	19 079
Taiwan	44	139 068	3 510	49 859	51 035

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

(b) Re-exports

(c) Data for the Federal Republic of Yugoslavia only

**Imports of Mercury**

kilograms

Country	1988	1989	1990	1991	1992
United Kingdom	311 020	89 178	51 090	39 472	67 252
Belgium-Luxembourg	161 500	91 700	74 000	87 200	94 000
Denmark	6 300	6 800	3 700	14 800	24 000
France	130 700	129 000	107 000	109 000	133 000
Germany, Federal Republic of	256 100	263 500	188 700	191 900	174 200
Greece	3 091	6 000	4 000	4 000	5 000
Irish Republic	7 452	14 385	48 521	15 647	25 800
Italy	194 300	189 000	92 000	75 900	48 700
Netherlands	104 000	110 000	106 000	83 000	37 000
Portugal	10 000	27 000	15 000	14 000	5 000
Spain	198 000	33 000	79 000	210 000	220 000
Austria	7 300	3 800	5 900	6 600	5 300
Finland	2 000	...	1 000	1 000	...
German Democratic Republic (a)	* 112 000	* 300 000	* 10 000	—	—
Hungary	65 000	70 000	27 000	...	17 761
Norway	4 000	...	...	3 000	...
Poland (a)	* 49 500	...	...	...	* 13 000
Romania (a)	* 17 000	* 3 000	* 15 000	* 1 000	...
Sweden	31 000	13 000	14 000	9 000	56 000
Switzerland	16 025	18 154	15 781	12 949	7 413
Turkey	52	—	22 000	5 000	5 000
Yugoslavia	48 000	29 000	48 000	(e) ...	...
Egypt	16 000	69 000	...	...	...
Morocco	4 293	466	9 296	10 269	6 000
South Africa	58 368	96 700	119 040	97 042	...
Tunisia	10 368	11 636	6 357	1 189	1 000
Canada	36 238	32 442	53 890	12 027	18 835
USA	326 563	131 219	14 951	55 433	91 705
Argentina	57 000	98 000	58 000	...	37 000
Brazil	202 970	336 515	239 515	148 828	181 000
Colombia	30 408	59 110	44 720	84 000	39 000
Peru	25 114	65 000	11 713	20 675	...
Uruguay	4 300	1 000	7 000	300	400
Venezuela	66 416	23 114	8 000	49 000	4 000
Bangladesh (c)	9 578	13 927	11 791	5 085	...
Hong Kong	158 219	80 363	128 746	115 526	651 045
India (d)	298 897	317 828	426 515	482 901	338 947
Indonesia	55 207	77 402	41 583	86 280	192 972
Iran (b)	38 309	25 651	...	...	...
Israel (a)	* 300	* 3 000	* 1 000	* 6 000	* 4 000
Japan	39 911	61 955	33 830	44 815	25 791
Korea, Dem. P.R. of (a)	* 1 000	* 3 000	* 3 000	* 3 000	...
Korea, Republic of	33 791	31 178	27 161	30 287	18 008
Malaysia	4 260	27 550	...	5 170	11 160
Myanmar (d)	...	203	16 257	10 160	...
Pakistan (c)	45 092	...	61 035	75 146	112 132
Philippines	132 451	62 370	92 729	120 813	95 425
Saudi Arabia	87 975	32 218	139 615	—	...
Singapore	55 576	150 733	18 742	85 589	23 921
Sri Lanka	400	...	1 339	837	2 384
Taiwan	18 321	18 418	10 808	13 599	18 901
Thailand	11 193	21 828	10 000	10 654	11 449
Australia (c)	60 574	83 339	73 558	73 557	80 759

(a) BGS estimates, based on known exports from certain 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) Data for the Federal Republic of Yugoslavia only

**Production of Mica**

Country	1988	1989	1990	1991	1992
France (e)	* 9 000	* 8 000	* 7 000	* 6 000	* 5 000
Spain (e)	2 233	951	913	* 300	* 250
Norway (b)	* 4 000	* 4 500	* 4 800	* 4 200	* 4 300
Soviet Union	* 50 000	* 50 000	* 45 000	* 40 000	* 35 000
Yugoslavia	807	794	802	(a)* 700	* 600
Madagascar	693	1 182	721	1 900	950
Morocco	* 1 500	* 1 500	* 1 500	* 1 500	* 1 500
South Africa	1 669	1 708	1 765	1 883	2 079
Zimbabwe	1 368	1 471	1 801	506	495
Canada	14 148	16 100	15 988	* 18 000	* 18 000
Mexico	6 228	4 510	5 863	5 587	5 866
USA (d) (e)	129 900	119 142	108 845	102 830	85 338
Argentina	960	327	684	1 671	1 008
Brazil	2 031	3 390	4 890	5 080	* 7 000
China (c)	* 12 200	* 20 200	* 25 000	* 23 000	* 27 000
India	7 533	7 307	6 682	5 529	* 5 500
Iran (f)	1 167	2 294	1 352	4 135	* 4 000
Malaysia	1 065	2 251	3 341	4 281	4 754
Sri Lanka	1 981	2 510	1 797	1 402	* 1 000
Taiwan	4 387	4 290	4 946	8 596	11 038
Australia	3 584	...	...	...	...
World total	256 000	256 000	247 000	241 000	224 000

## Note(s):

- (1) In addition to the countries listed, Namibia, Pakistan and Romania are believed to produce mica
- (a) Excluding data from August to December for the Republic of Croatia
- (b) Crude only
- (c) Conservative BGS estimates, based on exports
- (d) Sold or used by producers
- (e) Including mica recovered from mica schists and/or kaolin beneficiation
- (f) Years ended 20 March following that stated

**Exports of Mica**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Unmanufactured	50	68	0	81	9
Ground	4 262	4 951	4 981	5 902	6 624
Waste	80	103	81	156	109
Belgium-Luxembourg	928	521	5 165	487	416
France					
Unmanufactured	763	1 578	1 229	580	815
Ground	6 651	6 827	7 142	7 246	8 464
Germany, Federal Republic of					
Unmanufactured	55	4	13	26	3
Ground	1 232	1 327	1 398	1 711	2 529
Italy					
Unmanufactured	134	(c) 430	(c) 392	48	282
Ground	649	...	...	190	329
Netherlands					
Unmanufactured	473	464	989	866	722
Ground	524	819	996	1 198	513
Spain	529	751	1 189	944	1 658
Austria	651	616	671	833	1 060
Finland					
Unmanufactured	—	674	54	—	1
Ground	1 976	2 875	3 689	4 133	4 302
Norway	1 946	2 241	2 414	2 077	2 170
Sweden	60	15	15	85	59
Switzerland	142	133	131	46	84
Turkey	34	118	4 544	127	5 602
Madagascar	...	684	2 038	493	1 137
Morocco	1 862	1 121	700	942	1 900
South Africa	851	884	1 060	831	874
Zimbabwe					
Ground	814	...	708	...	...
Canada	8 775	12 859	12 182	13 362	15 503
USA					
Unmanufactured	1 181	1 351	794	1 152	899
Ground	5 412	3 745	4 342	3 430	4 040
Brazil	1 734	1 202	1 516	1 903	2 304
China	(a)* 12 200	(a)* 20 200	24 879	23 020	27 026
Hong Kong (d)	751	1 135	552	834	1 058
India (b)					
Block	407	355	264	268	211
Splittings	3 731	2 538	2 283	2 578	1 449
Condenser films	28	75	34	58	0
Waste	15 151	11 647	8 199	3 254	4 062
Japan	529	577	683	711	793
Malaysia	2 422	2 650	3 465	3 058	3 936
Singapore	377	350	290	306	440
of which: Re-exports	377	350	289	306	346
Sri Lanka	1 805	2 691	1 288	839	1 993
Taiwan	183	307	273	189	238

## Note(s):

(1) 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

(b) Years ended 31 March following that stated

(c) Including ground

(d) Re-exports

# Imports of Mica

Mica  
tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Unmanufactured	57	42	150	73	51
Ground	3 471	4 245	3 784	2 609	3 209
Waste	10 186	16 357	16 886	13 885	10 466
Belgium-Luxembourg					
Ground	1 169	1 374	1 589	1 869	1 753
Denmark	238	197	228	221	244
France					
Unmanufactured	3 306	4 440	3 082	3 239	3 686
Ground	919	1 416	1 580	1 695	1 739
Germany, Federal Republic of					
Unmanufactured	1 698	1 541	1 600	2 107	1 876
Ground	13 919	15 000	14 949	15 507	18 431
Greece	522	590	557	355	541
Irish Republic	207	686	507	484	1 068
Italy					
Unmanufactured	204	95	224	158	354
Ground	1 577	1 383	1 659	1 484	1 534
Netherlands					
Unmanufactured	785	726	936	542	341
Ground	1 357	1 888	2 405	1 597	2 141
Portugal	156	218	216	95	97
Spain	1 550	1 555	1 854	1 889	1 716
Austria	426	401	370	280	342
Czechoslovakia (c)	* 1 500	* 1 200	* 700	...	...
Finland	590	244	346	291	629
German Democratic Republic	628	920	...	—	—
Norway					
Unmanufactured	130	123	157	74	125
Waste	3 097	2 398	4 524	2 915	1 726
Poland	1 643	893	863	...	...
Soviet Union (c)	* 300	* 2 800	* 1 700	* 500	...
Sweden	398	510	574	746	772
Switzerland	856	925	566	505	394
Turkey	7	6	3	2 009	11
Yugoslavia	101	72	102	(d) 4	...
Egypt	95	22	...	...	...
South Africa	687	1 283	697	739	736
Canada	1 815	2 512	2 340	1 201	1 603
Jamaica	108	162	153	157	204
Mexico	154	207	280	689	649
USA					
Block	183	158	381	127	273
Splittings	1 317	1 380	1 204	1 244	1 601
Ground	7 780	8 904	9 142	9 722	11 568
Other unmanufactured	4 431	4 266	4 065	3 681	3 966
Colombia	112	132	98	196	201
Venezuela	492	420	318	435	308
Hong Kong	68	317	904	315	1 238
Indonesia	440	493	814	543	887
Iran (a)	755	...	22	...	...
Japan					
Block	90	248	672	4 890	...
Splittings	4 944	6 333	6 787	7 112	(e) 14 157
Waste	6 269	4 565	4 929	3 521	1 556
Other unmanufactured	9 819	13 107	15 005	18 842	20 600
Korea, Republic of	1 926	2 122	2 508	3 095	2 875
Malaysia	3 114	329	...	260	291
Philippines	139	204	129	176	153
Saudi Arabia	—	302	281	158	...
Singapore	1 010	951	1 353	1 443	59 993

## Mica

**Imports of Mica**

tonnes

Country	1988	1989	1990	1991	1992
Taiwan					
Unmanufactured	208	149	407	274	139
Ground	680	843	709	903	1 069
Thailand	319	542	595	510	687
Australia (b)	641	1 546	937	527	1 072
New Zealand (b)	£122 000	£122 000	£146 000	£130 000	£92 000

## Note(s):

(1) 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
- (c) BGS estimates, based on known exports from certain countries
- (d) Data for the Federal Republic of Yugoslavia only
- (e) Including block



## Mine Production of Molybdenum

tonnes (metal content)

Country	1988	1989	1990	1991	1992
Bulgaria	* 200	* 190	231	* 200	* 200
Soviet Union	* 17 000	* 17 000	* 17 000	* 16 000	* 15 000
Turkey	* 100	* 100	* 100	* 100	* 100
Niger	* 15	* 13	* 10	* 10	* 10
Canada	12 494	14 073	11 994	11 329	9 405
Mexico	4 456	4 189	2 001	1 716	1 458
USA	43 051	63 105	61 611	53 364	49 725
Chile	15 515	16 550	13 830	14 434	14 840
Peru	2 382	3 013	2 509	3 046	3 245
China	* 14 400	* 15 700	* 15 700	29 000	37 300
Iran	1 181	1 305	889	707	1 510
Japan	* 100	* 100	* 100	* 100	* 100
Korea, Republic of	144	132	103	144	* 140
Mongolia	1 547	1 574	2 011	* 1 700	* 1 500
World total	113 000	137 000	128 000	132 000	135 000

## Note(s):

(1) In addition to the countries listed, Australia, India, Democratic P.R. of Korea and Romania are believed to produce molybdenum

## Molybdenum

**Exports of Molybdenum**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ores & concentrates	2 551	2 465	3 060	875	1 056
Metal	489	347	397	452	206
Oxides	459	676	557	112	91
Belgium-Luxembourg					
Ores & concentrates	16 519	16 102	17 695	14 560	14 614
Metal	151	139	196	80	74
Oxides	55	76	195	214	55
France					
Ores & concentrates	1 267	1 273	693	235	479
Metal	310	293	271	256	174
Germany, Federal Republic of					
Ores & concentrates	2 213	2 057	2 499	2 195	1 079
Metal	874	949	861	4 142	862
Oxides	566	394	493	779	792
Italy					
Metal	55	237	153	170	164
Netherlands					
Ores & concentrates	15 953	17 403	15 984	14 248	8 234
Metal	266	355	200	193	217
Oxides	2 211	1 193	1 451	1 057	1 335
Austria					
Metal	1 640	1 651	1 656	1 390	1 412
Sweden					
Ores & concentrates	1 725	2 647	2 952	3 602	2 676
Metal	21	3	3	1	7
Canada					
Ores & concentrates (a)	13 978	16 140	11 062	10 199	7 042
Mexico					
Ores & concentrates	4 542	4 656	22 693	3 130	2 287
USA					
Ores & concentrates (a)	23 500	51 270	41 568	33 616	33 347
Metal	1 654	1 672	1 356	1 412	1 069
Oxides	...	1 408	787	1 571	556
Chile					
Ores & concentrates	24 815	24 468	26 268	27 338	28 337
Oxides	690	794	1 078	1 170	1 214
Peru					
Ores & concentrates	4 279	5 190	4 574	5 507	5 807
China					
Ores & concentrates	(b)* 3 300	(b)* 1 300	370	1 311	1 472
Metal	(b)* 90	(b)* 60	178	232	204
Oxides	...	...	381	895	6 858
Japan					
Metal	62	93	91	72	85

## Note(s):

(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

(a) Mo content

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

## Imports of Molybdenum

Country	1988	1989	1990	1991	1992
United Kingdom					
Ores & concentrates	19 882	23 196	18 224	14 212	12 144
Metal	337	295	377	399	468
Oxides	256	146	160	218	98
Belgium-Luxembourg					
Ores & concentrates	28 512	31 950	32 706	26 865	29 147
Metal	292	339	205	319	207
Oxides	190	122	160	152	111
France					
Ores & concentrates	9 614	9 406	9 993	8 451	8 470
Metal	391	408	510	413	463
Oxides	140	152	126	292	359
Germany, Federal Republic of					
Ores & concentrates	17 329	16 450	15 929	14 733	10 197
Metal	1 272	1 375	1 284	1 031	1 121
Oxides	544	448	361	306	297
Italy					
Ores & concentrates	2 789	2 631	2 697	2 630	2 408
Metal	182	194	129	200	198
Oxides	173	76	37	82	41
Netherlands					
Ores & concentrates	17 697	25 577	22 205	19 111	14 620
Metal	163	260	167	134	223
Oxides	10	18	18	27	128
Spain					
Ores & concentrates	2 720	2 609	2 335	2 014	1 191
Metal	56	53	56	52	50
Austria					
Ores & concentrates	9 542	9 969	8 977	6 764	6 131
Metal	130	256	307	303	172
Oxides	2 852	2 486	2 419	1 760	2 091
Czechoslovakia					
Ores & concentrates (a)	* 1 900	* 2 000	* 1 600	* 600	* 100
Finland					
Ores & concentrates	1 245	1 256	1 792	1 306	1 884
Sweden					
Ores & concentrates	7 870	7 577	8 122	8 378	6 178
Metal	274	372	263	228	352
Oxides	234	243	201	471	1 929
Switzerland					
Metal	17	17	17	19	47
Yugoslavia					
Metal	20	26	24	(d) 2	...
South Africa					
Metal	19	12	15	15	...
Oxides	518	355	326	437	479
Canada					
Metal	159	59	77	47	41
Oxides	188	124	176	305	250
USA					
Ores & concentrates	668	620	1 055	273	1 425
Metal	473	512	417	522	317
Oxides	721	422	643	987	997
Argentina					
Oxides	805	841	...	...	...
Brazil					
Ores & concentrates	3 094	3 784	2 080	2 096	2 816
Metal	68	75	72	64	79
Oxides	615	731	391	304	...
India (b)					
Ores & concentrates	1 413	1 551	1 566	1 274	656
Metal	21	40	114	72	84

## Molybdenum

**Imports of Molybdenum**

tonnes

Country	1988	1989	1990	1991	1992
Japan					
Ores & concentrates	22 987	23 106	24 408	25 298	21 090
Metal	662	606	528	504	437
Oxides	351	352	335	567	794
Korea, Republic of					
Ores & concentrates	13 520	559	745	1 450	1 249
Metal	58	182	358	79	97
Malaysia					
Metal	61	263	365	207	435
Philippines					
Metal	9	35	21	41	38
Singapore					
Metal	7	164	49	73	1
Taiwan					
Metal	127	134	139	130	152
Australia					
Metal (c)	42	128	104	140	59
Oxides (c)	190	127	86	33	91

## Note(s):

- (1) 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) Years ended 31 March following that stated
- (c) Years ended 30 June of that stated
- (d) Data for the Federal Republic of Yugoslavia only

## Mine Production of Nickel

tonnes (metal content)

Country	1988	1989	1990	1991	1992
Greece (d)	13 131	10 719	15 728	16 005	15 424
Albania	10 139	11 204	8 843	4 000	* 200
Finland	11 070	9 958	10 812	10 332	10 311
German Democratic Republic	1 367	1 479	872	—	—
Norway	382	445	2 200	2 200	3 400
Soviet Union	* 205 000	* 205 000	* 212 000	* 200 000	* 180 000
Yugoslavia	* 5 600	* 6 300	* 4 900	* 3 200	* 3 000
Botswana	22 539	21 309	19 022	19 294	18 873
South Africa (a)	29 217	28 100	28 200	26 885	27 621
Zimbabwe	11 489	11 634	11 442	11 312	10 115
Canada	216 589	200 899	196 225	192 259	186 384
Cuba	42 145	44 765	39 292	32 246	31 036
Dominican Republic	42 187	50 736	42 148	44 661	42 641
USA	—	—	330	5 523	6 671
Brazil	18 667	18 826	24 054	26 376	29 372
Colombia	19 200	21 200	23 100	23 000	23 400
China	* 26 000	29 500	27 300	30 400	32 800
Indonesia	59 800	64 184	68 583	70 400	78 100
Myanmar (b)	* 100	* 100	* 100	...	—
Philippines	10 349	15 380	15 818	13 707	14 005
Australia	58 000	62 000	67 100	67 600	59 000
New Caledonia (c)	71 242	96 150	85 047	99 664	100 500
World total	870 000	910 000	900 000	900 000	870 000

(a) Refined nickel and nickel in matte

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

(c) Ni and Co content

(d) Ni content of ferro-nickel

## Nickel

**Smelter/Refinery Production of Nickel**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	28 000	26 100	26 500	28 600	28 000
France	9 124	8 632	8 539	7 455	6 800
Greece	13 131	10 719	15 728	16 005	15 424
Albania	5 000	1 900	2 143	827	—
Czechoslovakia	3 500	2 500	2 600	2 433	1 500
Finland	16 343	13 090	17 136	13 146	14 984
German Democratic Republic	2 600	2 700	1 300	—	—
Norway	52 545	54 885	57 811	58 729	55 686
Soviet Union	* 295 000	* 295 000	* 272 300	* 257 000	* 243 000
Yugoslavia	5 600	6 300	4 900	3 200	* 3 000
South Africa	29 217	28 100	28 200	26 885	27 621
Zimbabwe	18 300	18 600	18 800	17 500	16 500
Canada	148 300	142 763	134 700	131 500	135 233
Cuba	23 831	26 261	21 126	18 756	16 920
Dominican Republic	29 345	31 264	28 701	29 063	27 535
USA	—	347	3 701	7 065	8 962
Brazil	13 101	13 727	13 419	13 840	14 668
Colombia	16 877	16 935	18 425	20 190	20 165
China	25 500	34 300	27 500	28 000	30 800
Indonesia	4 900	5 000	5 000	5 300	5 500
Japan	102 573	105 900	100 200	114 200	107 000
Korea, Republic of	—	5 000	8 200	11 400	10 300
Taiwan	10 500	10 000	10 400	11 200	9 000
Australia	37 400	43 600	44 600	50 000	50 584
New Caledonia	37 352	36 285	32 278	34 411	31 895
World total	930 000	940 000	900 000	910 000	880 000

Note(s):

(1) Data relate to refined nickel plus the nickel content of ferro-nickel and nickel oxide

## Exports of Nickel

Country	1988	1989	1990	1991	1992
United Kingdom					
Mattes, sinters etc.	762	450	255	700	1 850
Unwrought	15 999	11 818	14 327	15 377	14 464
Unwrought alloys	2 565	2 682	3 799	3 083	3 045
Scrap	4 185	4 772	5 070	5 880	7 258
Oxides	218	109	66	16	30
Belgium-Luxembourg					
Mattes, sinters etc.	11	50	4	1 048	3 560
Unwrought	461	1 684	273	349	751
Unwrought alloys	908	871	516	597	448
Scrap	1 396	1 206	2 191	1 130	1 062
Denmark					
Scrap	612	303	110	148	143
France					
Unwrought	6 510	6 006	6 371	4 638	4 096
Unwrought alloys	528	256	1 666	253	77
Scrap	4 582	3 863	4 118	4 615	5 078
Germany, Federal Republic of					
Unwrought	6 215	4 825	4 661	4 362	9 133
Unwrought alloys	3 142	2 924	3 723	3 794	3 041
Scrap	9 989	8 041	9 765	11 063	15 528
Oxides	88	68	107	197	187
Irish Republic					
Unwrought (a)	260	90	99	85	70
Scrap	330	315	410	241	322
Italy					
Unwrought (a)	845	484	1 631	3 851	701
Scrap	602	472	309	365	453
Netherlands					
Mattes, sinters etc. (b)	* 4 200	* 10 100	* 9 800	* 8 400	* 7 800
Unwrought (a)	400	1 558	365	3 194	619
Scrap	6 740	6 367	5 500	6 123	8 376
Oxides (b)	* 150	* 300	* 250	* 250	* 300
Spain					
Scrap	166	349	125	256	1 706
Albania					
Unwrought	1 500	1 900	2 000	2 000	...
Austria					
Scrap	123	311	184	113	273
Finland					
Ores & concentrates	6 039	31 448	26 296	1 266	1 686
Unwrought	10 458	9 456	10 515	6 791	10 520
Oxides	311	456	474	476	459
Norway					
Ore	6 914	11 513	21 578	23 452	29 320
Unwrought	50 789	54 824	58 605	56 655	53 874
Scrap	86	100	85	53	285
Soviet Union					
Mattes, sinters etc.	(b)* 7 900	(b)* 15 700	(b)* 27 300	(b)* 13 400	(g) 9 134
Unwrought (a)	(b)* 62 000	(b)* 75 200	(b)* 80 300	(b)* 98 800	(g) 118 294
Sweden					
Unwrought (a)	1 802	133	95	62	598
Scrap	642	769	542	947	2 479
Switzerland					
Unwrought (a)	662	194	63	64	93
Scrap	440	302	276	347	241
Yugoslavia					
Scrap	14	1	80	(i) 121	...
Botswana					
Mattes, sinters etc.	60 739	56 118	48 500	48 800	45 500
South Africa					
Unwrought (a)	17 737	16 412	21 167	17 934	17 170
Scrap (b)	* 500	* 1 100	* 1 900	* 1 800	* 1 200
Zimbabwe					
Unwrought (a)	16 928	15 000	13 740	11 517	11 767

## Nickel

**Exports of Nickel**

tonnes

Country	1988	1989	1990	1991	1992
Canada					
Ores, concentrates, mattes etc. (c)	67 888	65 517	68 671	75 109	75 707
Unwrought (a)	(j)* 67 000	(j) 62 674	(j) 65 861	(j) 61 961	104 875
Scrap	7 155	7 936	5 594	4 232	4 178
Cuba					
Oxide, sinter & sulphide (e)	* 43 000	* 46 000	* 40 600	* 30 400	* 33 000
USA					
Mattes, sinters etc.	...	760	8 268	6 959	4 561
Unwrought (a)	2 080	3 977	4 426	4 768	4 814
Scrap	11 626	14 753	21 458	21 502	17 213
Brazil					
Unwrought	935	496	1 713	2 437	3 162
China					
Unwrought (a)	(b)* 5 200	(b)* 3 000	(b)* 500	(b)* 200	179
Hong Kong					
Unwrought (a) (f)	4 979	5 301	2 509	4 980	22 079
Scrap	526	252	56	55	365
Oxides (f)	39	81	101	63	—
Indonesia					
Ore	1 253 611	1 081 531	1 364 752	1 697 110	1 493 474
Mattes, sinters etc.	58 769	38 166	35 069	42 284	35 774
Israel					
Scrap (b)	* 400	* 400	* 300	* 500	* 300
Japan					
Unwrought (a)	544	128	147	81	78
Scrap	150	129	222	312	441
Oxides	163	186	245	1 102	360
Korea, Republic of					
Unwrought (a)	—	1 152	1 330	837	282
Scrap	881	1 392	2 221	7 567	2 084
Philippines					
Ores & concentrates	489 055	601 144	511 054	626 573	478 255
Unwrought (a)	—	—	—	198	—
Singapore					
Unwrought (f)	2 436	5 521	633	1 220	907
Scrap	97	140	174	69	138
of which: Re-exports	38	12	7	2	81
Taiwan					
Unwrought	2 431	(a) 1 403	(a) 1 421	(a) 105	(a) 82
Scrap	3 891	3 111	3 041	2 346	1 470
Australia (d)	(b)* 61 800	(b)* 56 900	(b)* 69 100	(b)* 71 300	* 75 000
New Caledonia					
Ores	1 301 864	2 087 000	2 263 000	2 067 000	3 483 201
Mattes, sinters etc.	14 000	14 600	14 400	11 600	10 700
New Zealand					
Scrap (h)	22	591	80	159	796

## Note(s):

- (1) In this table the term 'unwrought' nickel corresponds to item 683.1 of the Standard International Trade Classification (Revision 3) 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) Unwrought metal and Ni content of ores, concentrates and intermediate products
- (e) Ni-Co content (mainly nickel)
- (f) Re-exports
- (g) Data for the Russian Federation only
- (h) Years ended 30 June of that stated
- (i) Data for the Federal Republic of Yugoslavia only
- (j) Exports to the USA only



## Imports of Nickel

Country	1988	1989	1990	1991	1992
United Kingdom					
Mattes, sinters etc.	46 834	41 792	48 861	44 929	43 027
Unwrought	15 248	17 140	18 018	16 621	15 696
Unwrought alloys	2 326	1 836	990	667	1 177
Scrap	6 332	6 493	6 372	5 766	6 562
Oxides	2 695	818	195	113	112
Belgium-Luxembourg					
Ore	2 273	2 317	1 459	439	3
Mattes, sinters etc.	4 445	6 358	7 826	5 310	6 021
Unwrought	9 238	9 133	8 240	9 650	8 038
Unwrought alloys	128	65	116	139	96
Scrap	1 390	2 388	572	908	1 261
Oxides	126	163	166	137	119
Denmark					
Unwrought (a)	140	117	131	150	157
France					
Mattes, sinters etc.	14 019	14 083	13 404	11 690	10 530
Unwrought	20 375	23 963	27 423	21 853	20 464
Unwrought alloys	4 687	3 033	4 455	4 468	4 387
Scrap	837	1 167	2 042	2 835	3 760
Oxides	173	204	288	176	215
Germany, Federal Republic of					
Mattes, sinters etc.	14 585	11 936	11 196	11 337	16 555
Unwrought (a)	56 399	57 458	57 383	51 950	40 969
Scrap	11 775	12 508	8 046	10 781	30 484
Oxides	331	271	378	377	454
Greece					
Unwrought (a)	105	194	100	173	62
Irish Republic					
Unwrought (a)	515	615	639	694	672
Italy					
Mattes, sinters etc.	6 978	10 520	11 158	8 590	9 347
Unwrought	16 258	15 420	14 297	20 244	13 638
Unwrought alloys	698	1 342	1 319	1 004	897
Scrap	119	42	44	149	693
Oxides	110	114	120	283	106
Netherlands					
Mattes, sinters etc. (e)	* 11 700	* 3 200	* 3 700	* 13 700	* 15 900
Unwrought	1 472	2 924	1 373	1 295	1 463
Unwrought alloys	62	756	14	11	271
Scrap	3 138	2 962	2 797	3 732	6 468
Oxides	196	211	200	226	172
Portugal					
Unwrought (a)	279	267	286	230	291
Spain					
Mattes, sinters etc.	503	426	342	280	382
Unwrought (a)	7 895	10 766	11 040	9 665	6 444
Austria					
Mattes, sinters etc.	672	835	843	597	255
Unwrought (a)	2 735	2 370	2 709	2 506	2 402
Scrap	626	271	201	504	1 509
Oxides	5	3	790	1 571	1 017
Czechoslovakia					
Unwrought (a)	5 352	6 092	8 123	5 500	...
Finland					
Ore	7 582	11 286	26 917	20 093	32 733
Mattes, sinters etc.	5 778	5 417	6 040	5 538	4 755
Unwrought (a)	3 140	4 045	3 051	5 476	3 834
Scrap	5 761	5 738	4 754	4 882	9 586
Norway					
Mattes, sinters etc.	119 220	110 432	128 467	133 194	115 227
Unwrought (a)	19	53	302	52	55
Sweden					
Ore	2 866	2 212	1 055	—	100
Mattes, sinters etc.	2 319	1 872	2 330	2 380	3 081
Unwrought	13 622	12 412	12 123	10 039	10 096
Unwrought alloys	554	1 371	410	1 291	377
Scrap	11 013	11 029	8 492	9 939	17 237

## Nickel

**Imports of Nickel**

tonnes

Country	1988	1989	1990	1991	1992
Switzerland					
Unwrought (a)	664	1 087	1 407	1 194	1 264
Scrap	85	51	64	77	464
Turkey					
Unwrought (a)	800	780	935	941	727
Yugoslavia					
Unwrought (a)	1 681	884	988	(f) 161	...
South Africa					
Unwrought (a)	25	5	401	44	386
Canada					
Ores & concentrates (b)	1 202	716	33	8	281
Mattes, sinters etc.	4 207	2 522	13 085	23 299	33 863
Unwrought (a)	1 682	3 786	4 084	10 063	3 790
Scrap	14 544	13 480	9 314	14 717	18 238
Mexico					
Unwrought (a)	998	1 258	1 885	1 644	1 672
USA					
Slurry, mattes, sinters etc.	6 687	303	1 055	5 157	4 798
Unwrought (a)	106 867	111 608	108 940	104 062	91 880
Scrap	8 384	10 280	7 945	7 469	7 608
Oxides	806	749	615	575	721
Argentina					
Unwrought	322	262	317	500	580
Brazil					
Unwrought (a)	1 493	4 017	2 804	3 435	4 107
Colombia					
Unwrought	164	284	164	191	253
Venezuela					
Unwrought	243	184	242	197	272
China					
Unwrought (a)	2 471	526	35	4 568	6 478
Hong Kong					
Unwrought (a)	7 026	6 079	3 836	8 068	32 137
India (c)					
Mattes, sinters etc.	3 265	3 372	5 408	4 964	1 753
Unwrought (a)	6 110	5 697	4 585	3 253	5 533
Scrap	969	137	401	200	145
Japan					
Ore	3 265 651	3 827 905	3 337 710	4 002 388	3 450 616
Mattes, sinters etc.	62 658	59 923	62 291	67 267	67 707
Unwrought	34 093	37 973	44 069	50 822	27 489
Unwrought alloys	235	282	314	376	276
Scrap	3 578	2 241	3 843	4 155	4 551
Oxides	290	283	269	272	212
Korea, Dem. P.R. of					
Unwrought (a) (e)	* 600	* 100	* 150	* 100	* 100
Korea, Republic of					
Mattes, sinters etc.	...	6 600	10 479	16 103	14 730
Unwrought (a)	5 259	8 165	6 571	13 280	5 526
Scrap	2 077	1 781	2 439	2 366	2 310
Malaysia					
Unwrought (a)	170	158	311	478	212
Singapore					
Unwrought	4 042	3 355	671	706	1 328
Scrap	208	185	277	224	306
Taiwan					
Mattes, sinters etc.	17 539	9 923	6 035	7 280	8 316
Unwrought	3 900	(a) 7 061	(a) 11 153	(a) 13 145	(a) 9 581
Scrap	155	7	14	82	220
Oxides	300	335	398	432	493
Thailand					
Unwrought (a)	567	2 788	927	812	1 201

**Imports of Nickel**

Country	1988	1989	1990	1991	1992
Australia					
Unwrought (d)	282	76	170	291	291
Unwrought alloys (d)	257	243	334	285	225
Scrap (d)	243	160	70	38	115
New Zealand (d)					
Unwrought (a)	25	45	67	36	42

## Note(s):

- (1) In this table the term 'unwrought' nickel corresponds to item 683.1 of the Standard International Trade Classification (Revision 3) 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
  - (e) BGS estimates, based on known exports from certain countries
  - (f) Data for the Federal Republic of Yugoslavia only

**Production of Crude Petroleum**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	109 455 000	87 306 000	87 992 000	86 832 000	89 184 000
Denmark (e)	4 700 061	5 416 303	5 933 019	7 003 426	7 611 388
France	3 358 000	3 243 000	3 023 000	2 950 000	2 873 000
Germany, Federal Republic of	3 937 000	3 770 000	3 606 000	3 385 000	3 247 000
Greece	1 141 922	926 593	836 013	848 594	697 739
Italy	4 839 213	4 568 424	4 623 694	4 305 916	4 555 000
Netherlands	3 909 000	3 391 000	3 533 000	3 258 000	2 845 000
Spain	1 482 034	1 038 008	795 000	1 067 000	1 067 000
Albania	2 482 000	2 135 000	1 067 000	1 002 000	985 000
Austria	1 175 186	1 157 891	1 148 593	1 279 882	1 179 933
Bulgaria	77 000	73 000	60 000	58 000	52 000
Czechoslovakia	143 000	144 000	123 000	140 000	133 000
German Democratic Republic	* 60 000	* 60 000	—	—	—
Hungary	1 947 000	1 966 000	1 974 000	1 893 000	1 825 000
Norway	56 125 000	74 528 000	81 745 000	94 181 000	106 977 000
Poland	163 000	159 000	163 000	158 000	202 000
Romania	9 389 000	9 173 000	7 928 000	6 791 000	6 602 000
Soviet Union	624 324 000	607 121 000	571 000 000	515 416 000	449 823 000
Turkey	2 563 891	2 876 537	3 719 956	4 520 030	4 296 026
Yugoslavia	3 681 147	3 392 445	3 144 526	(f) 2 160 000	3 141 000
Algeria	49 357 000	51 370 000	56 673 000	58 454 000	58 045 000
Angola	24 606 000	25 000 000	25 780 000	24 751 000	26 356 000
Benin	238 600	192 000	206 100	202 300	195 000
Cameroon	8 688 000	8 642 000	8 292 000	7 709 000	6 978 000
Congo	7 038 074	7 969 388	8 015 900	7 855 500	9 003 000
Egypt (g)	44 523 000	42 626 000	43 407 000	44 375 000	43 821 000
Gabon	8 812 000	10 998 000	13 754 000	14 982 000	14 898 000
Ivory Coast	548 000	350 000	315 000	60 000	63 000
Libya	49 250 000	53 694 000	65 990 000	73 968 000	73 266 000
Nigeria	68 530 000	83 129 000	90 736 000	96 455 000	97 193 000
Tunisia	4 908 000	4 916 000	4 502 000	5 195 000	5 353 000
Zaire	1 464 000	1 358 000	1 411 000	1 380 000	1 302 000
Barbados	58 617	53 430	62 369	62 382	65 716
Canada	85 596 900	82 606 600	82 235 200	81 963 600	85 129 400
Cuba	718 800	718 400	736 000	817 000	882 100
Guatemala	185 182	184 221	199 630	187 648	284 473
Mexico	133 903 176	133 947 324	136 484 511	143 480 935	142 950 000
Trinidad & Tobago	7 793 355	7 697 400	7 790 100	7 424 600	6 994 400
USA	405 168 000	378 937 000	366 095 000	369 181 000	356 936 000
Argentina	23 829 749	24 368 512	25 545 968	26 108 344	29 416 000
Bolivia	840 470	868 306	914 639	1 034 000	985 000
Brazil	28 979 383	30 977 843	32 825 392	32 478 773	32 799 027
Chile	1 295 716	1 169 392	1 038 015	942 613	786 550
Colombia	19 358 000	20 839 000	22 647 000	21 927 000	22 649 000
Ecuador	15 418 451	14 199 445	14 568 801	15 258 343	16 344 278
Peru	6 982 151	6 425 929	6 355 000	5 657 000	5 710 000
Suriname	199 500	225 619	229 959	246 598	263 844
Venezuela	99 918 498	99 939 123	111 876 674	125 041 231	* 125 000 000
Abu Dhabi	34 563 636	* 45 000 000	* 50 000 000	* 65 000 000	* 60 000 000
Bahrain	2 141 257	2 128 825	2 084 000	2 100 137	2 065 437
Brunei	6 352 000	6 449 000	6 544 000	8 049 000	8 286 000
China (a)	137 046 000	137 641 000	138 306 000	140 990 000	142 100 000
Dubai	18 903 000	20 706 000	20 902 000	20 861 000	19 373 000
India	31 580 000	33 693 000	33 309 000	31 287 000	27 863 000
Indonesia	64 053 453	68 031 754	70 185 234	71 038 899	76 456 000
Iran	112 900 000	144 347 000	157 084 000	166 731 000	173 172 000
Iraq	127 700 000	139 185 000	100 681 000	14 876 000	20 871 000
Israel	19 522	16 876	11 494	8 575	7 115
Japan	631 180	584 736	576 581	800 933	852 000
Kuwait (c)	71 504 000	91 886 000	58 729 000	9 567 000	53 121 000
Malaysia	26 700 000	28 800 000	30 600 000	32 000 000	32 600 000
Myanmar (d)	643 900	737 800	710 900	764 600	747 000
Oman	30 960 175	31 914 894	34 097 108	35 324 604	36 961 266
Pakistan	2 213 000	2 530 000	2 925 000	3 054 000	2 977 000

**Production of Crude Petroleum**

tonnes

Country	1988	1989	1990	1991	1992
Philippines	300 000	257 700	237 093	149 760	537 000
Qatar	16 900 000	19 300 000	21 200 000	20 500 000	22 600 000
Ras al Khaimah	500 000	498 000	37 000	40 000	40 000
Saudi Arabia (c)	265 600 000	267 000 000	334 200 000	410 047 000	420 104 000
Sharjah	1 927 000	1 681 000	1 802 000	1 922 000	1 927 000
Syria	14 160 000	16 998 000	20 292 000	24 644 000	27 660 000
Taiwan	125 000	140 000	100 000	99 000	66 000
Thailand	2 008 700	2 087 000	2 292 500	2 432 400	2 315 000
Vietnam	747 000	1 022 000	2 482 000	3 900 000	5 401 000
Yemen, Republic of (b)	8 300 000	8 517 625	8 700 826	9 443 061	8 433 626
Australia	27 492 622	25 937 279	30 547 662	28 835 416	28 326 395
New Zealand	1 555 310	1 742 000	1 795 000	1 877 200	1 766 600
World total	2 941 000 000	3 005 000 000	3 042 000 000	3 011 000 000	3 028 000 000

## Note(s):

- (1) The figures shown in this table exclude natural gasoline
- (a) Including oil from shale and coal
- (b) Yemen Arab Republic and People's Dem. Rep. of Yemen were unified on 22 May 1990 as the Republic of Yemen
- (c) Including shares of production from the Neutral Zone
- (d) Years ended 31 March following that stated
- (e) Sales
- (f) Excluding data from August to December for the Republic of Croatia
- (g) Years ended 30 June of that stated

**Production of Natural Gas**million m<sup>3</sup>

Country	1988	1989	1990	1991	1992
United Kingdom	45 753	44 755	49 551	55 221	55 944
Belgium	27	20	—	—	—
Denmark (g)	2 689	2 686	2 752	3 509	3 850
France	3 207	3 073	2 964	3 370	3 280
Germany, Federal Republic of	14 783	14 650	14 554	21 890	18 770
Irish Republic	2 017	2 300	2 320	2 400	2 300
Italy	16 511	16 766	17 000	17 220	18 150
Netherlands	65 610	71 715	72 238	81 666	82 020
Spain	952	1 623	1 330	1 320	1 210
Albania	* 800	* 700	* 700	* 140	* 100
Austria	1 265	1 323	1 288	1 329	1 441
Bulgaria	10	9	14	10	40
Czechoslovakia	944	865	1 227	592	370
German Democratic Republic	11 936	10 262	* 8 500	—	—
Hungary	6 272	6 176	4 932	5 043	5 057
Norway	29 778	30 745	27 642	27 425	29 419
Poland	5 713	5 368	3 867	4 132	4 020
Romania	36 804	32 951	29 200	24 810	22 140
Soviet Union	770 000	796 000	815 300	810 530	772 800
Turkey	99	174	212	203	200
Yugoslavia	3 015	2 871	2 659	(f) 1 878	2 750
Algeria	44 900	48 400	50 640	54 760	55 800
Angola	450	430	460	580	570
Egypt	6 920	7 740	8 110	9 080	9 820
Gabon	100	90	100	100	100
Libya	5 500	6 000	6 200	6 750	6 770
Morocco	83	62	57	39	20
Nigeria	3 800	4 700	3 710	4 750	4 720
Tunisia	430	427	378	387	402
Canada	113 724	119 623	123 228	129 598	141 365
Mexico	26 046	* 26 100	26 730	26 521	26 146
Trinidad & Tobago	4 956	5 050	5 500	5 700	5 500
USA (e)	482 112	488 749	504 300	501 200	505 200
Argentina	19 224	20 440	19 700	21 957	22 291
Bolivia	2 783	2 934	3 004	2 950	3 130
Brazil	3 173	3 395	3 443	3 411	3 543
Chile	1 848	1 806	1 921	1 649	1 750
Colombia	4 140	4 130	4 280	4 400	4 270
Peru	810	704	* 600	* 500	* 400
Venezuela	19 028	19 538	21 966	21 902	* 22 000
Abu Dhabi	12 920	15 600	15 270	18 600	14 060
Afghanistan (c)	3 000	300	300	300	300
Bahrain	6 169	6 435	6 170	6 315	7 249
Bangladesh (d)	4 113	4 413	4 754	4 893	5 337
Brunei	8 469	8 300	8 462	7 850	8 100
China	14 260	15 049	15 298	16 073	15 788
Dubai	2 440	2 280	2 890	2 980	2 250
India	8 833	8 778	10 245	11 532	15 320
Indonesia	52 320	55 938	61 137	65 599	73 132
Iran	20 000	22 200	23 710	26 000	25 000
Iraq	5 730	6 100	4 180	1 100	2 270
Israel	41	38	33	27	23
Japan	2 097	2 010	2 043	2 134	2 170
Kuwait (a)	6 490	8 160	5 230	500	2 620
Malaysia	16 450	17 160	18 520	21 150	22 550
Myanmar (b)	1 107	1 125	953	950	870
Oman	1 595	1 644	1 749	1 817	* 1 800
Pakistan	12 594	13 450	14 290	15 130	15 540
Qatar	6 470	6 090	6 720	9 300	12 620
Ras al Khaimah	300	200	40	40	40
Saudi Arabia (a)	29 100	29 800	30 500	32 000	34 000
Sharjah	2 980	3 900	3 900	4 320	5 820
Syria	720	1 000	2 920	3 500	3 600
Taiwan	1 157	1 158	1 129	766	630
Thailand	6 021	5 986	6 520	8 088	8 645

**Production of Natural Gas**million m<sup>3</sup>

Country	1988	1989	1990	1991	1992
Australia	15 383	17 806	20 620	21 694	23 462
New Zealand	4 700	4 809	4 793	5 273	5 571
World total	2 004 000	2 065 000	2 115 000	2 147 000	2 146 000

## Note(s):

- (1) So far as possible the figures in this table exclude flared or reinjected gas
  - (a) Including 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
  - (e) Dry gas
  - (f) Excluding data from August to December for the Republic of Croatia
  - (g) Sales

**Exports of Crude Petroleum**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	63 804 707	49 228 876	54 162 184	51 694 907	54 388 088
Denmark	1 801 566	2 385 236	2 727 597	4 051 480	4 428 201
France	132 669	18 945	20 594	30 099	115
Germany, Federal Republic of	1 175 249	1 155 060	1 100 013	120 400	173 376
Greece	450 000	419 310	416 623	532 827	533 000
Italy	626 155	741 036	814 846	499 208	252 138
Netherlands	930 293	1 051 752	1 316 126	1 190 242	1 004 076
Hungary	2 483 000	2 700 000	2 344 000	2 715 000	...
Norway	48 104 368	65 133 948	68 331 921	82 196 498	92 568 217
Soviet Union	144 196 000	127 330 000	108 551 000	(d) 56 476 000	(d) 66 209 000
Sweden	—	56 000	—	84 005	1 172
Algeria	27 265 805	30 001 664	31 441 296	32 004 000	* 31 000 000
Angola	20 592 000	20 516 000	22 127 000	18 626 000	* 19 780 000
Benin	* 275 000	* 285 000	* 291 000	* 295 000	...
Cameroon	1 117 000	2 157 658	2 091 000	2 060 000	* 1 820 000
Congo	4 520 920	6 665 717	6 175 000	6 175 000	* 7 225 000
Egypt	7 086 378	5 359 525	* 6 500 000	* 7 500 000	9 952 000
Gabon	7 229 000	8 665 000	11 983 000	13 642 000	13 600 000
Libya	42 951 000	42 083 000	49 225 000	51 686 000	49 980 000
Nigeria	55 247 000	67 909 000	76 508 000	82 610 000	79 000 000
Tunisia	3 186 593	4 350 989	3 372 222	3 422 500	3 882 404
Zaire	1 451 700	1 210 000	1 210 000	1 447 000	...
Bahamas (b)	6 836 821	9 110 554	7 933 551	...	...
Canada	37 376 510	34 170 001	31 977 809	39 300 009	42 470 114
Cuba	* 1 150 000	1 140 000	* 800 000	* 790 000	...
Guatemala	134 516	155 167	188 681	124 683	215 885
Mexico	65 303 238	67 749 332	67 625 194	70 774 000	70 725 000
Netherlands Antilles	1 229 000	2 058 000	1 924 000	1 152 000	...
Trinidad & Tobago	3 638 257	3 713 463	4 471 381	3 986 726	3 002 468
USA	639 503	512 369	1 086 434	310 185	261 426
Argentina	200 984	315 928	1 038 185	881 398	2 697 115
Colombia	7 785 588	8 809 001	10 305 978	9 109 615	9 504 567
Ecuador	7 400 000	7 300 000	7 700 000	8 300 000	9 500 000
Peru	249 322	48 480	130 000	* 50 000	* 50 000
Venezuela	51 054 000	51 637 000	65 023 000	72 316 000	73 800 000
Brunei	6 153 000	6 261 000	7 056 000	8 596 000	* 8 800 000
China	26 045 339	24 388 350	23 978 675	22 237 537	21 507 171
Indonesia	36 653 795	39 147 075	37 855 428	39 553 728	39 160 164
Iran (a)	* 60 153 000	* 80 494 000	* 93 234 000	* 107 838 000	* 98 591 000
Iraq	94 993 000	107 258 000	75 724 000	2 120 000	2 400 000
Kuwait	31 630 000	40 949 000	27 719 000	4 299 000	35 144 000
Malaysia	19 937 235	21 456 162	22 172 000	22 653 604	22 526 376
Oman	28 910 000	29 459 000	29 459 000	31 232 000	31 825 000
Pakistan (c)	—	137 453	327 834	429 494	455 286
Qatar	14 639 000	15 938 578	16 510 630	15 751 141	17 000 371
Saudi Arabia	153 239 867	157 880 887	209 413 267	309 829 937	313 858 000
Singapore	1 551 062	185 460	19 059	686	22 199
of which: Re-exports	1 476 407	14 764	488	498	432
Syria	3 794 152	6 949 194	9 152 973	* 11 600 000	* 12 600 000
United Arab Emirates	64 681 000	79 349 000	85 548 000	95 430 000	89 500 000
Australia	5 596 000	4 067 600	8 373 300	7 526 800	8 997 300
New Zealand (c)	214 346	290 597	659 949	921 251	966 523

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

(b) Re-exports

(c) Years ended 30 June of that stated

(d) Data for the Russian Federation only



## Imports of Crude Petroleum

Country	1988	1989	1990	1991	1992
United Kingdom	32 885 988	36 339 792	43 748 921	45 655 480	47 144 259
Belgium-Luxembourg	23 207 014	24 608 187	23 562 511	28 775 995	29 156 487
Denmark	4 476 516	4 226 890	4 079 612	4 864 862	4 957 042
France	66 351 077	66 676 889	70 267 015	73 392 448	71 115 870
Germany, Federal Republic of	72 036 951	66 326 900	72 400 222	90 119 452	98 062 296
Greece	4 200 010	7 095 710	8 008 909	9 824 216	13 215 000
Irish Republic	1 348 043	1 429 924	1 989 428	1 726 241	1 952 631
Italy	63 393 108	67 978 000	72 710 934	73 204 325	75 446 644
Netherlands	51 394 231	51 285 070	49 659 179	53 008 915	56 831 463
Portugal	7 947 544	9 823 383	10 595 000	9 473 000	11 174 000
Spain	45 019 884	49 918 012	49 350 695	50 921 769	56 697 055
Austria	5 630 832	5 943 879	6 796 999	7 000 545	7 549 799
Bulgaria	13 196 000	13 950 000	10 844 000	9 290 000	* 5 000 000
Czechoslovakia	17 014 000	17 632 000	13 581 000	11 383 000	11 025 000
Finland	8 937 400	8 840 411	8 973 190	9 925 143	8 869 699
German Democratic Republic	20 514 000	21 040 000	17 638 000	—	—
Hungary	7 261 969	6 320 991	6 224 091	8 490 000	5 822 719
Norway	1 187 345	929 749	1 624 245	1 664 901	1 120 755
Poland	14 966 000	14 985 000	13 008 000	11 647 000	11 926 000
Romania	20 957 000	21 809 000	16 206 000	9 603 000	6 572 000
Soviet Union	19 845 000	13 336 000	8 218 000	8 150 000	...
Sweden	14 414 742	15 781 358	16 928 391	16 326 656	17 112 959
Switzerland	3 845 408	3 013 434	3 054 292	4 528 655	4 124 040
Turkey	21 636 806	18 584 000	19 842 000	17 528 000	19 185 000
Yugoslavia	12 061 042	11 688 739	11 995 890	(c) 3 839 942	...
Ethiopia	767 275	759 758	702 734	228 059	...
Ghana	1 369 218	1 040 000	1 070 000	1 085 000	...
Ivory Coast	1 941 717	2 065 000	2 214 000	2 250 000	2 264 000
Kenya	2 010 836	2 101 000	1 338 348	2 059 000	2 067 000
Liberia	370 000	380 000	385 000	378 000	...
Madagascar	420 229	154 185	207 861	339 807	332 791
Morocco	5 001 294	5 644 575	5 838 151	5 048 466	4 950 000
Senegal	1 165 046	1 619 112	771 478	718 000	...
Sierra Leone	285 000	287 000	86 289	58 732	...
Somalia	* 250 000	* 251 000	* 258 000	* 80 000	...
South Africa	16 100 000	16 300 000	17 300 000	17 500 000	...
Sudan	1 023 000	1 027 000	1 050 000	1 176 000	...
Tanzania	624 705	703 963	* 710 000	* 700 000	...
Tunisia	4	553 150	396 058	117 779	247 559
Zaire	115 000	119 000	125 000	110 000	...
Zambia	636 542	7 273	1 293 674	537 304	...
Bahamas	4 772 058	9 304 173	7 401 300	4 300 400	...
Barbados	185 754	209 904	217 000	198 000	...
Canada	21 415 133	25 816 113	29 051 388	28 117 457	26 804 328
Costa Rica	602 869	677 744	422 169	362 853	575 386
Cuba	8 500 000	8 410 000	7 675 000	6 145 000	* 6 000 000
Dominican Republic	* 1 500 000	* 1 500 000	1 515 000	1 440 000	...
El Salvador	710 125	563 858	438 932	490 699	...
Guatemala	* 500 000	* 500 000	545 018	672 019	787 551
Honduras	389 816	461 416	420 585	356 824	239 438
Jamaica	739 822	877 547	1 154 950	1 426 320	1 289 217
Martinique	493 023	595 164	862 404	627 319	888 875
Netherlands Antilles	10 458 000	9 924 000	11 195 000	17 485 000	9 841 000
Nicaragua	550 000	560 000	565 000	261 406	686 042
Panama	951 948	955 927	1 209 192	1 142 112	1 843 997
Trinidad & Tobago	673 632	307 490	736 724	1 570 244	1 026 574
USA	257 447 206	290 198 569	303 073 018	289 626 171	309 091 322
Brazil	31 700 745	29 180 116	28 288 265	25 302 911	26 268 000
Chile	4 226 840	4 633 645	5 379 166	5 677 432	6 280 616
Paraguay	243 108	300 210	289 111	272 263	242 910
Peru	1 073 242	875 135	800 773	692 044	...
Uruguay	1 155 122	759 127	1 212 743	1 940 049	1 122 270

**Imports of Crude Petroleum**

tonnes

Country	1988	1989	1990	1991	1992
Bahrain	9 959 000	10 050 000	10 243 000	10 260 000	9 723 000
Bangladesh (a)	1 212 079	1 018 546	2 192 210	1 060 013	...
China	854 536	3 262 838	2 922 711	5 972 471	11 357 906
Cyprus	707 134	680 197	624 485	767 829	749 029
India (b)	17 810 000	18 961 000	20 637 000	23 994 000	29 380 002
Indonesia	4 309 647	4 657 022	6 586 034	7 336 844	6 830 446
Israel	7 271 000	7 184 000	7 288 000	7 952 000	10 579 000
Japan	171 247 941	183 249 914	201 320 242	211 531 290	221 866 404
Jordan	2 482 403	2 453 260	2 688 111	2 324 092	2 974 858
Korea, Dem. P.R. of (d)	* 1 202 000	* 1 073 000	* 1 598 000	* 1 102 000	* 1 129 000
Korea, Republic of	32 942 770	40 067 228	41 297 050	55 577 825	69 489 953
Lebanon	1 300 000	1 300 000	1 250 000	1 390 000	...
Malaysia	1 526 793	1 020 056	1 026 217	1 084 177	1 138 448
Pakistan	3 809 857	3 671 000	3 515 677	4 038 294	4 075 559
Philippines	9 473 386	9 777 864	10 730 785	6 433 527	7 062 115
Singapore	34 885 597	37 344 978	43 129 467	45 455 676	46 784 287
Sri Lanka	1 720 591	...	1 663 556	1 636 799	1 176 325
Syria	477 084	770 860	250 000	—	—
Taiwan	19 952 499	21 388 499	20 545 150	22 396 898	22 846 009
Thailand	8 040 644	10 503 857	10 119 567	10 718 398	13 288 976
Yemen, Republic of (e)	3 450 000	3 570 000	3 444 000	3 500 000	3 550 000
Australia	8 197 000	12 447 000	10 732 000	13 859 000	15 573 000
New Zealand (a)	2 305 756	2 619 645	3 290 907	3 315 764	3 195 895

(a) Years ended 30 June of that stated

(b) Years ended 31 March following that stated

(c) Data for the Federal Republic of Yugoslavia only

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

(e) Yemen Arab Republic and People's Dem. Rep. of Yemen were unified on 22 May 1990 as the Republic of Yemen

**Production of Phosphate Rock**

Country	1988	1989	1990	1991	1992
Finland	583 542	563 934	546 134	472 459	570 528
Soviet Union	* 34 000 000	* 34 514 000	* 35 082 000	* 29 994 000	* 21 411 000
Sweden	73 713	70 962	6 645	—	—
Turkey	74 230	84 810	86 788	3 360	* 30 000
Algeria	1 331 000	1 253 000	1 128 000	1 090 000	1 143 000
Egypt (e)	207 698	216 107	886 911	377 333	359 024
Morocco	25 015 000	18 067 000	21 396 000	17 970 000	19 146 000
Senegal					
Phosphate rock	2 327 262	2 272 600	2 147 000	1 702 121	2 283 500
Aluminium phosphate (a)	417 090	157 600	* 140 000	55 190	92 700
South Africa	2 850 200	2 962 900	3 164 800	3 180 100	3 051 000
Tanzania	14 741	10 556	26 000	2 419	4 948
Togo	3 312 773	3 484 237	2 995 490	2 964 642	2 086 000
Tunisia	6 027 000	6 610 360	6 258 514	6 352 000	6 335 284
Zimbabwe	125 156	133 791	147 767	116 938	142 322
Mexico	835 093	655 477	623 481	596 392	451 659
Netherlands Antilles (b)	21 931	15 738	4 180	9 522	...
USA	45 389 000	49 817 000	46 343 000	48 096 000	46 965 000
Brazil (d)	4 647 875	3 699 131	3 148 372	3 300 000	2 800 000
Chile					
Phosphate rock	9 161	14 354	13 986	13 338	17 546
Guano	4 052	3 127	1 452	1 308	139
Colombia	30 000	30 000	31 000	31 516	32 041
Peru	13 465	14 804	47 333	18 239	* 20 000
Venezuela	83 604	174 198	138 391	161 472	166 000
China	16 600 000	21 760 000	21 550 000	23 660 000	25 870 000
Christmas Island (b) (c) (e)	—	—	—	63 609	196 803
India	738 877	703 716	674 000	562 771	580 000
Indonesia	411	11 000	1 600	6 384	* 8 000
Iraq	* 1 270 000	* 1 140 000	* 900 000	* 400 000	* 900 000
Israel	2 648 000	2 761 000	2 482 000	2 267 000	2 372 000
Jordan	5 628 200	6 635 600	5 748 100	4 460 800	5 230 000
Korea, Dem. P.R. of	* 500 000	* 500 000	* 500 000	* 500 000	* 500 000
Pakistan	40 880	12 285	30 000	18 985	19 828
Philippines					
Phosphate rock	8 103	4 139	2 963	20 633	* 20 000
Guano	1 470	48 347	888	11 689	* 10 000
Sri Lanka	23 104	29 257	32 564	19 693	26 010
Syria	2 186 000	2 256 000	1 633 000	1 359 000	1 266 000
Thailand	8 348	6 584	9 547	5 936	7 981
Vietnam	221 000	232 000	260 000	* 275 000	* 275 000
Australia	13 000	8 000	16 000	3 000	2 000
Nauru (b)	1 540 379	1 186 820	926 200	530 100	747 000
World total	159 000 000	162 000 000	159 000 000	151 000 000	145 000 000

(a) Including lime phosphates

(b) Exports

(c) Including phosphate dust

(d) Including beneficiated and directly shipped material

(e) Years ended 30 June of that stated

## Phosphates

**Exports of Phosphate Rock**

tonnes

Country	1988	1989	1990	1991	1992
Belgium-Luxembourg	19 305	19 342	16 438	15 241	22 200
Denmark	1 449	1 910	1 294	3 091	118
France	4 459	12 863	2 660	1 511	1 085
Germany, Federal Republic of	5 189	5 090	5 040	9 517	664
Netherlands	158 586	194 541	211 330	159 236	186 836
Finland	2 807	15 430	22 545	—	—
Soviet Union	(b)* 2 582 000	(b)* 2 712 000	(b)* 1 885 000	(c) 701 607	(c) 658 425
Sweden	72 363	80 328	12 354	1 659	49
Algeria	744 177	297 957	851 433	1 043 611	* 1 040 000
Egypt	122 254	246 000	297 200	164 000	179 900
Morocco	14 260 343	12 426 000	11 672 000	9 143 199	9 132 000
Senegal	1 846 500	1 396 449	1 209 432	1 304 100	1 186 600
South Africa	1 268 000	1 094 200	1 217 100	1 165 500	1 344 400
Togo	3 312 773	3 347 147	2 783 495	3 074 395	2 085 500
Tunisia	1 114 055	1 082 386	601 821	421 285	925 522
Netherlands Antilles	21 931	15 738	4 180	9 522	...
USA	8 092 000	8 323 000	6 959 000	5 749 000	3 977 000
China	158 200	194 479	344 648	533 866	455 583
Christmas Island (a) (e)	—	—	63 609	196 803	263 946
Israel	1 915 000	1 946 000	1 501 000	1 635 000	1 723 000
Jordan	5 726 740	6 356 840	4 871 123	4 245 700	4 263 880
Malaysia	6 726	2 078	...	937	2 746
Singapore (d)	743	163	5 348	595	1 462
Syria	1 917 279	1 652 545	1 326 721	1 246 000	1 171 000
Australia (e)	7 302	54	17	4	4
Nauru	1 540 379	1 186 820	926 200	530 100	747 300

(a) Including phosphate dust

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

(c) Data for the Russian Federation only

(d) Re-exports

(e) Years ended 30 June of that stated

## Imports of Phosphate Rock

Country	1988	1989	1990	1991	1992
United Kingdom	746 823	602 426	548 126	340 846	224 075
Belgium-Luxembourg	2 386 939	2 279 182	2 211 516	2 162 072	2 068 791
Denmark	270 370	219 203	172 960	* 110 000	* 105 000
France	3 672 788	3 578 361	3 270 709	3 084 720	2 231 780
Germany, Federal Republic of	1 157 569	1 208 100	902 915	704 070	551 286
Greece	308 123	451 232	713 185	663 077	340 357
Irish Republic	1 495	6 128	4 507	4 262	11 204
Italy	1 162 063	1 056 869	851 157	587 416	530 071
Netherlands	2 459 808	2 366 965	2 235 549	2 028 363	1 875 209
Portugal	262 847	237 725	169 350	160 412	123 192
Spain	2 870 591	2 421 726	2 088 262	1 998 050	1 739 836
Albania	99 300	98 300	101 500	24 200	...
Austria	328 113	426 191	440 217	296 957	283 537
Bulgaria	732 600	643 000	335 400	181 400	166 300
Czechoslovakia (a)	146 000	199 000	92 000	31 000	10 600
Finland	149 900	121 800	112 200	54 000	48 900
German Democratic Republic (a)	394 000	423 900	* 140 000	—	—
Hungary	544 221	523 211	328 149	58 000	* 10 000
Norway	512 188	599 961	620 089	697 599	591 895
Poland	3 401 000	3 319 000	1 463 000	625 000	1 115 000
Romania (a)	873 100	833 200	* 600 000	643 800	938 649
Sweden	693 305	714 696	649 904	379 254	121 390
Switzerland	2 193	3 312	2 040	446	352
Turkey	995 330	808 922	730 319	743 785	706 107
Yugoslavia	1 741 304	1 234 726	1 066 386	(d) 512 717	...
Ivory Coast	4 646	...	...	...	2 500
South Africa	404 787	296 801	124 682	262 000	318 677
Tanzania	25 000	...	...	...	...
Canada	2 157 426	1 846 917	1 258 290	1 078 689	1 169 026
Cuba	5 000	5 000	8 200	12 700	...
Mexico	1 489 631	1 456 615	2 278 380	1 630 230	589 869
USA	675 626	709 564	456 761	552 119	1 530 140
Brazil	142 340	146 349	205 183	212 533	304 811
Chile	18 275	26 508	16 897	34 357	21 400
Colombia	43 696	37 703	49 960	56 668	81 430
Uruguay	77 149	72 200	56 236	42 141	36 750
Venezuela	68 365	68 130	75 206	76 510	68 734
Bangladesh (b)	87 547	107 200	120 103	110 800	90 100
China	194 647	211 046	203 882	354 545	128 695
India (c)	2 017 431	2 117 260	2 681 911	2 428 436	2 230 859
Indonesia	1 035 831	886 342	898 852	1 585 622	793 044
Japan	1 821 007	1 590 053	1 543 302	1 455 907	1 453 204
Korea, Dem. P.R. of	132 000	31 000	36 400	21 000	—
Korea, Republic of	1 653 005	1 544 445	1 559 966	1 309 706	1 671 025
Lebanon	119 500	85 000	134 800	158 600	215 000
Malaysia	359 420	376 161	481 100	412 020	433 160
Pakistan (b)	278 845	238 300	279 564	249 011	251 358
Philippines	717 016	780 371	834 369	929 045	608 026
Saudi Arabia	4 869	2 134	3 878	2 433	...
Singapore	2 358	725	10 199	611	249
Sri Lanka	10 500	14 000	16 405	5 003	2 208
Taiwan	368 630	391 353	420 425	348 656	380 483
Australia	2 082 000	1 761 000	1 092 000	394 000	845 000
New Zealand (b)	563 310	489 350	708 618	543 688	679 842

(a) P<sub>2</sub>O<sub>5</sub> content

(b) Years ended 30 June of that stated

(c) Years ended 31 March following that stated

(d) Data for the Federal Republic of Yugoslavia only

**Mine Production of Platinum Group Metals**

kilograms (metal content)

Country	1988	1989	1990	1991	1992
<b>Finland</b>					
Platinum (a)	54	67	72	59	54
Palladium (a)	106	107	104	101	107
<b>Soviet Union</b>					
Platinum	* 32 000	* 32 000	* 31 000	* 30 000	* 20 000
Palladium	* 95 500	* 95 500	* 94 000	* 91 500	* 85 000
<b>Yugoslavia</b>					
Platinum (a)	23	23	21	(d) 22	(b) 19
Palladium (a)	142	199	130	(d) 155	(b) 130
<b>Ethiopia (c)</b>	2	* 2	* 2	* 1	* 1
<b>South Africa (a)</b>	131 722	133 684	141 913	142 861	152 891
<b>Zimbabwe</b>					
Platinum	28	25	21	19	9
Palladium	45	43	31	30	19
<b>Canada</b>					
Platinum	5 781	4 467	5 044	4 683	5 120
Palladium	6 050	4 676	5 269	6 439	5 358
Other platinum metals	1 613	1 246	1 396	586	1 429
<b>USA</b>					
Platinum	* 1 490	* 1 680	* 2 050	* 1 730	* 1 840
Palladium	* 3 980	* 5 100	* 6 170	* 6 050	* 6 470
<b>Colombia</b>	810	973	1 316	1 603	1 956
<b>Japan</b>					
Platinum (a)	647	1 031	1 425	988	629
Palladium (a)	1 170	821	1 047	1 053	986
<b>Australia</b>					
Platinum	73	* 75	* 100	* 100	* 150
Palladium	360	* 400	* 450	* 400	* 550
<b>World total</b>	<b>282 000</b>	<b>282 000</b>	<b>292 000</b>	<b>288 000</b>	<b>283 000</b>

## Note(s):

- (1) Wherever possible, figures relate to quantities of platinum group metals thought to be recovered from ores originating in the country stated
  - (2) 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
  - (3) In addition to the countries listed, Bulgaria, China, Indonesia, Papua New Guinea and Philippines are believed to produce platinum group metals
- (a) Metal production  
(b) Data for the Federal Republic of Yugoslavia only  
(c) Years ended 6 July of that stated  
(d) Excluding data from August to December for the Republic of Croatia

## Exports of Platinum Group Metals

kilograms

Country	1988	1989	1990	1991	1992
United Kingdom					
Platinum	37 487	34 473	45 347	50 722	33 655
Palladium	32 795	30 086	30 371	39 113	26 748
Other platinum metals	5 796	9 580	6 169	5 564	6 058
Waste & scrap	1 198	3 773	1 550	1 452	7 062
Belgium-Luxembourg					
Platinum	3 646	3 730	3 760	4 107	6 032
Platinum metals	16 201	11 397	11 154	15 645	14 503
Waste & scrap	£4 433 000	£5 360 000	£4 576 000	£5 486 000	£14 159 000
Denmark					
Platinum & platinum metals	285	81	453	244	106
Waste & scrap	373	1 574	918	178	182
of which: Re-exports	274	468	...	...	...
France					
Platinum	6 930	7 164	6 595	5 340	4 609
Platinum metals	4 370	5 070	6 778	4 863	5 150
Waste & scrap	449	171 352	14 163	96 621	6 371
Germany, Federal Republic of					
Platinum	15 183	17 119	15 546	14 003	15 278
Palladium	8 490	9 293	10 727	12 193	11 287
Other platinum metals	2 377	2 192	2 326	2 098	2 843
Waste & scrap	20 545	42 588	36 628	120 506	88 977
Italy					
Platinum	1 200	...	1 577	6 346	1 890
Platinum metals	662	...	441	43 565	24 697
Netherlands					
Platinum	1 560	1 872	2 040	1 998	3 313
Platinum metals	482	313	206	310	361
Waste & scrap	18 000	10 000	3 000	54 000	2 000
Portugal					
Platinum & platinum metals	400	400	330	...	...
Spain					
Platinum & platinum metals	330	97	1 246	715	10 760
Austria					
Platinum & platinum metals	1 201	766	1 255	1 058	1 248
Czechoslovakia					
Waste & scrap (a)	...	* 14 100	* 13 600	* 4 000	* 2 100
Norway					
Platinum & platinum metals	1 579	2 465	3 307	3 509	4 251
Soviet Union					
Platinum & platinum metals (a)	* 81 700	* 76 300	* 90 000	* 134 100	* 76 600
Sweden					
Platinum & platinum metals	£1 307 000	£2 608 000	£2 833 000	£952 000	£510 000
Switzerland					
Platinum & platinum metals	63 335	42 238	44 636	56 764	62 183
Waste & scrap	59 614	12 332	11 525	9 021	9 684
Yugoslavia					
Platinum & platinum metals	£614 000	£431 000	£296 000	(f) —	...
Waste & scrap	£3 311 000	£309 000	£5 407 000	(f) —	...
South Africa					
Platinum & platinum metals (d)	130 854	137 278	135 581	141 120	137 063
Waste & scrap (a)	* 20 700	* 4 600	* 19 100	* 21 300	* 4 600
Canada					
Ores & concentrates (b)	12 494	10 148	10 323	7 921	9 793
Platinum metals	4 657	9 772	7 060	6 353	7 245
USA					
Ores & concentrates (b)	156	173	415	863	488
Platinum	9 524	9 299	9 047	14 275	14 205
of which: Re-exports	1 898	884	1 537	1 574	2 325
Palladium	9 106	13 155	11 247	13 894	17 799
of which: Re-exports	718	150	360	259	72
Other platinum metals	4 379	1 717	2 232	1 068	1 473
of which: Re-exports	1 002	53	480	161	208
Waste & scrap	12 103	15 064	34 487	11 427	27 628

**Exports of Platinum Group Metals**

kilograms

Country	1988	1989	1990	1991	1992
Colombia					
Platinum	728	4	379	...	...
China					
Platinum & platinum metals	158	871	1 129	160	83
Hong Kong					
Platinum & platinum metals (c)	2 067	1 101	1 131	2 071	1 572
Japan					
Platinum	7 188	3 055	5 021	3 363	5 518
Platinum metals	1 639	1 451	2 180	2 554	4 192
Korea, Republic of					
Waste & scrap	3 979	6 335	6 362	13 999	197
Malaysia					
Waste & scrap	14 310	10 610	...	10 250	16 690
Singapore					
Platinum & platinum metals (c)	218	869	904	51	60
Taiwan					
Platinum & platinum metals	4 539	11 425	11 524	9 315	9 125
Australia					
Platinum & platinum metals (e)	929	1 271	744	44 169	472

## Note(s):

- (1) In this table the term 'Platinum' and/or 'Platinum metals' includes unwrought, partly worked and alloys
- (a) BGS estimates, based on known imports into certain countries
- (b) Platinum metals content
- (c) Re-exports
- (d) Sales
- (e) Years ended 30 June of that stated
- (f) Data for the Federal Republic of Yugoslavia only



## Imports of Platinum Group Metals

kilograms

Country	1988	1989	1990	1991	1992
United Kingdom					
Ores & concentrates	75 240	46 787	49 487	42 283	55 434
Platinum	26 437	29 225	35 654	39 357	37 335
Palladium	28 438	17 242	21 916	21 782	13 600
Other platinum metals	4 342	4 923	6 288	5 039	4 616
Waste & scrap	35 456	382 547	310 763	253 915	62 771
Belgium-Luxembourg					
Platinum	1 519	1 282	3 398	1 375	1 347
Platinum metals	719	718	1 817	4 731	921
Waste & scrap	£11 211 000	£13 772 000	£17 605 000	£11 764 000	£2 877 000
Denmark					
Platinum & platinum metals	473	634	673	603	622
France					
Platinum	6 514	6 746	8 530	8 393	7 494
Platinum metals	5 336	6 163	7 451	7 299	7 486
Waste & scrap	50 380	39 913	35 133	2 209	4 305
Germany, Federal Republic of					
Platinum	21 492	24 813	21 973	19 245	19 579
Palladium	27 461	21 889	26 211	26 578	31 023
Other platinum metals	3 151	3 331	2 786	2 699	3 614
Waste & scrap	86 762	103 755	105 543	46 443	15 707
Greece					
Platinum & platinum metals	514	438	347	248	...
Italy					
Platinum	10 533	2 705	4 296	10 499	7 134
Platinum metals	5 346	5 289	10 081	5 249	6 485
Waste & scrap	1 500	1 581	5 000	4 000	5 100
Netherlands					
Platinum	1 158	1 094	917	945	1 119
Platinum metals	2 465	3 059	2 238	2 304	11 564
Waste & scrap	14 000	1 000	1 000	...	...
Portugal					
Platinum & platinum metals	700	49	247	...	...
Spain					
Platinum & platinum metals	1 842	2 064	4 816	1 611	2 216
Waste & scrap	338	...	...	1 000	1 000
Austria					
Platinum & platinum metals	2 512	2 429	2 794	3 041	4 129
Bulgaria					
Platinum & platinum metals (e)	* 700	* 500	* 300	* 200	* 50
Czechoslovakia					
Platinum & platinum metals (e)	* 500	* 600	* 1 000	* 600	* 600
Finland					
Platinum & platinum metals	954	134	758	124	107
German Democratic Republic					
Platinum & platinum metals (e)	* 2 300	* 2 200	* 2 700	—	—
Hungary					
Platinum & platinum metals	(e)* 400	100	100	(e)* 300	(e)* 500
Norway					
Platinum & platinum metals	728	595	411	942	1 052
Poland					
Platinum & platinum metals (e)	* 800	* 800	* 50	...	...
Romania					
Platinum & platinum metals (e)	* 450	* 290	* 360	* 50	* 40
Sweden					
Platinum & platinum metals	2 000	2 000	1 000	3 000	3 000
Switzerland					
Platinum & platinum metals	23 735	33 743	41 639	71 075	35 400
Waste & scrap	4 617	2 135	5 112	4 252	686
Turkey					
Platinum & platinum metals	227	1 000	4 000	7 000	5 755
Yugoslavia					
Platinum & platinum metals	£1 863 000	£2 145 000	£1 673 000	(g) £56 000	...
Algeria					
Platinum & platinum metals	61	51	234	...	...
South Africa					
Platinum & platinum metals	1 295	78	176	714	695

**Imports of Platinum Group Metals**

kilograms

Country	1988	1989	1990	1991	1992
Canada					
Platinum & platinum metals (c)	10 893	6 108	6 275	5 350	7 322
Mexico					
Platinum & platinum metals	70	33	26	...	...
USA					
Ores & concentrates (d)	30	12	109	31	—
Platinum	46 789	49 240	52 277	50 200	55 009
Platinum metals					
Palladium	52 881	51 133	51 992	60 239	61 210
Rhodium	7 359	7 105	13 098	6 553	7 785
Other	4 585	3 628	3 264	3 170	4 003
Waste & scrap	12 761	2 162	4 614	4 019	5 090
Argentina					
Platinum	2	...	...	...	...
Palladium	94	...	...	...	...
Other platinum metals	111	...	...	...	...
Brazil					
Platinum	277	...	143	560	...
Palladium	662	458	313	740	...
China					
Platinum & platinum metals	4 863	2 589	7 360	9 406	1 432
Cyprus					
Platinum & platinum metals	...	62	68	100	94
Hong Kong					
Platinum & platinum metals	3 318	2 085	2 595	5 047	5 798
India (a)					
Platinum & platinum metals	166	301	210	126	101
Indonesia					
Platinum & platinum metals	3	1 173	41	1 163	16
Iran (f)					
Platinum & platinum metals	£5 000	£10 000	...	...	...
Israel					
Platinum & platinum metals	£1 288 000	£1 364 000	...	£625 000	£807 000
Japan					
Platinum	68 459	53 516	61 851	71 162	58 023
Platinum metals	58 595	61 145	64 305	72 175	68 372
Waste & scrap	4 537	5 294	5 295	24 775	2 786
Korea, Republic of					
Platinum & platinum metals	804	1 130	1 748	2 709	3 957
Malaysia					
Platinum & platinum metals	7 890	4 857	6 629	3 435	9 341
Qatar					
Platinum & platinum metals	675	—	—	—	—
Singapore					
Platinum & platinum metals	865	1 530	4 871	3 747	13 556
Taiwan					
Platinum & platinum metals	1 678	3 596	1 712	2 254	3 046
Thailand					
Platinum & platinum metals	9 221	17 750	72 059	27 222	122 442
Australia					
Platinum metals (b)	3 310	6 295	11 486	4 821	8 289

## Note(s):

- (1) In this table the term 'Platinum' and/or 'Platinum metals' includes unwrought, partly worked and alloys
- (a) Years ended 31 March following that stated
- (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
- (g) Data for the Federal Republic of Yugoslavia only

## Production of Potash

tonnes (K<sub>2</sub>O content)

Country	1988	1989	1990	1991	1992
United Kingdom					
Chloride	483 662	486 501	513 634	520 575	557 173
France					
Potassic salts	1 502 450	1 195 400	1 395 000	1 217 000	1 230 000
Germany, Federal Republic of					
Potassic salts	2 290 000	2 182 000	2 216 000	3 708 000	3 758 000
Italy					
Potassic salts	195 500	207 630	95 460	* 44 100	* 100 000
Spain					
Potassic salts	855 466	842 399	685 700	585 200	593 600
German Democratic Republic					
Potassic salts	4 203 000	3 852 000	* 3 200 000	—	—
Soviet Union	11 300 000	10 232 000	9 088 000	8 509 600	6 910 600
Canada					
Chloride	8 310 586	7 333 499	6 989 481	7 405 575	7 270 000
USA					
Potassic salts	1 521 000	1 595 000	1 713 000	1 749 000	1 705 000
Brazil					
Chloride	54 121	96 945	65 735	100 667	85 035
Chile					
Chloride	* 5 300	* 17 900	* 25 500	* 33 000	* 33 400
Nitrate	* 36 000	* 37 000	* 40 900	* 41 000	* 46 300
China	* 40 000	50 700	46 100	98 000	153 000
Israel					
Chloride	1 244 000	1 338 000	1 311 000	1 320 000	1 296 300
Jordan	785 000	792 000	841 600	805 000	794 152
World total	32 800 000	30 300 000	28 200 000	26 100 000	24 500 000

## Exports of Potash

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Chloride	434 640	367 140	384 505	529 875	603 716
Other potassic fertilisers	1 967	2 060	1 493	740	2 102
Potassic chemicals	5 020	3 294	6 932	7 323	14 385
Belgium-Luxembourg					
Fertiliser salts	530	945	674	743	* 210
Sulphate (b)	* 278 200	* 213 200	* 221 800	* 279 500	* 340 400
Chloride	55 921	192 384	224 280	174 627	144 854
Other potassic fertilisers	3 942	6 941	9 723	12 610	11 780
Potassic chemicals	2 737	1 083	626	206	3 848
France					
Sulphate	833	2 651	1 454	1 792	13 166
Chloride	513 901	340 128	311 105	239 739	187 142
Other potassic fertilisers	16 863	13 454	13 243	1 844	2 470
Potassic chemicals	8 745	996	518	31 807	31 809
Germany, Federal Republic of					
Fertiliser salts	43 017	43 546	45 668	85 355	47 919
Potassic fertilisers	2 317 394	2 378 355	2 540 235	4 845 376	4 535 160
Potassic chemicals	43 393	46 344	42 629	36 799	33 584
Greece					
Potassic fertilisers (a)	33	1 660	0	—	...
Italy					
Sulphate	74 397	131 932	92 078	7 851	119 366
Other potassic fertilisers	2 060	3 372	1 431	721	337
Potassic chemicals	3 182	2 755	5 419	7 175	8 438
Netherlands					
Sulphate (a)	409	512	569	1 610	687
Chloride (a)	63 055	77 261	74 179	49 099	59 754
Potassic chemicals	4 434	4 715	5 649	6 846	6 765
Portugal					
Potassic fertilisers	35	223	10 105	1 104	...
Spain					
Sulphate	48 325	34 665	71 557	24 750	51 665
Chloride	627 743	528 856	595 951	457 416	491 278
Potassic chemicals	5 197	10 407	8 333	6 802	1 646
Czechoslovakia					
Potassic chemicals (b)	* 900	* 400	* 500	* 1 600	* 6 100
German Democratic Republic					
Fertiliser salts (a)	2 832 000	2 556 000	2 381 500	—	—
Poland					
Potassic chemicals	4 055	3 612	2 641	2 957	(b)* 1 700
Romania					
Potassic chemicals (b)	* 7 200	* 6 700	* 1 700	* 1 400	...
Soviet Union					
Fertiliser salts	5 830 462	5 315 000	5 480 000	(d) 4 573 000	(d) 4 123 000
Sweden					
Sulphate	11 877	33 498	55 362	98 650	83 109
Switzerland					
Potassic chemicals	1 594	905	1 000	1 693	1 013
Yugoslavia					
Potassic chemicals	3 517	4 210	4 206	(e) 1 728	...
Canada					
Chloride	12 674 202	10 914 791	11 494 339	10 557 861	10 199 772
Other potassic fertilisers	45 074	60 892	274 321	70 401	49 531
Potassic chemicals	15 611	18 931	10 124	25 981	8 635
USA					
Sulphate	382 027	448 880	561 900	509 700	602 400
Chloride	400 831	496 575	445 800	730 600	708 500
Potassic chemicals	30 306	129 375	62 081	106 770	116 214
Chile					
Fertiliser salts	131 190	121 148	137 724	133 043	136 050
Potassic chemicals	...	60 555	111 207	129 702	135 343
China					
Potassic chemicals	(b)* 6 900	(b)* 19 400	(b)* 5 300	(b)* 5 800	7 085
Hong Kong					
Potassic chemicals (c)	16 505	3 467	1 493	2 875	1 037

**Exports of Potash**

Country	1988	1989	1990	1991	1992
Israel					
Chloride (b)	* 1 408 500	* 1 388 000	* 1 467 400	* 1 263 600	* 1 280 700
Other potassic fertilisers	(b)* 179 200	(b)* 140 300	(b)* 119 700	(b)* 126 700	114 204
Potassic chemicals	218 462	249 027	228 144	(b)* 193 900	(b)* 206 200
Japan					
Potassic fertilisers	1 187	1 350	1 074	1 022	994
Potassic chemicals	19 790	21 830	17 390	17 299	17 515
Jordan					
Fertiliser salts	1 300 411	1 257 895	1 403 358	1 412 000	1 235 196
Korea, Republic of					
Sulphate	44 800	46 020	89 123	30 517	28 312
Chloride	10 500	2 260	21	—	124
Potassic chemicals	13 802	8 862	15 669	20 658	20 473
Singapore					
Sulphate	3 004	10 157	6 857	10 798	11 655
of which: Re-exports	2 944	10 156	6 838	10 778	11 655
Chloride	85 064	94 091	107 358	58 966	79 615
of which: Re-exports	85 058	94 070	105 606	58 671	79 329
Other potassic fertilisers	137 753	14 969	4 770	4 868	1 152
of which: Re-exports	136 996	14 959	4 768	1 726	...
Taiwan					
Potassic fertilisers	52 024	48 267	80 895	71 744	93 037
Potassic chemicals	1 636	3 301	6 589	3 949	8 353

## Note(s):

(1) So far as possible the term 'potassic chemicals', as used in this table, relates to items 522.64, 523.3,4,5 and 7 of the S.I.T.C. (Rev.3) and includes hydroxide, carbonate, chlorate, nitrate and sulphate

(a) K<sub>2</sub>O content

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

(c) Re-exports

(d) Data for the Russian Federation only

(e) Data for the Federal Republic of Yugoslavia only

**Imports of Potash**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Fertiliser salts	28 038	17 274	19 605	16 413	12 080
Chloride	570 686	452 657	...	...	396 762
Other potassic fertilisers	23 796	15 521	46 105	44 848	25 921
Potassic chemicals	32 623	36 166	36 718	38 896	41 756
Belgium-Luxembourg					
Fertiliser salts	30 540	29 796	32 899	29 455	* 36 000
Sulphate	34 222	53 406	84 139	109 280	80 570
Chloride	1 229 633	1 251 317	1 427 117	1 292 291	1 187 209
Other potassic fertilisers	30 132	19 781	29 500	25 069	33 158
Potassic chemicals	12 268	13 229	15 859	19 165	27 833
Denmark					
Sulphate	31 178	22 800	18 208	17 497	25 869
Chloride	229 558	239 907	269 454	190 538	205 503
Other potassic fertilisers	60	215	6 477	9 752	9 783
Potassic chemicals	8 409	7 616	7 729	8 432	12 463
France					
Fertiliser salts	58 260	74 040	85 922	79 037	45 832
Sulphate	106 118	109 575	112 096	125 542	102 504
Chloride	1 012 242	1 290 689	1 110 814	1 274 356	1 131 359
Other potassic fertilisers	32 236	27 467	23 720	25 145	25 475
Potassic chemicals	29 826	34 641	34 674	35 076	31 084
Germany, Federal Republic of					
Chloride	179 316	131 851	113 229	86 939	105 833
Potassic chemicals	28 037	27 937	34 004	43 416	49 146
Greece					
Sulphate	86 495	107 978	38 582	161 107	100 591
Chloride	2 235	13 051	2 115	44 751	12 528
Potassic chemicals	10 191	9 644	12 173	19 205	13 085
Irish Republic					
Sulphate	2 097	5 011	3 989	1 165	90
Chloride	219 477	253 195	225 690	221 953	215 244
Other potassic fertilisers	400	1 622	3 395	233	2 723
Italy					
Fertiliser salts	1 587	1 725	427	504	817
Sulphate	75 561	44 134	114 265	114 158	85 219
Chloride	655 647	702 553	592 539	566 542	554 009
Other potassic fertilisers	39 008	25 768	29 579	33 555	31 383
Potassic chemicals	35 356	34 696	36 727	32 633	40 614
Netherlands					
Fertiliser salts (a)	708	768	682	374	249
Sulphate (a)	20 173	20 096	15 480	35 016	28 618
Chloride (a)	302 227	340 581	324 576	262 473	246 544
Other potassic fertilisers (a)	12 946	10 478	9 993	12 382	10 782
Potassic chemicals	52 506	54 401	49 116	51 172	30 531
Portugal					
Sulphate	...	...	2 217	3 053	1 397
Chloride	(e) 85 414	(e) 81 160	64 524	69 660	55 758
Potassic chemicals	...	...	5 548	4 684	4 207
Spain					
Sulphate	1 271	4 369	12 718	11 113	4 055
Chloride	39 016	27 765	52 930	53 119	209 079
Other potassic fertilisers	6 245	8 341	6 075	12 519	4 278
Potassic chemicals	31 030	47 690	45 816	61 572	68 756
Austria					
Fertiliser salts	11 842	16 647	16 730	13 959	11 449
Sulphate	15 286	16 319	16 668	15 980	13 219
Chloride	197 176	165 486	170 116	166 429	162 716
Other potassic fertilisers	4 875	5 014	4 075	5 238	3 396
Potassic chemicals	7 459	6 137	6 372	7 066	7 148
Bulgaria					
Fertiliser salts (c)	* 183 400	* 223 200	...	...	...
Czechoslovakia					
Potassic fertilisers (a)	641 000	557 000	470 000	95 000	113 600
Finland					
Chloride (c)	* 209 800	* 241 000	* 186 300	* 255 700	* 257 000
Other potassic fertilisers	106	111	107	215	2 593
Potassic chemicals	7 197	9 542	7 767	5 502	5 300
Hungary					
Fertiliser salts	2 132	...	...	...	...
Potassic fertilisers	1 356 158	879 990	680 948	...	...
Potassic chemicals	1 562	1 420	...	...	1 193

## Imports of Potash

Country	1988	1989	1990	1991	1992
Iceland					
Sulphate	1 000	2 076	1 468	120	1 824
Chloride	5 850	7 127	5 549	5 953	8 163
Norway					
Sulphate	124 196	123 606	138 965	166 147	156 709
Chloride	227 477	293 756	305 288	303 395	282 898
Other potassic fertilisers	1 496	536	514	1 015	480
Potassic chemicals	1 959	2 570	2 122	2 310	2 190
Poland					
Chloride	18 475	17 242	11 425	6 569	...
Other potassic fertilisers	2 532 000	2 055 000	1 166 000	136 000	(h) 197 848
Potassic chemicals	5 721	5 976	3 410	2 931	...
Romania					
Fertiliser salts (a)	398 600	327 400	299 500	25 600	36 800
Sweden					
Fertiliser salts	4 934	6 309	5 720	1 050	3 037
Sulphate	30 830	10 535	34 590	55 796	9 980
Chloride	141 911	153 799	177 540	161 749	138 757
Other potassic fertilisers	869	1 196	2 069	2 487	3 834
Potassic chemicals	4 897	4 153	4 884	3 906	5 292
Switzerland					
Sulphate	5 320	6 079	5 088	6 296	4 759
Chloride	51 315	52 569	51 509	51 220	35 733
Other potassic fertilisers	5 366	5 380	5 405	4 904	3 056
Potassic chemicals	15 217	14 871	14 205	14 206	14 855
Turkey					
Fertiliser salts	13 517	1	...	1	8
Sulphate	14 919	14 245	20 565	17 803	24 537
Other potassic fertilisers	45 439	66 448	84 783	76 325	88 242
Potassic chemicals	7 725	5 946	10 304	7 997	11 851
Yugoslavia					
Sulphate	32 017	6 217	14 052	(f) 2 937	...
Chloride	606 000	436 001	398 739	(f) 182 099	...
Potassic chemicals	7 570	7 777	6 871	(f) 1 097	...
Algeria					
Sulphate	99 148	48 275	51 400	...	...
Potassic chemicals	695	2 139	558	41	...
Cameroon					
Potassic fertilisers	* 9 200	* 5 800	* 18 800	* 13 000	* 4 600
Egypt					
Potassic fertilisers	* 9 000	* 46 000	* 46 300	* 44 000	14 992
Gabon					
Potassic fertilisers	* 1 400	* 1 800	* 1 400	...	...
Ivory Coast					
Sulphate	1 370	...	...	...	...
Chloride	36 944	...	...	...	...
Kenya					
Potassic fertilisers	3 724	2 200	3 700	1 700	1 400
Liberia					
Potassic fertilisers (a)	1 700	2 000	—	—	—
Madagascar					
Potassic fertilisers	* 3 000	7 688	19 371	2 395	2 905
Mauritius					
Potassic fertilisers	17 445	36 039	24 988	25 061	27 833
Morocco					
Sulphate	59 815	45 961	50 969	42 211	26 632
Chloride	61 117	21 723	36 256	21 314	60 689
Potassic chemicals	1 060	1 375	608	1 946	394
Nigeria					
Potassic fertilisers (a)	31 700	41 400	58 400	65 500	41 800
Reunion					
Potassic fertilisers	1 600	4 800	2 400	100	1 600
Senegal					
Potassic fertilisers	13 472	11 953	16 200	12 600	20 100
South Africa					
Potassic fertilisers	245 435	649 553	209 556	223 537	237 945
Potassic chemicals	28 879	32 235	18 980	22 565	29 990

## Imports of Potash

tonnes

Country	1988	1989	1990	1991	1992
Tunisia					
Potassic fertilisers	45 500	11 132	56 598	19 587	9 459
Potassic chemicals	599	296	661	709	762
Zimbabwe					
Sulphate	5 876	...	20 396	...	...
Chloride	15 903	(e)* 50 000	47 234	(e)* 68 000	(e)* 54 000
Belize					
Potassic fertilisers	2 122	2 199	...	685	...
Canada					
Sulphate	53 799	39 759	86 877	65 360	84 325
Chloride	3 765	4 553	7 382	7 737	8 844
Other potassic fertilisers	1 877	1 885	1 912	4 644	3 780
Potassic chemicals	13 160	17 307	21 253	18 604	17 675
Costa Rica					
Potassic fertilisers	61 727	50 811	85 141	82 372	98 352
Cuba					
Sulphate	20 000	20 000	...	...	...
Chloride	323 000	394 000	* 345 000	...	...
Dominican Republic					
Potassic fertilisers	17 276	32 100	25 089	23 800	29 900
El Salvador					
Potassic fertilisers	7 206	7 451	...	3 043	...
Guatemala					
Potassic fertilisers	10 632	39 403	31 073	40 307	21 723
Honduras					
Potassic fertilisers	28 706	10 557	44 548	39 549	22 229
Jamaica					
Potassic fertilisers	11 472	447	400	404	2 738
Martinique					
Potassic fertilisers	10 008	9 192	18 365	13 765	19 260
Mexico					
Sulphate	31 745	24 253	19 825	30 006	42 836
Chloride	123 777	85 940	77 700	69 140	58 468
Potassic chemicals	4 244	4 031	13 083	13 143	11 823
Nicaragua					
Potassic fertilisers	* 10 000	* 13 000	* 3 000	3 480	8 139
Panama					
Potassic fertilisers	7 918	16 982	17 939	7 159	12 056
Trinidad & Tobago					
Potassic fertilisers	1 583	3 461	...	1 242	164
USA					
Fertiliser salts	36 905	6 949	1 302	532	568
Sulphate	90 787	64 215	55 361	59 239	67 746
Chloride	6 795 910	5 497 763	6 707 720	6 904 942	6 862 406
Other potassic fertilisers	3 122	834 723	355 682	210 320	180 224
Potassic chemicals	30 231	155 457	59 125	64 584	66 189
Argentina					
Sulphate	6 448	1 412	5 325	* 5 000	6 520
Chloride	19 073	11 172	12 167	* 12 000	17 635
Potassic chemicals	7 269	...	...	...	14 133
Brazil					
Sulphate	48 100	40 096	35 212	45 120	57 678
Chloride	2 145 575	1 866 803	1 860 343	2 037 045	2 117 161
Potassic chemicals	12 488	16 344	12 518	14 063	24 456
Chile					
Sulphate	29 348	22 312	14 806	18 664	13 444
Chloride	143 893	139 822	135 069	142 163	38 184
Other potassic fertilisers	4 949	2 200	3 255	10 451	6 228
Colombia					
Sulphate	15 447	16 272	21 358	10 139	12 434
Chloride	241 791	239 050	341 698	247 232	281 008
Potassic chemicals	1 814	2 167	1 808	* 1 500	* 2 000
Ecuador					
Chloride	26 768	17 152	30 713	40 209	10 231
Other potassic fertilisers	382	2 192	5 154	3 231	13 522
Guyana					
Potassic fertilisers	* 3 000	* 4 000	* 3 000	* 2 000	...



## Imports of Potash

Country	1988	1989	1990	1991	1992
Peru					
Sulphate	6 827	...	—	3	...
Chloride	17 811	(e) 22 300	1 637	2 638	...
Potassic chemicals	1 096	1 029	819	665	...
Uruguay					
Potassic fertilisers	6 307	17 754	12 936	6 252	7 121
Venezuela					
Sulphate	26 416	36 917	51 946	19 070	9 513
Chloride	124 309	104 997	41 825	100 741	35 970
Potassic chemicals	2 351	2 541	1 262	2 838	2 468
Bangladesh (d)					
Potassic fertilisers	66 946	67 624	50 427	53 085	...
China					
Sulphate	...	...	666 039	423 664	522 845
Chloride	(e) (g) 2 243 896	(e) (g) 1 477 092	2 072 805	2 432 214	2 444 345
Other potassic fertilisers	...	...	53 804	79 777	1 580
Cyprus					
Potassic fertilisers	1 106	115	410	332	506
Hong Kong					
Potassic chemicals	3 581	3 838	2 172	3 874	1 142
India (b)					
Chloride	1 078 921	1 475 760	1 615 426	1 399 328	1 225 097
Other potassic fertilisers	176 589	202 226	232 257	75 000	39 841
Potassic chemicals	1 864	1 873	886	2 256	2 332
Indonesia					
Fertiliser salts	2	10 500	151 633	46 194	—
Sulphate	1 400	104 629	26 325	4 210	13 038
Chloride	509 804	259 600	417 635	279 843	443 623
Other potassic fertilisers	12 053	—	—	156	—
Potassic chemicals	3 036	4 928	5 398	5 293	4 639
Japan					
Sulphate	236 268	222 314	190 373	218 671	184 268
Chloride	1 041 940	947 907	944 421	1 037 536	965 638
Other potassic fertilisers	66 528	83 344	64 608	83 776	81 073
Potassic chemicals	16 644	18 052	17 680	26 860	23 666
Jordan					
Potassic fertilisers	3 424	...	300	590	...
Korea, Dem. P.R. of					
Potassic fertilisers (c)	* 31 600	...	...	...	* 121 900
Korea, Republic of					
Chloride	662 936	679 718	570 899	602 086	673 414
Potassic chemicals	6 223	10 572	9 132	7 648	8 038
Malaysia					
Sulphate	28 678	3 349	...	17 226	3 503
Chloride	24 653	24 700	(e) 64 868	55 400	142 999
Other potassic fertilisers	771 110	607 285	804 161	758 623	683 373
Pakistan (d)					
Potassic chemicals	2 448	...	1 444	699	572
Philippines					
Sulphate	99 586	4 875	29 715	38 135	45 414
Chloride	93 266	122 062	146 070	234 075	143 722
Other potassic fertilisers	698	—	1 180	560	4 443
Potassic chemicals	3 191	3 829	5 226	5 717	7 298
Saudi Arabia					
Sulphate	25 139	7 855	50 585	27 371	...
Other potassic fertilisers	30 614	8 198	11 569	10 649	...
Singapore					
Sulphate	3	14 420	10 373	12 958	17 535
Chloride	90 434	66 266	84 344	60 456	57 500
Other potassic fertilisers	179 043	918	24 856	24 491	15 173
Sri Lanka					
Chloride	58 502	...	52 302	16 008	28 200
Other potassic fertilisers	62 253	...	19 465	12 596	21 197
Syria					
Potassic fertilisers	* 62 500	...	* 87 000	* 40 000	* 1 500
Taiwan					
Chloride	227 858	244 952	257 242	329 675	259 777
Potassic chemicals	16 616	9 745	6 041	6 301	5 778

## Potash

**Imports of Potash**

tonnes

Country	1988	1989	1990	1991	1992
<b>Thailand</b>					
Sulphate	14 501	7 504	16 154	20 002	20 302
Chloride	60 703	76 226	106 228	91 160	115 858
Other potassic fertilisers	10 818	0	0	0	—
Potassic chemicals	9 714	7 813	11 203	16 758	15 022
<b>Australia</b>					
Sulphate (d)	15 636	16 234	11 815	17 946	21 223
Chloride (d)	261 056	282 640	275 948	228 750	222 659
Other potassic fertilisers (d)	634	559	1 976	737	529
Potassic chemicals (d)	15 292	12 164	16 511	15 913	16 007
<b>Fiji</b>					
Potassic fertilisers	4 686	...	...	...	...
<b>New Zealand (d)</b>					
Sulphate	1 343	1 686	4 171	2 269	12 776
Chloride	64 094	101 877	147 491	135 695	180 733
Other potassic fertilisers	41 801	325	680	0	18
Potassic chemicals	1 936	23 018	1 781	2 032	1 839

## Note(s):

- (1) So far as possible the term 'potassic chemicals', as used in this table, relates to items 522.64, 523.3,4,5 and 7 of the S.I.T.C. (Rev.3) and includes hydroxide, carbonate, chlorate, nitrate and sulphate
- (a) K<sub>2</sub>O content
- (b) Years ended 31 March following that stated
- (c) BGS estimates, based on known exports from certain countries
- (d) Years ended 30 June of that stated
- (e) Including sulphate
- (f) Data for the Federal Republic of Yugoslavia only
- (g) Including other potassic fertilisers
- (h) Including chloride

**Production of Rare Earth Minerals**

Country	1988	1989	1990	1991	1992
Soviet Union					
Monazite (a)	...	* 1 500	* 1 500	* 1 500	* 1 500
Madagascar					
Bastnaesite	* 5	* 5	* 5	* 5	* 5
South Africa					
Monazite	* 1 200	* 1 200	1 317	* 1 300	* 1 300
Zaire					
Monazite	168	175	124	* 120	* 50
USA					
Bastnaesite (a)	11 533	20 787	22 713	16 465	20 699
Monazite (a)	* 450	* 450	* 2 100	* 1 500	* 800
Brazil					
Monazite	2 817	1 910	2 579	* 2 500	* 2 500
China (a)	29 640	25 220	16 480	16 150	* 17 000
India					
Monazite (b)	* 4 000	* 4 300	* 4 500	* 4 000	* 4 000
Malaysia					
Monazite	2 920	2 948	3 323	1 981	777
Xenotime	47	131	165	5	13
Sri Lanka					
Monazite	* 200	* 200	* 200	* 200	* 200
Thailand					
Monazite	590	631	377	134	89
Xenotime	101	35	14	3	—
Australia					
Monazite	10 897	13 000	6 000	6 000	6 000
World total (c)	94 800	104 500	89 900	75 600	81 600
World total (REO content)	* 56 800	* 62 600	* 53 800	* 45 300	* 48 900

## Note(s):

- (1) With the exception of the data for the Soviet Union, USA and China, figures in this table refer to gross tonnage of rare earth concentrates
- (2) Rare earth minerals are believed to be produced, on a small scale, in Indonesia, Democratic P.R. of Korea and Mozambique
- (a) REO content. Assumed to be 60% of concentrates produced
- (b) Years ended 31 March following that stated
- (c) Expressed as grossed up weight of concentrates produced

**Exports of Rare Earths**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Cerium compounds	582	607	679	466	497
Other rare earth compounds	86	70	102	145	185
Ferro-cerium & other pyrophoric alloys	121	54	10	113	9
Metals	28	100	84	42	75
France					
Ferro-cerium & other pyrophoric alloys	98	124	103	108	132
Metals	30	1	42	24	16
Germany, Federal Republic of					
Rare earth compounds	223	210	249	328	234
Ferro-cerium & other pyrophoric alloys	94	131	189	173	158
Metals	6	12	6	9	4
Italy					
Metals	780	22	42	36	121
Austria					
Cerium compounds	576	522	697	590	599
Other rare earth compounds	1 740	1 059	1 071	957	2 183
Metals	430	358	273	470	383
Norway					
Rare earth compounds	1 353	549	598	114	2
Soviet Union					
Rare earth compounds (b)	* 1 000	* 1 000	* 1 400	* 2 000	* 2 500
Metals (b)	* 200	* 300	* 400	* 500	* 600
South Africa (a)					
Rare earth compounds	£2 100	£6 200	£7 900	£7 200	£9 000
USA					
Ores & concentrates	7 360	...	...	* 800	—
Cerium compounds	...	1 437	1 730	1 378	1 962
Other rare earth compounds	...	3 375	2 230	2 161	1 335
Ferro-cerium & other pyrophoric alloys	89	74	83	83	...
Metals	...	426	211	59	36
Brazil					
Rare earth compounds	780	799	246	156	...
Ferro-cerium & other pyrophoric alloys	260	198	44	...	...
Metals	107	187	234	130	...
China					
Rare earth compounds	(b)* 7 400	(b)* 6 400	3 093	4 671	9 315
Ferro-cerium & other pyrophoric alloys	(b) * 200	* 200	* 200	* 150	* 20
Metals	(b)* 420	(b)* 520	1 327	2 393	2 986
Hong Kong					
Ferro-cerium & other pyrophoric alloys (c)	112	97	116	88	...
Japan					
Cerium compounds	482	903	648	396	467
Other rare earth compounds	322	165	154	199	238
Malaysia					
Ores & concentrates	173	660	212	—	—
Thailand					
Ores & concentrates	165	488	220	—	149
Ferro-cerium & other pyrophoric alloys	37	54	18	11	127
Australia					
Ores & concentrates	10 000	20 000	11 000	9 000	6 000

## Note(s):

(1) Rare earths are here taken to include yttrium and scandium

(a) Values shown are for the common customs area

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

(c) Re-exports

## Imports of Rare Earths

Country	1988	1989	1990	1991	1992
United Kingdom					
Cerium compounds	655	355	269	315	404
Other rare earth compounds	215	169	323	366	418
Ferro-cerium & other pyrophoric alloys	111	384	23	41	16
Metals	54	77	22	78	113
Belgium-Luxembourg					
Cerium compounds	92	249	249	342	336
Other rare earth compounds	3	41	3	44	67
Ferro-cerium & other pyrophoric alloys	49	26	45	38	47
Metals	54	45	147	54	28
Denmark					
Ferro-cerium & other pyrophoric alloys	16	9	6	5	8
France					
Cerium compounds	661	356	638	740	680
Other rare earth compounds	3 012	2 599	364	999	4 537
Ferro-cerium & other pyrophoric alloys	57	37	37	627	1 025
Metals	228	291	302	243	284
Germany, Federal Republic of					
Cerium compounds	1 246	1 131	1 577	1 746	1 257
Other rare earth compounds	1 611	1 503	1 871	1 400	1 798
Ferro-cerium & other pyrophoric alloys	23	45	30	16	15
Metals	143	117	163	154	230
Italy					
Ferro-cerium & other pyrophoric alloys	29	22	24	39	8
Metals	70	61	59	26	97
Netherlands					
Cerium compounds	351	112	395	435	256
Other rare earth compounds	1 090	2 902	2 651	2 578	3 368
Ferro-cerium & other pyrophoric alloys	25	29	44	21	40
Metals	1	4	12	0	3
Spain					
Rare earth compounds	280	248	257	186	177
Ferro-cerium & other pyrophoric alloys	48	46	41	43	38
Metals	12	17	68	129	68
Austria					
Cerium compounds	1 510	1 531	1 200	504	957
Other rare earth compounds	179	121	15	23	49
Metals	111	245	255	995	999
Norway					
Rare earth compounds	56	70	48	9	2
Metals	282	257	248	75	218
Turkey					
Rare earth compounds	123	126	230	87	124
Yugoslavia					
Ferro-cerium & other pyrophoric alloys	191	409	300	(b) 75	...
Metals	66	61	1	(b) —	...
South Africa					
Rare earth compounds (a)	£80 000	£140 000	£137 000	£339 000	£665 000
Canada					
Cerium compounds	201	278	311	303	369
Other rare earth compounds	240	158	255	649	180
USA					
Ores & concentrates	1 924	774	800	...	...
Cerium compounds	695	251	359	545	811
Other rare earth compounds	234	9 295	6 504	7 962	6 008
Ferro-cerium & other pyrophoric alloys	108	84	93	93	103
Metals	198	294	183	226	293
Brazil					
Cerium compounds	262	127	72	91	...
Other rare earth compounds	14	96	216	518	...
Metals	20	63	54	84	...

**Imports of Rare Earths**

tonnes

Country	1988	1989	1990	1991	1992
Hong Kong					
Ferro-cerium & other pyrophoric alloys	178	170	228	189	...
Indonesia					
Rare earth compounds	21	27	26	11	16
Ferro-cerium & other pyrophoric alloys	17	107	...	...	104
Japan					
Cerium compounds	3 089	3 520	2 349	2 832	2 799
Other rare earth compounds	11 466	8 192	6 544	7 637	5 844
Metals	468	337	180	436	414
Korea, Republic of					
Cerium compounds	2 300	621	604	452	242
Other rare earth compounds	249	54	74	107	137
Ferro-cerium & other pyrophoric alloys	25	17	30	...	...
Metals	35	4	121	9	4
Malaysia					
Ores & concentrates	62	143	...	830	151
Saudi Arabia					
Ferro-cerium & other pyrophoric alloys	45	37	43	488	...
Taiwan					
Ores & concentrates	—	500	332	548	375
Rare earth compounds	...	498	340	442	469
Ferro-cerium & other pyrophoric alloys	24	31	34	32	24
Metals	31	2	56	52	87
Thailand					
Ferro-cerium & other pyrophoric alloys	19	40	70	73	80

## Note(s):

(1) Rare earths are here taken to include yttrium and scandium

(a) Values shown are for the common customs area

(b) Data for the Federal Republic of Yugoslavia only

# Production of Salt

Salt  
tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Rock salt	876 845	1 184 000	1 102 000	1 635 000	* 1 400 000
Brine salt	1 425 551	1 344 000	1 341 000	1 319 800	* 1 300 000
Salt in brine (a)	3 827 138	4 228 000	3 991 000	3 874 000	3 401 103
Denmark (m)	548 085	551 871	522 206	550 150	528 429
France					
Rock salt	* 900 000	* 900 000	* 800 000	* 800 000	* 500 000
Salt in brine	3 973 000	4 322 000	4 022 000	4 130 000	4 860 000
Sea salt	1 435 000	1 132 000	1 591 000	1 388 000	1 156 000
Germany, Federal Republic of					
Rock salt	6 251 000	5 611 000	4 910 000	4 762 000	4 265 000
Brine salt	946 000	941 000	785 000	778 000	807 000
Salt in brine	5 379 475	5 386 147	5 242 186	5 161 212	5 293 737
Greece	181 324	148 265	182 470	128 845	* 125 000
Italy					
Rock salt & brine salt	3 609 095	3 500 512	3 752 003	3 503 891	3 500 000
Sea salt	970 000	700 000	700 000	700 000	610 000
Netherlands	3 693 000	3 756 000	3 653 000	3 417 000	3 628 000
Portugal					
Rock salt	530 047	591 543	661 640	622 495	592 287
Sea salt	138 784	* 150 000	* 125 000	* 125 000	* 125 000
Spain					
Rock salt	2 455 002	2 496 441	* 2 200 000	* 2 200 000	2 870 000
Sea salt	1 298 984	593 798	* 900 000	* 900 000	* 900 000
Other salt	124 126	132 508	* 100 000	* 100 000	* 100 000
Albania					
Rock salt	75 353	88 478	85 342	52 000	—
Sea salt	123 740	120 019	151 157	...	...
Austria					
Rock salt	1 020	1 361	1 236	1 252	1 344
Salt in brine	255 000	251 000	288 000	280 000	* 280 000
Evaporated salt	412 929	396 485	386 188	459 250	461 679
Bulgaria	* 91 000	77 500	166 445	* 150 000	* 150 000
Czechoslovakia	72 880	73 051	76 140	77 316	...
Finland	4 861	5 917	9 023	5 187	8 327
German Democratic Republic	3 277 800	3 172 300	* 2 600 000	—	—
Poland					
Rock salt	1 247 000	994 000	556 000	556 000	582 000
Other salt	4 932 000	3 676 000	3 499 000	3 284 000	3 305 000
Romania	5 353 000	5 038 000	4 262 000	3 255 000	2 556 000
Soviet Union	14 800 000	15 000 000	14 700 000	14 000 000	* 11 000 000
Switzerland	264 709	198 608	209 812	302 173	228 756
Turkey					
Rock salt	67 265	79 606	76 340	...	86 321
Sea salt	402 743	528 827	504 160	...	511 671
Other salt	888 429	1 130 684	1 308 462	(l) 1 440 000	819 632
Yugoslavia					
Rock salt	126 650	133 597	99 747	(p)* 130 000	* 50 000
Sea salt	58 286	50 376	71 345	(p)* 50 000	(n) 46 945
Other salt	200 276	184 461	204 213	(p)* 217 000	* 100 000
Algeria					
Brine salt & sea salt	232 000	228 000	222 000	207 000	180 000
Angola	55 000	* 70 000	* 70 000	* 70 000	* 70 000
Botswana	—	—	—	2 600	53 708
Cape Verde Islands	3 000	* 3 000	1 140	* 1 500	1 310
Egypt (j)	922 308	805 840	1 013 230	673 100	794 980
Ethiopia (d)	174 848	187 867	* 180 000	* 170 000	* 180 000
Ghana	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Kenya	94 682	103 220	102 100	72 449	29 490
Libya	* 12 000	* 12 000	* 12 000	* 12 000	* 12 000
Madagascar	52 658	57 508	* 55 000	* 50 000	* 50 000
Mali	* 4 500	* 5 000	* 5 000	* 5 000	* 5 000
Mauritania	* 5 500	* 5 500	* 5 500	* 5 400	* 5 400
Mauritius (c)	7 000	7 000	7 000	7 000	7 000
Morocco	139 212	140 568	158 530	143 921	164 528
Mozambique	* 37 500	* 40 000	* 40 000	* 40 000	* 40 000
Namibia	149 317	142 102	157 224	141 368	120 835
Senegal	26 800	161 300	90 800	60 700	110 000
Somalia	* 2 000	* 2 000	* 1 500	* 500	* 1 000
South Africa	678 225	692 391	728 110	664 624	701 991

## Salt

## Production of Salt

tonnes

Country	1988	1989	1990	1991	1992
Sudan	91 000	90 000	95 000	75 000	* 75 000
Tanzania	30 023	20 010	39 315	64 419	77 281
Tunisia (c)	450 000	480 000	402 000	431 000	460 000
Bahamas (k)	1 236 012	1 008 483	1 140 143	1 319 713	* 1 000 000
Canada					
Rock salt	7 355 243	7 525 772	7 749 239	8 731 370	7 984 369
Other salt (e)	3 571 490	3 596 177	3 511 723	3 261 720	3 187 024
Costa Rica	* 30 000	* 30 000	* 40 000	* 50 000	* 50 000
Cuba	200 300	206 100	* 200 000	* 200 000	* 185 000
Dominican Republic	37 532	30 258	11 339	* 11 400	* 12 000
El Salvador (c)	32 591	30 238	31 584	30 351	21 573
Guatemala (c)	43 100	42 600	43 600	42 500	46 200
Honduras	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Mexico	6 788 359	6 942 165	7 135 121	7 532 421	7 395 152
Netherlands Antilles (k)	236 717	149 854	190 057	252 237	...
Nicaragua (c)	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
Panama (c)	22 934	17 989	22 206	25 903	31 045
USA (f)					
Rock salt	11 703 000	12 644 000	13 055 000	11 064 000	10 911 000
Salt in brine	17 782 000	16 509 000	17 724 000	18 640 000	17 571 000
Evaporated salt	5 841 000	6 095 000	6 136 000	6 198 000	6 302 000
Argentina	1 245 709	1 185 458	833 578	943 162	952 205
Brazil					
Rock salt	1 365 857	1 369 009	1 032 996	1 200 000	1 231 000
Sea salt	3 020 000	2 355 000	4 170 000	3 703 000	4 030 000
Chile	1 043 397	903 932	1 834 971	1 676 253	1 671 681
Colombia					
Rock salt	209 099	190 380	208 697	218 736	230 000
Sea salt	473 482	469 875	478 150	482 360	317 033
Peru	125 500	* 200 000	* 200 000	* 200 000	238 244
Venezuela (c)	* 365 000	439 400	430 000	293 386	312 700
Afghanistan (g)	* 10 000	* 10 000	* 10 000	* 12 000	* 12 000
Bangladesh (j)	409 000	449 000	217 000	400 000	720 000
Cambodia	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
China	22 640 000	28 290 000	20 230 000	24 100 000	28 380 000
India					
Rock salt	4 357	2 640	* 2 700	* 2 700	* 2 700
Sea salt	* 9 200 000	* 9 600 000	* 9 500 000	* 9 500 000	* 9 500 000
Indonesia	* 600 000	* 600 000	* 600 000	* 610 000	* 630 000
Iran (g)	814 842	989 932	848 098	1 066 010	1 017 627
Iraq	300 000	* 300 000	* 250 000	* 120 000	* 250 000
Israel	386 300	495 900	426 000	1 115 000	* 1 100 000
Japan (i)	1 363 000	1 366 684	1 377 300	1 380 000	1 405 000
Jordan (b)	38 000	57 000	55 000	5 000	15 000
Korea, Dem. P.R. of	* 570 000	* 570 000	* 580 000	* 580 000	* 590 000
Korea, Republic of	1 020 000	830 000	617 000	* 600 000	771 937
Kuwait	31 753	30 431	25 487	—	800
Laos	* 30 000	7 950	* 8 000	* 8 000	* 8 000
Lebanon	* 3 000	* 3 000	* 3 000	* 3 000	* 3 000
Mongolia	* 16 000	* 16 000	* 17 000	* 17 000	* 17 000
Myanmar (b) (c) (h)	245 930	256 850	* 260 000	* 260 000	* 260 000
Pakistan					
Rock salt	509 000	721 053	763 046	769 051	832 000
Sea salt	207 200	* 210 000	* 210 000	...	...
Philippines	492 080	488 674	490 407	492 859	495 816
Sri Lanka	101 590	150 223	53 088	52 938	121 875
Syria	127 000	137 950	127 172	127 000	* 127 000
Taiwan	111 341	169 982	82 820	195 319	25 732
Thailand					
Rock salt	5 670	15 384	119 179	124 500	212 750
Other salt	* 165 000	* 165 000	* 100 000	* 100 000	* 100 000
Vietnam	850 500	644 600	543 300	* 550 000	* 550 000
Yemen, Republic of (o)	* 220 000	152 600	143 400	115 800	107 000



**Production of Salt**

Country	1988	1989	1990	1991	1992
Australia	6 979 000	7 069 000	7 227 000	7 737 000	7 693 000
New Zealand	45 000	76 000	80 000	* 80 000	* 80 000
World total	184 700 000	188 100 000	180 500 000	179 900 000	179 800 000

## Note(s):

- (1) This table does not include production of refined salt
- (2) Salt is known to be produced in many countries for which statistics are not available. Among these are Martinique 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
- (k) Exports
- (l) Salt; all forms
- (m) Sales
- (n) Data for the Federal Republic of Yugoslavia only
- (o) Yemen Arab Republic and People's Dem. Rep. of Yemen were unified on 22 May 1990 as the Republic of Yemen
- (p) Excluding data from August to December for the Republic of Croatia

## Exports of Salt

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	293 028	285 296	325 542	198 613	182 572
Belgium-Luxembourg	77 614	80 847	81 418	89 171	72 498
Denmark	301 736	311 931	305 011	301 911	312 946
France	514 074	529 287	936 060	799 506	486 013
Germany, Federal Republic of	2 061 264	2 001 650	2 167 794	3 315 346	3 107 795
Irish Republic	754	1 595	1 554	1 701	511
Italy	358 371	81 885	170 784	224 277	374 201
Netherlands	2 776 934	2 815 205	2 662 295	3 085 450	3 025 690
Portugal	19 894	22 134	28 454	18 436	19 189
Spain	297 257	291 031	78 718	109 360	228 618
Albania	49 000	33 000	46 000	...	...
German Democratic Republic	1 826 000	1 772 000	...	...	...
Norway	1 427	2 505	2 309	2 027	2 093
Poland	424 837	366 242	290 533	233 903	249 214
Romania	(a)* 793 100	822 932	(a)* 581 500	(a)* 418 900	295 953
Soviet Union	344 909	299 156	344 678	...	...
Sweden	1 793	1 878	1 985	1 478	1 575
Switzerland	102	309	526	4 060	7 737
Turkey	20 312	4 368	2 368	31 316	7 901
Algeria	9 202	9 620	11 647	16 160	...
Egypt	122 017	131 775	...	...	208 106
Kenya	48 239	...	38 229	...	...
Madagascar	...	12 548	8 141	10 387	7 768
Morocco	17 050	5 680	4 959	4 002	12 388
Namibia	133 894	185 328	153 371	103 312	73 164
Senegal	85 148	108 477	110 139	...	...
South Africa	79 404	76 748	91 049	56 169	53 029
Tanzania	7 140	5 606	...	...	...
Tunisia	295 682	483 450	399 488	350 048	343 463
Bahamas	1 236 012	1 008 483	1 141 914	1 319 713	...
Canada	3 038 462	2 137 512	1 912 161	2 783 021	2 632 613
Jamaica	3 377	3 369	3 793	2 752	5 620
Mexico	5 098 127	5 526 458	5 722 364	6 133 227	6 371 223
Netherlands Antilles	236 717	149 854	190 057	252 237	...
USA	855 718	1 429 638	2 266 152	1 816 635	1 003 655
Argentina	24 340	172 646	191 290	...	37 428
Brazil	24 018	13 069	12 196	56 883	43 994
Chile	654 577	699 674	1 201 421	1 012 187	930 061
Colombia	23 100	72 683	21 592	14 706	18 574
China	382 177	370 634	480 974	212 403	151 709
Hong Kong (c)	1 756	4 745	6 151	7 009	6 220
India (b)	494 418	349 432	403 882	406 164	332 681
Indonesia	—	—	501	14 594	14 382
Iran (e)	11 840	16 907	44 442	...	...
Israel (a)	* 10 500	* 19 000	* 18 100	* 26 200	* 67 100
Japan	656	1 036	1 320	1 509	1 349
Jordan	—	18 338	13 090	8 633	6 212
Korea, Republic of	14 467	24 157	40 464	59 621	3 733
Malaysia	1 233	2 698	...	1 628	4 489
Pakistan (d)	32 127	20 039	22 644	18 249	30 418
Saudi Arabia	12 189	11 653	3 831	1 849	...
Singapore	13 707	18 170	16 084	13 628	10 808
of which: Re-exports	12 442	17 252	14 436	12 911	10 310
Taiwan	4 800	6 834	8 000	9 000	2 060
Thailand	41 139	17 857	31 091	55 375	76 922
Australia	6 206 000	6 194 000	6 470 000	7 060 000	7 027 000
New Zealand (d)	3 444	1 897	3 055	4 095	6 212

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

(b) Years ended 31 March following that stated

(c) Re-exports

(d) Years ended 30 June of that stated

(e) Years ended 20 March following that stated

## Imports of Salt

Country	1988	1989	1990	1991	1992
United Kingdom	162 057	140 042	166 797	164 101	171 520
Belgium-Luxembourg	1 061 158	1 110 538	960 257	998 749	1 148 139
Denmark	171 772	132 127	128 161	193 426	131 201
France	181 248	169 210	182 412	198 176	226 382
Germany, Federal Republic of	872 680	745 482	764 171	929 790	1 141 388
Greece	40 636	74 180	75 299	71 312	43 249
Irish Republic	94 940	107 767	121 234	130 311	106 054
Italy	707 861	646 571	680 046	576 459	568 014
Netherlands	247 647	220 405	264 166	424 538	400 314
Portugal	117 078	95 018	104 417	75 943	76 216
Spain	7 882	77 430	199 198	95 456	29 832
Czechoslovakia (a)	* 139 000	* 140 600	...	* 537 100	* 538 800
Faeroe Islands	38 648	27 875	15 993	20 234	16 680
Finland	645 815	710 140	686 355	477 639	432 500
Greenland	3 590	4 958	5 024	3 914	3 338
Hungary	664 982	581 791	471 362	...	787 373
Iceland	67 924	130 608	90 765	68 650	62 873
Malta	1 744	742	1 872	2 093	2 960
Norway	470 547	491 912	511 753	557 491	578 360
Sweden	1 342 487	1 100 235	932 959	894 245	960 099
Switzerland	4 082	3 027	3 162	3 238	3 170
Turkey	12 126	9 265	18 072	5 352	25 584
Yugoslavia	255 730	268 962	251 300	(d) 127 917	...
Benin	6 990	7 088	7 942	...	3 192
Botswana	10 937	7 861	...	...	...
Burkina Faso	24 455	16 063	23 890	...	...
Burundi	6 209	13 663	7 843	17 363	...
Cameroon	...	38 833	...	...	...
Central African Republic	...	5 809	2 700	3 887	...
Congo	5 028	14 000	23 000	23 000	...
Gabon	...	...	5 162	...	...
Ivory Coast	34 042	...	...	...	...
Mali	55 396	39 440	...	...	...
Mauritius	972	1 028	598	1 292	992
Morocco	2 459	19	42	2 845	2 776
Niger	17 480	...	...	...	...
Reunion	3 093	...	2 599	2 805	2 738
Rwanda	10 892	16 958	17 629	...	...
Seychelles	575	459	460	353	...
South Africa	88 177	51 012	51 889	86 899	63 606
Tanzania	2 623	297	...	...	...
Togo	4 776	9 999	15 415	...	...
Uganda	...	...	...	42 175	54 503
Zaire	37 965	...	...	...	...
Zambia	12 409	58 823	885	...	...
Zimbabwe	55 466	...	54 415	...	...
Bahamas	2 063	4 287	5 122	1 229	...
Barbados	2 141	...	...	2 676	...
Belize	621	621	671	694	947
Canada	1 275 663	2 360 908	2 095 067	1 202 752	1 045 908
Costa Rica	238	8 437	4 819	4 045	235
Dominica	577	639	732	872	696
El Salvador	740	764	3 301	4 937	2 626
Grenada	433	491	496	425	...
Guadeloupe	2 527	2 309	2 042	2 333	2 413
Guatemala	2 315	...	893	2 891	518
Jamaica	18 225	22 231	15 162	26 075	20 740
Martinique	2 376	2 290	2 594	2 542	2 376
Mexico	1 062	7 376	37 247	81 205	70 935
Netherlands Antilles	520	332	627	604	543
Panama	193	278	663	1 098	1 303
St. Lucia	777	1 590	712	861	655
Trinidad & Tobago	...	...	16 863	13 892	14 395
USA	4 950 341	5 519 290	5 969 601	6 161 315	5 503 547
Brazil	47 743	401 050	254 657	59 112	55 325
French Guiana	503	444	542	497	537
Paraguay	1 774	395	1 125	1 329	2 552
Suriname	3 963	2 341	2 885	2 624	...
Uruguay	72 292	78 706	67 816	75 052	51 504

Salt

**Imports of Salt**

tonnes

Country	1988	1989	1990	1991	1992
Abu Dhabi	2 016	...	1 627	999	1 188
Bahrain	2 802	2 242	2 418	2 485	...
Bangladesh (b)	219 990	376 423	116 985	300 352	...
China	405	63 505	11 257	8 656	37 608
Cyprus	3 354	4 352	5 250	6 642	9 468
Hong Kong	131 362	156 456	148 674	143 578	138 847
India (c)	10 645	14 566	18 215	14 558	18 317
Indonesia	757	175 767	349 042	330 107	320 446
Japan	7 229 250	7 703 070	7 920 433	7 854 886	7 686 928
Korea, Dem. P.R. of (a)	* 155 600	* 135 600	* 249 100	* 118 600	* 81 300
Korea, Republic of	1 053 486	1 038 719	1 080 843	1 275 010	1 421 948
Kuwait	8 583	7 752	3 550	1 945	2 141
Macao	2 135	3 265	3 571	2 745	2 726
Malaysia	210 759	230 224	...	227 084	171 808
Oman	16 700	17 964	17 562	18 610	12 934
Philippines	52 620	208 540	111 265	80 931	78 673
Qatar	3 747	3 384	3 157	5 805	3 726
Saudi Arabia	24 868	15 733	16 739	12 662	...
Singapore	66 068	67 459	87 370	70 482	65 871
Taiwan	781 925	851 667	942 384	855 840	943 998
Thailand	846	895	828	934	760
Australia	7 243	6 633	7 232	6 051	7 144
Fiji	3 226	3 669	...	...	...
New Caledonia	649	846	551	773	...
New Zealand (b)	69 877	67 550	64 397	14 248	23 487
Solomon Islands	1 070	775	815	1 448	...

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

(b) Years ended 30 June of that stated

(c) Years ended 31 March following that stated

(d) Data for the Federal Republic of Yugoslavia only

**Production of Sillimanite Minerals**

Country	1988	1989	1990	1991	1992
France					
Andalusite	50 000	50 000	* 50 000	* 50 000	* 50 000
Spain					
Andalusite	3 360	3 765	* 3 600	* 3 600	* 3 600
Czechoslovakia	* 75 000	* 75 000	* 75 000	* 75 000	* 70 000
Romania	* 70 000	* 70 000	* 70 000	* 70 000	* 65 000
Soviet Union					
Kyanite (a)	* 100 000	* 100 000	* 100 000	* 100 000	* 95 000
Sweden					
Kyanite	* 6 000	* 6 000	* 6 000	* 6 000	* 6 000
South Africa					
Andalusite	259 556	284 617	283 677	209 824	230 333
Sillimanite	781	170	256	422	632
Zimbabwe					
Kyanite	1 795	1 869	160	2 463	1 990
USA					
Kyanite (b)	* 90 000	* 100 000	* 100 000	* 85 000	* 85 000
Brazil					
Kyanite (d)	630	1 032	642	* 600	* 600
China	* 2 500	* 2 500	* 2 500	* 2 500	* 2 500
India					
Kyanite	35 773	39 489	38 851	30 020	* 30 000
Sillimanite	15 377	16 117	18 240	11 757	* 15 000
Australia					
Kyanite	* 500	* 500	* 750	* 800	* 800
Sillimanite (c)	64	* 80	* 100	* 100	* 100
World total	711 000	751 000	750 000	648 000	657 000

## Note(s):

(1) In addition to the countries listed above as producing sillimanite minerals, synthetic mullite is known to be produced in Denmark, France, Hungary, Japan, Yugoslavia, United Kingdom and the USA

(a) May include other sillimanite minerals

(b) Including related minerals

(c) Excluding sillimanite clay

(d) Including beneficiated and directly shipped material

## Sillimanite

**Exports of Sillimanite Minerals**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Sillimanite minerals	5 618	6 274	4 816	3 156	3 007
Belgium-Luxembourg					
Sillimanite minerals	—	250	52	147	142
Denmark					
Sillimanite minerals	49	11	—	17	—
France					
Sillimanite minerals	46 525	49 764	47 654	43 301	46 641
Germany, Federal Republic of					
Sillimanite minerals	6 374	10 929	12 920	9 979	13 175
Italy					
Sillimanite minerals	1 337	1 007	...	725	403
Netherlands					
Sillimanite minerals	927	1 011	1 364	2 207	3 342
Sweden					
Sillimanite minerals	2 559	3 280	3 623	2 365	933
South Africa					
Andalusite	147 046	160 084	148 360	124 081	156 521
Sillimanite	935	181	368	740	480
USA					
Kyanite & related minerals	(b)* 96 600	29 950	33 211	32 073	37 763
Brazil					
Kyanite	82	39	89	...	...
Japan					
Sillimanite minerals	5 207	4 925	5 159	5 512	6 903
Macao					
Sillimanite minerals	12 000	1 260	—	—	—
New Zealand (a)					
Sillimanite minerals	9 930	—	—	—	4

## Note(s):

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

(a) Years ended 30 June of that stated

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

**Imports of Sillimanite Minerals**

Country	1988	1989	1990	1991	1992
United Kingdom					
Sillimanite minerals	52 694	87 871	58 219	51 390	53 597
Belgium-Luxembourg					
Sillimanite minerals	3 487	7 414	9 712	7 057	10 613
Denmark					
Sillimanite minerals	1 162	2 737	2 143	1 677	1 595
France					
Sillimanite minerals	5 331	7 105	8 098	7 333	7 347
Germany, Federal Republic of					
Sillimanite minerals	131 409	132 840	126 436	98 358	101 634
Italy					
Sillimanite minerals	25 956	24 692	26 792	22 554	21 897
Netherlands					
Sillimanite minerals	5 636	8 485	6 278	6 988	6 650
Spain					
Sillimanite minerals	8 819	12 666	17 857	12 287	12 916
Austria					
Sillimanite minerals	2 213	3 338	2 534	2 230	2 775
Finland					
Sillimanite minerals	1 698	76	1 623	1 091	1 420
Norway					
Sillimanite minerals	377	437	450	2 452	2 523
Sweden					
Sillimanite minerals	394	2 267	965	962	1 978
Switzerland					
Sillimanite minerals	339	653	754	379	402
Yugoslavia					
Sillimanite minerals	7 248	4 400	1 485	(a) 463	...
Canada					
Sillimanite minerals	7 222	6 664	6 245	6 358	8 252
Mexico					
Sillimanite minerals	293	1 326	1 747	2 383	2 521
Mullite	2 055	1 939	2 231	2 201	2 615
USA					
Sillimanite minerals	...	10 862	18 104	5 601	7 550
Japan					
Sillimanite minerals	35 298	37 583	34 825	27 351	32 146
Mullite	762	2 000	9 489	12 336	8 595
Korea, Republic of					
Sillimanite minerals	4 830	11 713	12 994	11 768	6 356
Mullite	4 710	5 157	4 919	5 944	9 354
Taiwan					
Sillimanite minerals	...	2 461	4 229	4 594	4 953
Mullite	...	2 393	15 788	16 101	1 418
Australia					
Sillimanite minerals (b)	3 655	5 511	4 168	5 822	13 890

## Note(s):

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

(a) Data for the Federal Republic of Yugoslavia only

(b) Years ended 30 June of that stated

## Mine Production of Silver

kilograms (metal content)

Country	1988	1989	1990	1991	1992
United Kingdom	2 113	1 689	2 695	565	—
France	22 200	21 950	22 190	28 450	14 500
Germany, Federal Republic of	* 20 000	* 8 500	8 000	7 200	1 800
Greece	61 300	61 200	62 600	70 200	61 900
Irish Republic	5 500	7 200	8 800	10 500	13 100
Italy	16 000	14 000	14 000	13 600	12 000
Portugal	877	815	722	43 820	38 200
Spain	220 477	250 684	270 000	180 000	160 000
Bulgaria	* 71 000	* 59 000	* 54 000	* 37 300	* 33 000
Czechoslovakia	* 25 000	* 24 000	* 26 000	* 28 000	* 20 000
Finland	28 428	34 832	28 989	26 643	30 000
German Democratic Republic	* 60 000	59 700	20 000	—	—
Greenland	14 300	14 700	9 200	—	—
Poland	1 063 000	1 003 000	832 000	899 000	798 000
Romania	* 23 000	* 20 000	* 24 000	* 17 000	* 17 000
Soviet Union	* 1 320 000	* 1 250 000	* 1 380 000	* 1 270 000	* 1 250 000
Sweden	207 804	227 715	242 685	239 321	210 319
Turkey	22 500	35 000	26 500	48 000	92 000
Yugoslavia (a)	138 957	133 018	105 300	(c) 92 000	* 80 000
Algeria	* 3 000	* 3 000	* 2 000	* 3 500	* 3 500
Ghana	* 100	1 100	1 100	1 200	1 200
Morocco	221 000	188 000	184 000	275 000	151 000
Namibia	108 000	108 000	91 635	91 900	89 000
South Africa	201 215	181 698	160 719	171 555	182 723
Tunisia	* 1 000	1 000	* 1 000	* 1 000	* 1 000
Zaire	74 000	70 000	84 000	* 50 000	* 35 000
Zambia	29 333	19 802	18 500	14 200	18 300
Zimbabwe	21 896	22 332	21 151	19 380	16 930
Canada	1 483 816	1 370 737	1 501 451	1 338 799	1 215 388
Dominican Republic	44 153	21 786	22 861	21 955	14 878
Honduras	49 483	40 957	30 866	42 033	35 353
Mexico	2 358 907	2 306 091	2 351 561	2 223 647	2 317 382
Nicaragua	594	1 126	1 030	1 546	2 240
USA	1 661 452	2 007 436	2 125 000	1 855 000	1 804 000
Argentina	79 415	83 126	82 657	69 959	45 374
Bolivia	231 766	267 086	310 543	337 010	282 350
Brazil	* 70 000	64 000	* 60 000	* 50 000	* 50 000
Chile	506 501	545 412	654 603	676 339	1 024 823
Colombia	6 562	6 847	6 631	8 037	8 292
Peru (b)	1 551 600	1 839 900	1 761 700	1 769 700	1 613 900
China	* 145 000	* 165 000	* 150 000	* 180 000	* 200 000
India	40 958	35 499	32 200	31 900	45 700
Indonesia	61 538	62 396	66 723	67 989	99 904
Iran	* 30 000	* 41 000	* 38 000	* 47 500	* 60 000
Japan	251 971	155 792	149 920	170 676	178 330
Korea, Dem. P.R. of	* 310 000	* 300 000	* 280 000	* 300 000	* 280 000
Korea, Republic of	48 865	53 428	16 400	3 100	4 723
Malaysia	10 775	12 877	12 556	13 440	15 325
Mongolia	22 200	21 200	21 200	* 15 500	* 18 000
Myanmar (a)	6 314	...	6 128	5 257	4 790
Oman	1 900	8 500	10 300	8 700	6 900
Philippines	54 634	50 630	47 111	39 069	30 878
Saudi Arabia	—	13 321	16 237	16 175	16 410
Taiwan	8 388	6 491	3 926	—	—
Thailand	* 10 000	* 15 000	* 20 500	* 20 000	* 10 000
Australia	1 134 332	1 075 000	1 173 000	1 180 000	1 218 000
Fiji	988	1 055	775	494	* 500
New Zealand	1 845	4 837	4 914	11 371	22 413
Papua New Guinea	70 423	93 671	114 543	124 484	95 498
World total	14 236 000	14 498 000	14 775 000	14 269 000	14 052 000

(a) Smelter and/or refinery production

(b) Recoverable

(c) Excluding data from August to December for the Republic of Croatia



## Exports of Silver

Silver  
kilograms

Country	1988	1989	1990	1991	1992
United Kingdom					
Metal	1 020 309	1 443 948	2 847 757	1 873 934	1 516 073
Belgium-Luxembourg					
Metal	1 000 838	1 298 145	1 283 609	1 149 307	1 545 299
Denmark					
Metal	54 463	38 716	43 220	41 215	34 579
of which: Re-exports	46 748	33 222	37 420	36 091	26 133
France					
Metal	532 610	613 769	1 015 259	1 098 455	748 796
Waste & scrap	137 952	279 853	269 666	213 990	208 346
Germany, Federal Republic of					
Metal	1 481 780	2 071 003	1 817 287	1 431 971	1 107 127
Greece					
Metal	4	1 046	2	336	...
Italy					
Metal	54 387	148 100	357 700	479 315	313 216
Netherlands					
Metal	113 272	101 100	105 970	95 918	82 069
Portugal					
Metal	2 500	300	426	6 000	7 000
Spain					
Metal	164 560	160 601	192 024	280 485	274 860
Austria					
Metal	171 174	38 888	50 403	144 442	108 725
Finland					
Metal	31 000	31 000	26 000	25 000	26 000
German Democratic Republic					
Metal (d)	* 133 800	* 264 100	* 138 900	—	—
Norway					
Metal	27 116	33 225	33 339	33 633	54 832
Poland					
Metal	691 000	672 000	678 000	931 000	...
Sweden					
Metal	301 000	317 000	297 000	306 000	296 000
Switzerland					
Metal	779 761	879 115	1 767 463	2 376 014	2 495 963
Yugoslavia					
Metal	116 000	114 000	74 000	(f) 35 000	...
Morocco					
Metal	158 154	186 000	201 024	199 542	150 000
Namibia					
Metal	105 000	110 785	90 325	89 000	90 000
South Africa					
Metal	190 712	170 783	158 773	130 260	189 017
Canada					
Ores & concentrates (e)	448 069	527 205	620 147	509 095	408 841
Metal	1 140 548	1 025 355	1 269 762	994 267	1 053 700
Dominican Republic					
Metal	44 153	21 786	22 861	21 955	14 878
Honduras					
Concentrates (e)	49 483	37 176	30 866	42 033	35 353
Mexico					
Ores & concentrates	4 749 987	5 144 072	2 374 656	2 002 569	2 864 110
Metal	1 565 233	1 912 392	1 904 028	1 760 000	1 552 000
USA					
Ores & concentrates (b)	25 450	607	21 929	229	8 505
Metal	588 436	708 179	922 921	1 472 712	1 430 485
Waste & scrap	498 085	782 099	1 258 484	837 440	769 187
Bolivia					
Ores & concentrates	1 117 593	1 628 049	1 232 102	769 016	* 779 000
Metal	3 550	35 568	46 376	41 353	42 242
Chile					
Metal	336 390	358 080	439 536	426 657	697 638
Peru					
Metal	282 084	534 100	496 000	588 000	625 000

## Silver

**Exports of Silver**

kilograms

Country	1988	1989	1990	1991	1992
Venezuela					
Metal	1 199	20 318	...	...	...
China					
Metal	3 420	2 450	7 153	11 721	34 134
Hong Kong					
Metal	45 332	42 361	31 126	55 009	67 240
of which: Re-exports	43 682	42 150	30 769	54 969	65 307
Waste & scrap	154 151	37 568	31 576	1 448	—
of which: Re-exports	117 678	30 128	31 114	1 447	—
Japan					
Metal	91 303	582 431	153 660	205 795	421 234
Waste & scrap	22 000	59 000	12 000	7 717	2 849
Korea, Dem. P.R. of					
Metal (d)	* 100 300	* 14 900	* 24 400	* 17 400	* 12 300
Korea, Republic of					
Ores & concentrates	—	81 000	—	—	—
Metal	81 472	85 883	100 411	79 700	200 161
Malaysia					
Metal	816	1 219	...	8 451	1 074
Myanmar (c)					
Metal	7 465	4 012	4 852	3 826	...
Philippines					
Ores & concentrates (b)	—	—	27 270	21 096	18 185
Metal	32 566	30 732	1 104	—	19 889
Singapore					
Metal	76 105	122 372	136 782	125 636	258 126
of which: Re-exports	76 105	122 372	135 679	121 948	237 172
Taiwan					
Metal	17 513	32 036	740	941	1 619
Waste & scrap	20 750	...	...	...	...
Australia					
Metal (a)	258 247	43 899	225 989	235 092	250 203
Fiji					
Metal	1 019	...	...	...	...
New Zealand (a)					
Metal	1 801	9 001	12 688	10 278	1 208
Papua New Guinea					
Metal	70 423	93 671	114 543	124 484	95 498

## Note(s):

- (1) This table excludes silver coin but includes silver shipped for minting
- (2) In this table the term 'metal' includes both unwrought and partly worked silver and alloys
- (a) Years ended 30 June of that stated
- (b) Ag content
- (c) Years ended 31 March following that stated
- (d) BGS estimates, based on known imports into certain countries
- (e) Ag content of all ores and concentrates
- (f) Data for the Federal Republic of Yugoslavia only

# Imports of Silver

Silver  
kilograms

Country	1988	1989	1990	1991	1992
United Kingdom					
Metal	1 251 280	920 008	708 813	1 216 043	1 416 753
Belgium-Luxembourg					
Ores & concentrates	450 100	183 100	145 700	609 000	—
Metal	909 309	933 163	895 133	872 042	1 324 264
Denmark					
Metal	111 733	79 130	114 601	104 658	93 481
France					
Metal	699 415	734 708	941 867	976 214	922 167
Waste & scrap	50 804	193 028	320 519	353 886	100 352
Germany, Federal Republic of					
Metal	1 381 466	2 075 274	1 656 536	1 553 968	1 299 915
Greece					
Metal	36 842	91 664	98 830	85 703	95 000
Italy					
Metal	652 254	635 900	1 173 900	1 518 320	2 746 293
Netherlands					
Metal	136 982	121 373	157 741	142 552	121 575
Portugal					
Metal	85 700	98 300	104 673	111 000	131 000
Spain					
Metal	299 859	515 588	1 041 478	1 304 167	698 885
Austria					
Metal	175 794	164 580	117 967	172 198	128 352
Bulgaria					
Metal (f)	* 6 400	* 5 700	* 1 100	* 9 500	* 5 800
Czechoslovakia					
Metal (f)	* 21 400	* 10 900	* 13 600	* 12 600	* 8 800
Faeroe Islands					
Metal	209	191	112	144	152
Finland					
Metal	114 000	185 000	149 000	77 000	125 000
German Democratic Republic					
Metal (f)	* 263 200	* 432 400	* 241 200	—	—
Iceland					
Metal	500	600	532	700	604
Malta					
Metal	1 116	993	1 367	1 674	1 886
Norway					
Metal	54 994	49 368	81 111	49 247	82 522
Sweden					
Metal	175 000	192 000	249 000	142 000	171 000
Switzerland					
Metal	1 211 052	1 879 370	2 045 272	2 563 258	2 371 942
Turkey					
Metal (b)	10 155	18 000	68 000	30 000	12 887
Yugoslavia					
Metal	16 000	10 000	11 000	(h) 1 000	...
Algeria					
Metal	15 829	22 028	6 870	...	...
Ivory Coast					
Metal	612	...	...	...	...
Morocco					
Metal	1 270	...	1 064	11 286	...
South Africa					
Metal	23 254	23 124	14 113	16 021	99 028
Tunisia					
Metal	1 966	3 349	4 486	5 622	...
Canada					
Ores & concentrates (g)	208 677	204 873	338 923	163 335	183 024
Metal	115 100	231 801	110 734	152 633	162 059
Costa Rica					
Metal	299	1 049	868	339	877
Jamaica					
Metal	827	299	75	21	285
Panama					
Metal	818	788	1 423	1 670	1 709
Trinidad & Tobago					
Metal	...	798	773	...	...

## Silver

**Imports of Silver**

kilograms

Country	1988	1989	1990	1991	1992
USA					
Ores & concentrates (c)	510 356	...	...	...	...
Metal	2 539 335	3 223 002	2 766 020	2 690 038	3 228 346
Waste & scrap	173 674	90 753	507 649	1 451 874	1 765 448
Brazil					
Metal	157 461	433 737	242 297	125 772	...
Chile					
Metal	2 019	2 330	2 007	...	512
Colombia					
Metal	1 485	1 121	3 124	...	...
Venezuela					
Metal	44 071	10 573	...	...	...
Abu Dhabi					
Metal	1 621	...	2 681	4 277	379
China					
Metal	27 136	21 304	7 936	15 802	307 138
Cyprus					
Metal	...	10 187	14 227	11 174	17 185
Hong Kong					
Metal	82 787	171 607	130 021	239 980	158 628
Waste & scrap	5 147	1 342	13	534	—
India (a)					
Metal	4 216	10 466	21 035	34 528	39 820
Indonesia					
Metal	235	1 000	7 742	6 447	4 237
Iran (d)					
Metal	10 669	10 494	...	...	...
Israel					
Metal (f)	* 27 200	* 30 900	* 33 100	* 43 700	* 44 600
Japan					
Ores & concentrates	7 207 000	9 142 000	6 390 000	8 998 000	1 107 000
Metal	1 014 731	1 265 202	1 547 669	1 050 491	769 392
Waste & scrap	20 798	37 732	111 678	263 655	319 682
Jordan					
Metal	258	283	—	187	519
Korea, Republic of					
Metal	66 760	129 056	122 949	287 487	276 343
Malaysia					
Metal	136 598	123 519	111 746	59 614	28 588
Philippines					
Metal	227	471	753	777	1 440
Saudi Arabia					
Metal	2 155	6 007	4 835	4 911	...
Singapore					
Metal	290 690	544 274	1 119 919	734 866	1 302 244
Taiwan					
Metal	139 630	128 930	120 985	143 048	219 673
Thailand					
Metal	63 790	87 221	85 552	236 295	1 394 380
Australia					
Metal (e)	10 907	402	913	137	262
New Zealand (e)					
Metal	23 890	38 697	37 351	29 274	28 667

## Note(s):

(1) This table excludes silver coin but includes silver shipped for minting

(2) In this table the term 'metal' includes both unwrought and partly worked silver and alloys

(a) Years ended 31 March following that stated

(b) Including gilt

(c) Ag content

(d) Years ended 20 March following that stated

(e) Years ended 30 June of that stated

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

(g) Ag content of all ores and concentrates

(h) Data for the Federal Republic of Yugoslavia only

## Production of Sulphur and Pyrites

tonnes (sulphur content)

Country		1988	1989	1990	1991	1992
United Kingdom						
Recovered (c)		54 500	60 200	80 700	60 100	53 900
Recovered (d)		129 000	118 000	138 000	143 000	177 000
Belgium						
Recovered (c) (d)		* 310 000	* 320 000	* 310 000	* 300 000	* 300 000
Denmark						
Recovered (d)		13 571	18 842	12 118	6 264	6 982
France						
Recovered (d)		1 232 000	1 146 000	1 149 000	1 026 000	1 000 000
Germany, Federal Republic of						
Recovered (c)		* 344 000	* 362 000	* 375 000	* 340 000	* 145 000
Recovered (d)		* 1 167 000	* 1 157 000	* 1 172 000	* 1 079 000	* 1 000 000
Recovered (e)		* 292 000	* 283 000	* 280 000	* 325 000	* 270 000
Greece						
Pyrites (45%)		58 558	57 150	41 347	35 332	31 395
Recovered (d)		* 190 000	* 190 000	* 190 000	* 200 000	* 185 000
Italy						
Pyrites (43%)		307 646	323 409	310 243	211 782	174 000
Recovered (d)		* 310 000	* 315 000	* 297 000	* 315 000	* 280 000
Netherlands						
Recovered (c) (d)		* 215 000	* 260 000	285 000	* 290 000	* 290 000
Portugal						
Pyrites (44%)		110 367	75 865	44 820	5 669	* 5 000
Recovered		* 5 000	* 3 000	* 3 000	* 4 000	* 4 000
Spain						
Pyrites (47%)		1 055 670	878 917	748 000	580 000	566 000
Recovered (c) (d) (e)		* 120 000	* 120 000	* 110 000	* 110 000	* 110 000
Austria						
Recovered		47 548	49 134	* 42 000	* 39 000	* 42 000
Bulgaria						
Pyrites (42%)		* 70 000	* 70 000	* 70 000	* 60 000	* 60 000
Recovered		* 60 000	* 60 000	* 60 000	* 50 000	* 50 000
Czechoslovakia						
Pyrites (42%)		* 60 000	* 50 000	* 50 000	* 50 000	* 50 000
Recovered		50 287	60 182	55 570	54 628	67 846
Sulphur ore		* 6 000	* 6 000	* 6 000	* 6 000	* 6 000
Finland						
Pyrites (44%)		270 570	345 240	290 157	249 721	293 464
Recovered (c)		* 240 000	* 180 000	* 237 000	* 227 000	* 225 000
Recovered (d)		39 485	32 949	37 101	31 164	37 319
German Democratic Republic						
Recovered		* 350 000	* 334 000	* 280 000	—	—
Hungary						
Pyrites		* 1 000	* 1 000	* 1 000	* 900	* 900
Recovered		* 10 000	* 10 000	* 10 000	18 785	26 709
Norway						
Pyrites (50%)		153 233	120 141	148 088	153 399	123 691
Recovered (c) (d)		* 90 000	* 88 000	* 90 000	* 90 000	* 90 000
Poland						
Frasch (g)		5 000 000	4 864 000	4 660 364	3 934 531	3 429 980
Recovered (c)		* 150 000	* 150 000	* 140 000	* 140 000	* 130 000
Recovered (d)		* 30 000	* 20 000	* 20 000	* 20 000	* 20 000
Anhydrite		* 20 000	* 20 000	* 10 000	* 10 000	* 10 000
Romania						
Pyrites (42%)		* 370 000	* 359 000	* 300 000	* 300 000	* 200 000
Recovered		* 380 000	* 375 000	* 350 000	* 350 000	* 250 000
Soviet Union						
Pyrites (46%)		* 2 150 000	* 2 150 000	* 1 900 000	* 1 700 000	* 1 400 000
Frasch		* 1 100 000	* 1 100 000	* 1 000 000	* 900 000	* 800 000
Recovered (c)		* 1 375 000	* 1 350 000	* 1 200 000	* 1 100 000	* 900 000
Recovered (d)		* 3 740 000	* 2 950 000	* 2 925 000	* 2 600 000	* 2 550 000
Sulphur ore		* 2 400 000	* 2 350 000	* 2 000 000	* 1 800 000	* 1 600 000
Sweden						
Pyrites (48%)		170 424	144 074	120 873	42 790	17 828
Recovered (c)		* 125 000	* 125 000	* 125 000	* 120 000	* 120 000
Sulphur ore		33 282	42 295	41 930	37 961	52 998
Turkey						
Pyrites (45%)		75 387	95 852	64 643	* 59 000	* 40 000
Recovered (d) (e)		* 21 000	* 62 000	* 21 000	* 22 000	* 22 000
Sulphur ore		28 196	27 455	25 618	* 22 300	* 21 000

**Production of Sulphur and Pyrites**

tonnes (sulphur content)

Country		1988	1989	1990	1991	1992
Yugoslavia						
Pyrites	(42%)	359 562	292 543	219 240	200 000	...
Recovered (c) (d)		* 173 000	* 179 000	* 178 000	* 162 000	* 152 000
Algeria						
Recovered (d)		* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Egypt						
Recovered (d)		* 2 500	* 2 500	* 2 500	* 2 500	* 2 500
Libya						
Recovered (d)		* 14 000	* 14 000	* 14 000	* 14 000	* 14 000
Namibia						
Pyrites	(50%)	113 341	98 266	69 463	63 560	82 095
South Africa						
Pyrites	(48%)	504 743	460 974	451 584	292 539	296 200
Recovered (d) (h)		* 120 000	(i) 224 465	(i) 236 792	(i) 228 145	(i) 221 496
Recovered (c)		111 508	...	...	...	...
Zaire						
Recovered (c)		* 32 000	* 29 000	* 23 500	* 16 000	* 11 000
Zambia (j)						
Pyrites	(43%)	28 817	25 056	30 063	33 300	32 300
Recovered (c)		* 83 000	* 78 000	* 71 000	* 69 000	* 75 000
Zimbabwe						
Pyrites	(42%)	16 657	19 976	28 035	29 337	27 865
Recovered		* 5 000	* 5 000	* 5 000	* 5 000	* 4 500
Canada						
Recovered (c)		879 000	836 000	899 000	872 000	931 000
Recovered (d)		8 106 641	6 868 930	6 873 495	6 937 884	* 7 000 000
Cuba						
Recovered (d)		* 5 000	* 6 000	* 5 000	* 4 000	* 5 000
Mexico						
Frasch		1 628 054	1 531 314	1 440 580	1 040 268	709 767
Recovered (c)		* 240 000	* 286 000	* 290 000	* 280 000	* 280 000
Recovered (d)		510 160	555 039	701 113	754 097	775 216
Netherlands Antilles						
Recovered (d)		20 685	20 205	19 469	25 513	* 25 000
Trinidad & Tobago						
Recovered (d)		* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
USA						
Pyrites (a)	(40%)	3 000	4 000	4 000	4 000	3 000
Frasch		3 174 000	3 888 000	3 726 000	2 869 000	2 320 000
Recovered (c)		1 125 000	1 190 000	1 294 000	1 302 000	1 292 000
Recovered (d)		6 444 000	6 510 000	6 536 000	6 645 000	7 048 000
Bolivia (f)						
Sulphur ore		6 733	8 167	2 101	2 795	15
Brazil						
Pyrites		108 895	77 461	51 859	71 903	42 866
Recovered (c)		152 013	163 981	165 891	163 576	184 051
Recovered (d)		61 396	60 121	58 322	46 826	58 513
Chile						
Recovered (c)		131 000	180 000	187 000	278 000	306 000
Sulphur ore (b)		37 649	15 963	28 582	16 884	24 034
Colombia						
Recovered (d)		8 233	8 700	* 8 000	9 308	* 9 200
Sulphur ore		42 617	41 722	39 686	46 624	44 969
Ecuador						
Recovered (d)		* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Sulphur ore		* 4 500	* 4 300	* 4 000	* 4 000	* 4 000
Peru						
Recovered (c)		* 66 000	* 66 000	* 66 000	* 66 000	* 66 000
Venezuela						
Recovered (d)		* 125 000	* 125 000	105 760	82 855	* 85 000
Abu Dhabi						
Recovered (d)		* 110 000	* 80 000	* 90 000	* 74 000	* 75 000
Bahrain						
Recovered (d)		47 690	* 48 000	* 48 000	38 000	59 400
China						
Pyrites	(45%)	* 3 900 000	* 4 270 000	4 400 000	4 752 000	5 070 000
Recovered		* 550 000	* 600 000	* 650 000	* 650 000	* 650 000
Sulphur ore		* 300 000	* 300 000	* 320 000	* 320 000	* 320 000
Cyprus						
Pyrites	(44%)	49 784	25 944	—	—	—

## Production of Sulphur and Pyrites

tonnes (sulphur content)

Country		1988	1989	1990	1991	1992
India						
Pyrites	(37%)	10 973	14 381	21 000	41 000	30 000
Recovered (c)		* 125 000	* 125 000	* 125 000	* 125 000	* 130 000
Indonesia						
Sulphur ore		4 321	3 939	3 628	* 3 600	* 3 600
Iran						
Recovered (c)		* 25 000	* 40 000	* 45 000	* 50 000	* 50 000
Recovered (d)		* 206 000	* 460 000	* 635 000	* 650 000	* 700 000
Iraq						
Frasch		* 958 000	* 960 000	* 800 000	* 250 000	* 500 000
Recovered (d)		* 227 000	* 370 000	* 380 000	* 50 000	* 70 000
Israel						
Recovered (d)		68 300	67 600	* 64 000	* 66 000	* 60 000
Japan						
Pyrites	(49%)	70 915	62 268	53 363	30 000	35 000
Recovered (c) (g)		1 267 934	1 384 318	1 336 000	1 382 000	1 497 000
Recovered (d)		1 093 000	1 176 000	1 268 000	1 244 000	1 340 000
Korea, Dem. P.R. of						
Pyrites	(40%)	* 200 000	* 200 000	* 200 000	* 210 000	* 210 000
Recovered (c)		* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Korea, Republic of						
Recovered (c)		* 55 000	* 55 000	* 55 000	* 55 000	* 55 000
Recovered (d)		* 35 000	* 36 000	* 36 000	* 37 000	* 37 000
Kuwait						
Recovered (d)		360 000	375 000	300 000	—	* 75 000
Oman						
Recovered (c) (d)		* 47 000	* 57 000	* 66 000	* 70 000	* 70 000
Pakistan						
Recovered		* 25 000	* 25 000	* 25 000	* 26 000	* 26 000
Philippines						
Pyrites	(46%)	174 491	165 211	134 316	150 000	70 000
Recovered (c)		* 150 000	* 185 000	* 185 000	* 150 000	* 110 000
Qatar						
Recovered (d)		* 55 000	* 52 000	* 52 000	* 52 000	* 52 000
Saudi Arabia						
Recovered (d)		1 378 000	1 423 000	1 435 000	2 000 000	* 2 000 000
Syria						
Recovered (d)		* 40 000	* 40 000	29 652	30 000	* 30 000
Taiwan						
Recovered		86 541	76 060	95 533	125 819	118 621
Australia						
Recovered (c)		* 200 000	* 200 000	* 200 000	* 200 000	* 200 000
Recovered (d)		* 9 000	* 10 000	* 10 000	* 10 000	* 10 000
Total Pyrites		10 400 000	10 400 000	9 800 000	9 300 000	9 100 000
Total Frasch		11 900 000	12 300 000	11 600 000	9 000 000	7 700 000
Total Recovered		35 700 000	34 700 000	35 000 000	34 300 000	34 500 000
Total Sulphur ore		2 900 000	2 800 000	2 500 000	2 300 000	2 100 000
World total (all forms)		60 900 000	60 200 000	58 900 000	54 900 000	53 400 000

## Note(s):

(1) Pyrites: nominal sulphur content is shown in parentheses

(a) Including hydrogen sulphide and liquid sulphur dioxide

(b) Including caliche at 45% S content

(c) From smelter gases

(d) From petroleum refining and/or natural gas

(e) Other

(f) Exports

(g) Including S content of sulphur ore

(h) Including production from synthetic fuels

(i) Including recovered from smelter gases

(j) Years ended 31 March following that stated

**Exports of Sulphur and Pyrites**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Sulphur					
Crude	3 325	3 931	3 863	3 440	6 191
Sublimed & precipitated	1 089	1 353	2 184	1 583	1 640
Belgium-Luxembourg					
Pyrites	265	245	206	166	3 139
Sulphur					
Crude	19 883	27 217	29 325	16 549	21 092
Sublimed & precipitated	85	59	34	112	49
Denmark					
Sulphur					
Crude	7 750	8 853	3 379	5 155	5 798
Sublimed & precipitated	2 254	34	67	—	—
France					
Sulphur					
Crude	537 359	417 132	501 702	365 575	464 021
Refined	9 424	7 391	7 472	5 068	8 872
Sublimed & precipitated	556	356	430	588	426
Germany, Federal Republic of					
Pyrites	1 318	1 499	1 274	991	82 164
Sulphur					
Crude	697 106	626 088	718 606	682 649	728 018
Sublimed & precipitated	235	315	8 546	302	365
Greece					
Sulphur	743	8 266	302	6 962	5 938
Italy					
Pyrites	5 351	5 780	5 752	5 230	12 170
Sulphur					
Crude	954	4 178	27 521	33 478	69 163
Sublimed & precipitated	279	481	238	1 855	592
Netherlands					
Sulphur	92 946	144 210	148 042	135 135	171 957
Spain					
Pyrites	162 984	86 121	13 651	7 685	20 953
Sulphur					
Crude	29 485	47 370	44 846	62 137	40 367
Sublimed & precipitated	39	85	1 690	1 689	334
Albania					
Pyrites	62 000	11 000	(c)* 15 000	...	...
Finland					
Pyrites (c)	* 288 900	* 383 400	* 351 900	* 331 900	* 290 600
Hungary					
Sulphur	34 508	38 081	17 000	10 000	15 250
Norway					
Pyrites	92 688	24 090	48 565	69 528	—
Sulphur					
Crude	800	—	10	1	—
Sublimed & precipitated	1 124	99	3 664	5 865	6 361
Poland					
Sulphur	3 878 000	3 636 000	3 815 000	2 812 000	2 625 000
Soviet Union					
Pyrites	246 000	161 000	174 000	...	...
Sulphur (c)	* 59 200	* 42 200	* 2 500	* 2 500	* 6 000
Sweden					
Sulphur					
Crude	15 597	36 528	38 299	29 757	39 468
Sublimed & precipitated	2 363	3 077	841	643	246
Switzerland					
Sulphur	12 389	14 331	15 791	28 975	15 793
Yugoslavia					
Pyrites	36 928	30 212	32 724	(f) 20 196	...
Namibia					
Pyrites (e)	...	89 820	84 097	...	...
South Africa					
Sulphur	24 852	19 449	17 412	15 861	23 951



## Exports of Sulphur and Pyrites

Country	1988	1989	1990	1991	1992
Canada					
Pyrites	4 585	10 540	119 722	3	1
Sulphur	7 381 005	5 516 208	6 057 556	5 303 666	5 653 525
Mexico					
Sulphur	1 738 934	1 208 901	1 330 909	1 335 874	1 013 318
Netherlands Antilles					
Sulphur	20 685	20 205	19 469	25 513	...
USA					
Sulphur					
Crude	(d) 1 223 357	684 777	688 963	943 166	735 080
Refined	...	159 712	111 694	89 942	51 175
Sublimed & precipitated	...	191 743	128 493	258 788	180 447
Bolivia					
Sulphur	6 767	8 269	2 310	2 952	...
Colombia					
Sulphur	2 666	843	3 482	2 359	1 796
Venezuela					
Sulphur	...	...	16 712	...	...
Bahrain					
Sulphur	13 468	36 244	39 906	44 754	...
China					
Pyrites	200 507	230 312	207 079	195 388	146 969
Sulphur					
Crude	32 664	8 451	85	486	804
Sublimed & precipitated	(c)* 500	(c)* 200	6	316	318
Cyprus					
Pyrites	6 610	—	1 630	—	—
Iran					
Sulphur (c)	* 73 400	* 105 300	* 251 400	* 175 100	* 151 400
Japan					
Sulphur					
Crude	170 366	262 621	385 385	358 370	390 306
Sublimed & precipitated	2 294	1 656	1 532	1 579	1 848
Korea, Republic of					
Sulphur					
Crude	5 191	5 605	6 400	5 589	4 966
Sublimed & precipitated	37	184	603	373	634
Kuwait					
Sulphur	—	764 058	342 922	—	—
Qatar					
Sulphur	—	59 162	51 045	—	68 397
Saudi Arabia					
Sulphur					
Crude	148 727	580 942	639 395	452 219	...
Sublimed & precipitated	831 785	410 921	1 012 604	1 055 731	...
Singapore					
Sulphur					
Crude	(a) 26 925	(a) 21 342	35 729	18 848	1 791
Sublimed & precipitated	23 408	11 719	19 981	11 626	38 448
Thailand					
Sulphur					
Crude	592	133	1 824	766	343
Sublimed & precipitated	45	—	35	16	30
Australia					
Sulphur (b)	46 010	558	1 149	1 541	30 812

(a) Re-exports

(b) Years ended 30 June of that stated

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

(d) Including refined, sublimed and precipitated

(e) S content

(f) Data for the Federal Republic of Yugoslavia only

**Imports of Sulphur and Pyrites**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Pyrites	13 020	8 928	14 325	8 373	268
Sulphur					
Crude	682 897	641 460	470 862	439 315	359 210
Sublimed & precipitated	910	1 103	376	117	203
Belgium-Luxembourg					
Pyrites	223 932	147 738	85 356	78 625	6 501
Sulphur					
Crude	449 888	434 603	447 778	436 148	476 805
Sublimed & precipitated	1 788	848	390	638	54
Denmark					
Sulphur					
Crude	72 813	72 551	52 867	27 386	27 182
Sublimed & precipitated	87	43	41	65	15
France					
Pyrites	1 317	1 188	2 865	840	1 243
Sulphur					
Crude	746 655	628 330	651 213	526 822	263 261
Refined	11 957	8 594	10 769	32 708	28 840
Sublimed & precipitated	535	604	353	348	647
Germany, Federal Republic of					
Pyrites	159 233	65 176	84 310	120 976	103 683
Sulphur					
Crude	176 187	131 334	97 648	68 160	37 551
Sublimed & precipitated	1 009	924	5 891	506	547
Greece					
Pyrites	10 588	5	9	1	8
Sulphur					
Crude	79 573	94 693	90 179	187 196	77 541
Sublimed & precipitated	122	3	15	75	139
Irish Republic					
Sulphur					
Crude	295	274	381	480	2 170
Sublimed & precipitated	85	15	31	28	3
Italy					
Pyrites	118 589	88 116	94 974	47 463	7 413
Sulphur					
Crude	264 903	186 303	174 421	191 412	152 293
Sublimed & precipitated	1 111	1 434	1 415	1 036	677
Netherlands					
Pyrites	411	491	1 203	463	390
Sulphur					
Crude	171 058	199 528	188 336	130 343	119 538
Sublimed & precipitated	398	377	278	154	142
Portugal					
Sulphur	17 913	16 828	14 830	16 566	10 049
Spain					
Sulphur					
Crude	54 839	39 662	51 343	47 418	53 895
Sublimed & precipitated	59	99	1 316	49	98
Austria					
Pyrites	746	800	819	642	702
Sulphur					
Crude	87 996	84 879	59 329	48 268	59 141
Sublimed & precipitated	242	190	2 657	374	349
Bulgaria					
Pyrites (a)	* 77 000	...	...	...	...
Sulphur (a)	* 61 000	* 37 000	* 17 000	* 37 000	...
Czechoslovakia					
Sulphur	486 000	419 000	396 000	199 000	180 000
Finland					
Sulphur	42 256	54 016	21 197	7 395	811
German Democratic Republic					
Sulphur (a)	* 134 000	* 135 000	...	—	—
Hungary					
Pyrites	28 362	19 000	20 000	—	—
Sulphur	183 662	155 076	47 573	19 000	19 444

## Imports of Sulphur and Pyrites

Country	1988	1989	1990	1991	1992
Norway					
Pyrites	29 164	68 173	19 340	30	14 373
Sulphur					
Crude	3 503	3 473	3 652	2 981	2 174
Sublimed & precipitated	42	528	106	485	476
Romania					
Sulphur	356 300	347 200	262 000	167 000	76 000
Soviet Union					
Sulphur (a)	* 748 000	* 1 321 400	* 949 700	* 642 900	* 311 800
Sweden					
Pyrites	125 817	188 101	225 251	167 760	134 855
Sulphur					
Crude	8 171	5 574	5 416	5 757	16 538
Sublimed & precipitated	7 935	11 315	10 803	7 680	6 921
Switzerland					
Pyrites	218	202	212	209	203
Sulphur					
Crude	54 829	59 932	56 164	51 381	30 020
Sublimed & precipitated	78	43	52	37	128
Turkey					
Pyrites	64 185	38	15 053	4 604	11 825
Sulphur					
Crude	139 115	126 749	160 873	123 525	148 182
Sublimed & precipitated	46	6 746	304	344	352
Yugoslavia					
Pyrites	30 455	10 774	3 633	(d) 8 743	...
Sulphur					
Crude	203 568	138 545	140 056	(d) 2 332	...
Refined	6 775	5 596	4 746	(d) 1 903	...
Sublimed & precipitated	175	73	50	(d) 181	...
Algeria					
Sulphur					
Crude	80 020	89 824	48 285	71 949	72 000
Sublimed & precipitated	0	1	1	900	...
Egypt					
Sulphur					
Crude	164 873	136 878	57 900	86 200	210 761
Sublimed & precipitated	481	14 421	...	...	...
Ethiopia					
Sulphur	2	716	1 601	30	...
Gabon					
Sulphur	4 000	4 000	2 200	2 200	...
Kenya					
Sulphur					
Crude	684	5 000	700	500	7 000
Sublimed & precipitated	1 323	...	...	...	...
Morocco					
Sulphur	2 924 965	1 095 286	2 739 592	2 228 027	2 653 000
Niger					
Sulphur	20 614	18 600	23 800	18 200	15 000
Nigeria					
Sulphur	6 000	2 000	1 400	4 900	10 000
Senegal					
Sulphur	155 000	157 636	237 204	269 000	315 000
South Africa					
Sulphur					
Crude	1 013 582	274 687	328 334	280 195	249 858
Sublimed & precipitated	91	451	444	54	...
Tanzania					
Sulphur	678	3 062	11 000	9 000	...
Tunisia					
Sulphur	1 305 036	1 234 789	1 286 606	1 154 746	1 414 761
Zimbabwe					
Sulphur	30 426	20 000	19 903	23 000	13 000
Canada					
Pyrites	5 970	4 588	2 860	6 710	9 475
Sulphur					
Crude	32 217	18 311	13 247	9 026	8 645
Sublimed & precipitated	2 314	1 845	1 620	1 268	948

**Imports of Sulphur and Pyrites**

tonnes

Country	1988	1989	1990	1991	1992
Cuba					
Sulphur	166 275	154 191	* 50 000	* 150 000	* 100 000
El Salvador					
Sulphur	8 949	228	2 127	4 296	3 000
Guatemala					
Sulphur	951	1 749	1 951	1 156	2 379
Jamaica					
Sulphur	3	3 286	6 010	6 033	6 031
Mexico					
Sulphur					
Crude	604 144	284 990	517 155	249 969	249 000
Sublimed & precipitated	1 133	288	372	772	843
Nicaragua					
Sulphur	1 000	1 000	...	250	127
USA					
Pyrites	11 435	29 007	32 061	2 046	198
Sulphur					
Crude	1 995 524	2 240 139	2 557 272	3 013 412	2 724 192
Sublimed & precipitated	...	19 503	13 870	7 840	428
Argentina					
Sulphur	53 882	50 663	82 034	105 200	55 509
Brazil					
Sulphur	1 145 282	1 093 351	923 355	1 065 649	861 660
Chile					
Sulphur	69 540	51 154	64 854	40 459	32 749
Colombia					
Sulphur	25 984	31 904	34 975	35 024	43 639
Ecuador					
Sulphur	1 367	502	265	1 914	133
Paraguay					
Sulphur	1 593	1 200	1 504	2 517	1 698
Peru					
Sulphur	6 271	3 000	3 649	3 360	3 000
Suriname					
Sulphur	784	781	851	1 216	...
Uruguay					
Sulphur	21 848	18 700	14 000	13 723	12 600
Venezuela					
Sulphur	82	6 127	164	252	192
Bangladesh (b)					
Sulphur	18 593	21 196	43 057	41 915	31 000
China					
Sulphur					
Crude	20 598	126 553	92	26 290	460
Sublimed & precipitated	...	...	37 863	24 655	44 605
Cyprus					
Sulphur	2 600	2 298	1 758	1 356	1 190
Hong Kong					
Sulphur					
Crude	345	344	623	881	444
Sublimed	262	849	574	572	614
India (c)					
Sulphur					
Crude	1 298 963	1 343 146	1 199 153	1 082 155	1 398 379
Sublimed & precipitated	1 362	924	1 275	1 115	1 374
Indonesia					
Sulphur					
Crude	61 970	49 605	143 192	320 052	188 667
Sublimed & precipitated	283 607	249 029	117 131	22 653	140 785
Israel					
Sulphur	253 316	143 832	47 566	130 422	44 386
Japan					
Pyrites	259 652	327 863	317 550	321 293	303 426
Sulphur	2 305	287	939	453	726

**Imports of Sulphur and Pyrites**

Country	1988	1989	1990	1991	1992
Jordan					
Sulphur					
Crude	267 996	89 249	38 410	281 154	64 811
Sublimed & precipitated	—	—	62 444	22 720	50 884
Korea, Republic of					
Sulphur					
Crude	585 328	554 925	517 345	472 320	532 189
Sublimed & precipitated	2 531	2 830	1 766	1 253	1 897
Malaysia					
Sulphur					
Crude	4 025	6 709	8 000	23 990	24 505
Sublimed & precipitated	15 297	27 873	...	8 534	9 040
Pakistan (b)					
Sulphur	36 396	44 000	27 154	23 461	34 550
Philippines					
Sulphur					
Crude	8 564	30 357	10 070	10 982	8 068
Sublimed & precipitated	14 062	2 897	10 215	4 079	17 042
Singapore					
Sulphur					
Crude	308	174	235	919	346
Sublimed & precipitated	192	127	195	101	207
Sri Lanka					
Sulphur					
Crude	712	...	525	1 024	735
Sublimed & precipitated	153	...	666	697	323
Syria					
Sulphur	27 983	22 487	39 000	39 000	6 000
Taiwan					
Sulphur					
Crude	59 160	93 505	114 827	129 775	40 687
Sublimed & precipitated	199 815	152 578	116 400	96 207	82 083
Thailand					
Sulphur					
Crude	23 148	2 403	12 648	4 130	31 680
Refined	81 898	71 444	69 780	92 744	57 391
Sublimed & precipitated	187	205	255	198	174
Australia					
Sulphur	555 678	416 000	312 000	62 000	97 000
New Zealand (b)					
Sulphur					
Crude	125 304	97 261	156 722	83 775	122 411
Sublimed & precipitated	105	52	128	129	125

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

(b) Years ended 30 June of that stated

(c) Years ended 31 March following that stated

(d) Data for the Federal Republic of Yugoslavia only

## Production of Talc

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	14 182	15 413	14 781	10 818	5 216
France	320 000	258 000	287 000	310 000	350 000
Germany, Federal Republic of	19 500	20 500	21 400	22 700	23 500
Greece	1 587	10 518	1 114	1 012	* 700
Italy	159 603	145 888	151 566	162 102	170 000
Portugal	7 187	11 651	11 535	10 794	9 166
Spain	68 979	71 660	* 70 000	* 70 000	* 70 000
Austria	132 974	133 078	133 971	161 425	145 664
Finland	457 410	473 056	273 214	261 350	322 859
Hungary	1 326	1 041	675	625	* 1 000
Norway	* 100 000	* 100 000	* 100 000	* 80 000	* 60 000
Romania	* 50 000	45 638	* 20 000	* 10 000	6 330
Soviet Union	* 530 000	* 530 000	* 500 000	* 450 000	* 400 000
Sweden	16 550	17 975	15 021	19 159	* 20 000
Turkey	5 397	6 280	5 557	6 122	3 281
Yugoslavia	29 204	26 614	20 069	(e)* 17 000	* 15 000
Egypt (d)	7 268	6 526	6 340	8 340	8 319
South Africa					
Talc	10 111	11 596	11 179	8 235	10 266
Wonderstone (pyrophyllite)	3 162	3 942	2 759	4 448	3 053
Zambia	73	144	160	89	366
Zimbabwe	356	1 513	1 767	1 676	2 203
Canada	134 000	150 000	148 000	123 000	104 000
Mexico	13 645	13 534	13 477	11 883	19 559
USA					
Talc	1 136 347	1 171 871	1 185 142	1 037 196	997 268
Pyrophyllite	97 000	81 301	82 025	...	...
Argentina					
Talc	26 108	26 658	17 994	23 060	21 580
Pyrophyllite	671	1 310	1 491	2 261	3 020
Brazil					
Talc (b)	339 077	445 329	231 796	* 250 000	* 250 000
Agalmatolite (b)	113 930	114 556	107 577	* 110 000	* 110 000
Pyrophyllite (b)	60 070	46 186	30 400	* 40 000	* 40 000
Chile	1 070	835	898	548	1 493
Colombia	10 353	9 196	10 390	11 773	13 340
Peru	10 650	* 9 000	* 9 000	* 10 100	* 10 000
Uruguay	1 460	1 535	1 412	716	1 052
Venezuela	* 32 000	* 32 000	* 32 000	* 32 000	* 32 000
China	* 1 000 000	2 056 400	2 545 000	* 2 600 000	* 2 650 000
India					
Pyrophyllite	64 923	94 264	* 80 000	84 577	* 85 000
Steatite	417 493	414 268	406 000	424 000	* 425 000
Iran (a)	29 261	11 039	31 087	6 676	23 707
Japan					
Talc	49 797	55 665	61 550	65 633	61 120
Pyrophyllite	949 973	922 213	890 168	903 823	771 078
Korea, Dem. P.R. of	* 100 000	* 100 000	* 170 000	* 170 000	* 170 000
Korea, Republic of					
Talc	146 478	162 098	181 660	170 563	149 862
Pyrophyllite	673 776	770 298	657 611	573 208	602 580
Nepal (c)	4 430	6 726	1 798	3 500	3 170
Pakistan	39 402	38 290	30 177	33 643	23 676
Taiwan	21 603	22 559	22 123	18 518	6 085
Thailand	42 128	47 041	33 650	48 265	39 424
Australia					
Talc	201 740	* 200 000	200 000	210 000	* 210 000
Pyrophyllite	4 030	* 4 000	5 000	6 000	* 5 000
World total	7 700 000	8 900 000	8 800 000	8 700 000	8 500 000

(a) Years ended 20 March following that stated

(b) Including beneficiated and directly shipped material

(c) Years ended 15 July of that stated

(d) Years ended 30 June of that stated

(e) Excluding data from August to December for the Republic of Croatia

## Exports of Talc

Country	1988	1989	1990	1991	1992
United Kingdom	1 978	1 844	1 774	1 925	2 078
Belgium-Luxembourg	64 113	66 483	59 074	67 865	56 875
France	126 413	146 352	147 109	156 799	159 058
Germany, Federal Republic of	6 482	8 366	7 353	7 278	5 350
Greece	259	167	646	637	273
Italy	42 394	41 797	42 144	38 219	46 260
Netherlands	12 810	18 491	19 449	25 858	27 088
Spain	17 213	14 321	10 330	7 531	9 571
Austria	115 565	116 949	119 546	125 532	130 156
Czechoslovakia (a)	* 6 300	* 5 600	* 3 800	* 3 700	* 3 900
Finland	72 537	90 635	105 782	(a)* 77 900	(a)* 90 300
Norway	41 090	44 292	43 570	33 926	35 562
Sweden	14 879	17 205	12 160	17 388	20 553
Switzerland	146	147	179	153	252
Turkey	651	135	84	125	169
Egypt	528	285	...	...	...
Canada	45 925	43 740	40 119	34 325	32 214
USA	382 557	321 060	200 276	178 711	176 795
Brazil	3 851	895	1 598	1 957	1 547
China	746 197	943 381	869 855	948 296	1 048 450
Hong Kong (c)	50 559	50 991	42 136	41 623	26 984
India (b)	15 629	16 169	14 402	15 308	16 551
Japan	2 658	2 476	3 160	3 547	4 012
Jordan	70	—	1 178	20	88
Korea, Dem. P.R. of (a)	* 21 100	* 15 200	* 7 200	* 7 100	* 8 600
Korea, Republic of					
Talc	36 073	34 182	33 055	21 392	9 011
Pyrophyllite	221 903	259 580	256 058	257 321	216 759
Singapore	2 182	1 890	1 358	895	1 857
of which: Re-exports	2 169	1 869	1 240	812	1 811
Taiwan	246	290	1 741	1 033	681
Thailand	1 709	4 999	3 074	7 216	2 090
Australia (d)	165 211	136 519	169 558	168 835	152 007

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

(b) Years ended 31 March following that stated

(c) Re-exports

(d) Years ended 30 June of that stated

## Imports of Talc

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	60 243	73 588	83 413	85 361	84 826
Belgium-Luxembourg	100 218	83 241	91 722	82 132	108 598
Denmark	10 364	12 426	10 279	10 268	11 748
France	22 992	25 979	25 377	24 490	24 589
Germany, Federal Republic of	173 702	194 995	197 506	219 661	234 114
Greece	2 614	3 141	2 622	3 797	3 114
Irish Republic	1 647	1 646	1 117	1 757	1 100
Italy	36 134	45 074	45 699	34 025	39 667
Netherlands	78 801	81 808	73 985	73 791	83 187
Portugal	10 208	9 434	11 952	10 859	11 525
Spain	28 341	27 695	32 505	41 725	37 196
Austria	8 179	12 980	9 953	10 832	12 341
Czechoslovakia (a)	* 900	* 700	* 1 100	* 600	* 300
Finland	568	612	458	340	412
German Democratic Republic (a)	* 1 700	* 3 000	* 2 300	—	—
Hungary	6 433	5 973	4 375	...	3 439
Norway	11 192	6 613	9 462	13 050	14 844
Poland	30 083	22 905	11 367	12 577	...
Soviet Union (a)	* 3 000	* 3 700	* 19 500	* 10 100	* 8 700
Sweden	32 668	33 923	25 276	26 668	26 309
Switzerland	13 734	15 072	15 261	14 510	12 471
Turkey	689	608	1 322	1 235	1 441
Yugoslavia	5 099	4 389	4 360	(c) 1 322	...
Algeria	1 835	623	342	612	...
Egypt	1 617	4 511	...	...	...
Ivory Coast	1 505	...	...	...	...
Kenya	5 309	...	...	...	...
Morocco	1 914	1 481	1 566	2 045	2 175
South Africa	4 500	3 972	4 654	6 300	5 303
Tunisia	1 222	1 262	1 146	1 231	2 058
Canada	39 640	49 373	44 978	44 996	47 351
Costa Rica	873	1 144	1 235	1 097	1 616
El Salvador	421	526	452	437	...
Guatemala	296	290	357	501	524
Honduras	231	313	310	288	166
Jamaica	636	...	758	671	633
Mexico	107 618	110 013	97 178	105 675	103 290
Panama	374	367	435	574	657
Trinidad & Tobago	2 813	604	...	629	524
USA	83 375	76 531	63 255	68 383	76 010
Argentina	778	386	432	...	1 825
Chile	16 216	11 707	...	3 021	3 580
Colombia	2 101	2 197	2 273	1 506	2 371
Ecuador	676	756	972	...	762
Peru	619	166	278	454	...
Venezuela	12 680	1 671	2 870	10 169	11 495
Bangladesh (b)	4 001	3 496	3 438	...	...
China	(a)* 1 300	(a)* 1 100	207	289	1 376
Cyprus	454	368	356	515	419
Hong Kong	49 804	51 514	52 127	40 782	24 043
Indonesia	28 569	27 744	43 770	28 890	39 567
Israel (a)	* 200	* 1 000	* 2 500	* 2 000	* 1 800
Japan	660 570	763 535	666 040	698 683	629 347
Jordan	395	1 074	1 105	940	1 685
Korea, Republic of	97 976	123 409	1 721 903	178 349	203 615
Malaysia	13 757	22 715	...	18 142	27 750
Pakistan (b)	1 564	...	783	1 183	1 025
Philippines	9 800	10 234	11 103	11 392	9 618
Saudi Arabia	3 538	4 445	5 227	5 752	...
Singapore	7 127	6 508	6 119	7 164	9 909
Sri Lanka	1 777	...	2 059	1 246	2 020



Talc  
tonnes

## Imports of Talc

Country	1988	1989	1990	1991	1992
Syria	...	...	1 368	...	...
Taiwan	37 337	54 693	62 663	81 256	103 818
Thailand	29 962	33 626	36 612	37 078	47 798
Australia (b)	312	578	631	529	562
New Zealand (b)	1 945	1 586	1 491	1 571	1 436

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

(b) Years ended 30 June of that stated

(c) Data for the Federal Republic of Yugoslavia only

**Production of Tantalum and Niobium Minerals**

tonnes

Country		1988	1989	1990	1991	1992
Spain						
Tantalite	( — , 25%)	* 11	* 11	* 10	* 8	* 8
Namibia						
Tantalite	( — , 14%)	7	6	4	0	0
Nigeria						
Columbite	(43%, 6%)	56	44	45	36	* 40
Rwanda						
Columbite-tantalite	(30%, 23%)	7	64	110	* 100	* 100
Zaire						
Columbite-tantalite	(27%, 27%)	34	48	36	57	29
Zimbabwe						
Columbite-tantalite	(11%, 28%)	66	32	35	111	94
Canada						
Pyrochlore	(42%, —)	5 600	5 600	5 600	5 600	5 500
Tantalite	( 3%, 30%)	37	253	287	310	160
Brazil						
Pyrochlore	(42%, —)	35 670	28 398	32 217	* 33 000	* 32 000
Columbite-tantalite	(20%, 30%)	402	480	310	290	* 200
Djalmaite	( 1%, 50%)	16	13	9	* 10	* 10
Malaysia						
Struverite	( — , 10%)	40	242	316	401	397
Thailand						
Columbite-tantalite	(17%, 25%)	124	109	9	3	—
Struverite	( — , 6%)	788	99	122	—	—
Australia						
Columbite-tantalite	(20%, 33%)	277	555	529	703	* 1 000
World total concentrates		43 000	36 000	40 000	41 000	39 500
Nb content		* 17 500	* 14 600	* 16 100	* 16 500	* 16 100
Ta content		* 300	* 500	* 450	* 500	* 550

## Note(s):

- (1) Niobium and tantalum minerals are believed to be produced also in the Soviet Union and China, and minor quantities in Argentina, Burundi, French Guiana and Zambia
- (2) The figures in this table refer to gross tonnage of tantalum and niobium concentrates
- (3) Estimated average niobium and tantalum contents are given in the form (Nb%,Ta%) for each country and each mineral, relating where possible to the later years
- (4) 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 60% of all tantalum recovered
- (5) 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**

Country	1988	1989	1990	1991	1992
United Kingdom					
Tantalum	38	48	39	79	134
France					
Tantalum	25	27	27	33	43
Germany, Federal Republic of					
Niobium & tantalum ores	95	157	364	124	133
Tantalum	115	130	93	95	83
Italy					
Tantalum	5	17	12	3	7
Netherlands					
Tantalum	—	20	1	0	—
Austria					
Tantalum	38	31	56	34	48
Zaire					
Columbite-tantalite	...	* 50	* 100	...	...
Canada					
Niobium & tantalum ores (a)	* 4 100	* 5 200	* 4 700	* 5 200	* 5 300
Tantalum	255	67	5	2	5
USA					
Tantalum ores & concentrates	97	9	576	11	17
Tantalum	357	500	313	328	227
Niobium	* 55	...	...	...	...
Brazil					
Columbite-tantalite	346	215	156	54	70
Japan					
Tantalum	30	22	28	33	44
Malaysia					
Columbite & tantalite	23	192	...	140	150
Tin slags	19 585	11 381	3 636	45	—
Singapore					
Tantalum ores & concentrates (b)	125	...	...	...	...
Tin slags	1 463	544	1 491	424	981
of which: Re-exports	690	200	1 100	117	652
Taiwan					
Tantalum	140	30	21	16	19
Thailand					
Columbite & tantalite	243	335	68	28	4
Tin slags	2 110	1 061	800	668	—
Australia					
Columbite-tantalite (c)	397	241	231	421	468
Tantalum (c)	...	275	123	1 117	207

## Note(s):

(1) 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) Re-exports

(c) Years ended 30 June of that stated

**Imports of Tantalum and Niobium**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Niobium & tantalum ores	1 120	2 270	1 432	1 721	1 957
Tantalum	66	84	84	133	418
Belgium-Luxembourg					
Niobium & tantalum ores	534	24	13	32	0
Tantalum	55	23	14	9	5
France					
Tantalum	45	30	34	35	39
Germany, Federal Republic of					
Tantalum	202	218	196	144	137
Italy					
Tantalum	5	4	1	2	3
Austria					
Tantalum	68	65	42	92	53
USA					
Tantalum concentrates	639	1 787	1 047	930	1 367
Niobium concentrates	1 689	2 227	1 950	1 607	2 428
Tantalum	236	111	99	139	108
Niobium	20	9	2	1	1
Japan					
Niobium ores & concentrates	1 010	816	1 171	1 347	1 169
Tantalum	107	64	55	76	61
Singapore					
Tantalum ores & concentrates	201	...	...	...	...
Tin slags	2 993	2 085	136	3	16

Note(s):

(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

## Mine Production of Tin

tonnes (metal content)

Country	1988	1989	1990	1991	1992
United Kingdom	3 419	3 846	3 389	2 326	2 044
Portugal	57	63	1 381	3 133	3 009
Spain	66	56	49	19	7
Czechoslovakia	* 600	500	336	10	—
German Democratic Republic	2 474	2 413	1 806	—	—
Soviet Union	* 15 000	* 14 000	* 13 000	* 12 000	* 12 000
Namibia	1 187	1 120	921	17	11
Niger	102	63	38	19	40
Nigeria	245	279	338	400	400
Rwanda	168	767	734	* 700	* 500
South Africa	1 377	1 306	1 140	1 042	592
Zaire	1 943	1 642	1 555	1 200	700
Zimbabwe	855	849	839	797	716
Canada	3 840	3 599	4 035	* 4 500	—
Mexico	274	159	5	12	6
USA	* 100	* 100	* 100	* 100	* 100
Argentina	446	405	123	—	—
Bolivia	10 758	15 849	17 249	16 830	16 516
Brazil	44 102	50 232	39 149	29 253	27 500
Peru (a)	4 378	5 069	5 134	6 559	10 195
China	* 30 000	* 33 000	* 35 800	42 000	43 800
Indonesia	30 590	31 256	31 290	33 418	29 389
Laos	* 240	400	400	300	* 300
Malaysia	28 866	32 034	28 468	20 710	14 339
Mongolia	200	200	200	300	100
Myanmar	529	567	500	500	700
Thailand	13 982	14 668	14 385	10 755	8 268
Vietnam	* 700	* 800	* 800	* 800	3 400
Australia	7 009	7 709	7 425	5 380	6 611
World total	204 000	223 000	211 000	193 000	181 000

(a) Recoverable

Tin

**Smelter Production of Tin**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	9 014	3 584	6 122	1 661	—
Netherlands	3 478	4 529	6 100	5 000	200
Portugal	20	50	100	100	100
Spain	246	1 409	1 349	1 700	2 400
Czechoslovakia	515	562	613	118	—
German Democratic Republic	3 322	3 470	2 862	—	—
Soviet Union	* 16 000	* 14 000	* 14 000	* 18 000	* 20 000
Nigeria	427	358	320	400	400
South Africa	2 410	2 300	2 100	1 600	600
Zaire	118	60	—	—	—
Zimbabwe	855	849	839	797	716
Mexico	1 423	4 752	5 004	2 262	1 097
USA	1 467	* 1 000	—	—	—
Argentina	188	186	90	100	130
Bolivia (a)	5 481	9 718	13 364	14 659	14 393
Brazil	41 857	44 240	37 580	29 500	27 000
China	* 24 000	30 500	35 800	36 000	39 600
Indonesia	28 365	29 916	30 389	30 415	28 151
Japan	846	808	816	716	821
Korea, Republic of	2 500	2 400	2 500	2 300	1 000
Malaysia	47 403	50 900	49 002	42 722	45 598
Myanmar	110	171	286	157	* 100
Singapore	900	600	* 600	* 200	—
Thailand	14 675	14 571	15 512	11 255	10 679
Vietnam	573	659	1 808	3 440	3 727
Australia	439	424	312	268	240
World total	207 000	222 000	227 000	203 000	197 000

(a) Refined, including alloys

## Exports of Tin

Tin  
tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Concentrates	5 424	1 944	1 426	1 445	3 516
Unwrought	13 981	5 371	5 661	2 897	242
Unwrought alloys	2 352	1 277	1 107	1 078	628
Scrap	374	613	448	1 882	798
Belgium-Luxembourg					
Unwrought	2 122	2 734	2 766	2 767	5 589
Unwrought alloys	1 978	1 258	873	707	106
Scrap	60	53	14	48	69
Denmark					
Scrap	390	528	686	905	450
France					
Unwrought	167	48	130	19	61
Unwrought alloys	38	123	28	80	160
Scrap	468	442	258	324	637
Germany, Federal Republic of					
Unwrought	521	610	893	1 099	1 025
Unwrought alloys	1 039	1 230	1 505	861	1 414
Scrap	282	369	316	1 078	374
Irish Republic					
Scrap	1 495	1 782	1 858	1 683	938
Italy					
Unwrought (a)	184	160	1 021	242	72
Scrap	61	162	75	78	42
Netherlands					
Unwrought	1 103	1 507	1 677	1 082	337
Unwrought alloys	806	968	876	795	830
Scrap	380	611	367	685	738
Spain					
Unwrought (a)	5	230	408	167	172
Scrap	84	120	0	80	3
Finland					
Scrap	63	138	185	224	188
Sweden					
Unwrought (a)	157	172	134	131	114
Switzerland					
Unwrought (a)	110	128	109	64	299
Scrap	39	84	86	70	164
Namibia					
Concentrates	1 770	1 686	1 322	16	16
Niger					
Concentrates (b)	162	98	40	20	20
Nigeria					
Unwrought (a)	70	135	110	100	120
Rwanda					
Concentrates	...	977	1 028	1 050	900
South Africa					
Unwrought (a)	205	345	254	—	—
Zaire					
Concentrates	2 122	2 171	* 1 500	* 1 500	* 1 500
Canada					
Concentrates (b)	3 593	2 790	2 828	3 716	401
Scrap	1 003	3 205	529	460	486
Jamaica					
Scrap	355	249	299	260	122
USA					
Unwrought (a)	1 573	1 036	2 327	2 999	4 569
of which: Re-exports	363	132	1 669	2 297	2 700
Scrap	39 102	17 191	22 629	12 221	13 050
Argentina					
Tin-silver ore	1 005	126	—	—	—
Bolivia					
Concentrates	11 404	13 379	8 256	6 706	6 056
Unwrought	6 071	9 463	12 852	14 276	14 262
Brazil					
Unwrought (a)	33 637	33 994	27 641	18 110	19 366

Tin

**Exports of Tin**

tonnes

Country	1988	1989	1990	1991	1992
Peru					
Concentrates	11 500	9 795	11 326	* 15 000	* 22 000
China					
Concentrates	23 855	21 828	9 583	11 295	7 448
Unwrought (a)	10 717	9 874	10 135	15 692	30 273
Hong Kong					
Concentrates (d)	16 248	18 449	9 088	9 097	7 567
Unwrought (a)	3 149	6 048	4 511	7 105	15 963
of which: Re-exports	3 074	5 810	4 269	7 097	15 887
Indonesia					
Concentrates	1 139	766	368	339	370
Unwrought (a)	26 990	29 714	28 995	27 704	27 710
Japan					
Unwrought (a)	119	484	311	276	321
Korea, Republic of					
Unwrought (a)	553	332	169	416	210
Scrap	—	747	482	435	582
Malaysia					
Unwrought (a)	49 586	50 255	54 015	44 449	46 852
Scrap	505	396	...	422	1 350
Myanmar					
Concentrates (c)	561	600	250	150	...
Singapore					
Concentrates (d)	7 560	3 259	1 301	1 359	820
Unwrought	27 673	27 954	26 856	26 953	26 066
of which: Re-exports	26 422	26 659	24 904	26 235	25 314
Scrap	228	471	277	275	520
of which: Re-exports	144	355	59	33	34
Thailand					
Unwrought	9 925	11 562	11 834	6 255	7 350
Unwrought alloys	2 792	2	47	—	—
Australia					
Concentrates	14 383	15 461	14 952	9 660	11 782
Unwrought (a)	216	251	188	454	240
Scrap (e)	757	526	335	462	1 176

## Note(s):

(1) In this table the term 'unwrought' tin corresponds to item 687.1 of the Standard International Trade Classification (Revision 3) and comprises ingots, pigs, unwrought bars, sticks, etc.

(a) Including alloys

(b) Sn content

(c) Years ended 31 March following that stated

(d) Re-exports

(e) Years ended 30 June of that stated



# Imports of Tin

Tin  
tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Concentrates	20 239	18 504	13 443	3 616	11
Unwrought	2 084	4 675	3 824	4 714	8 932
Unwrought alloys	2 467	3 092	2 272	2 166	1 443
Scrap	517	1 207	720	2 153	1 384
Belgium-Luxembourg					
Concentrates	54	57	755	170	70
Unwrought	2 549	1 945	2 122	2 558	2 513
Unwrought alloys	201	321	209	184	347
Scrap	646	566	652	1 248	1 552
Denmark					
Unwrought	68	35	40	12	5
Unwrought alloys	182	109	81	57	30
Scrap	25	109	15	1	—
France					
Unwrought	8 041	8 133	8 290	8 195	8 549
Unwrought alloys	484	617	490	381	470
Germany, Federal Republic of					
Concentrates	3 780	695	115	45	63
Unwrought	19 867	18 926	19 777	19 650	21 856
Unwrought alloys	1 642	1 870	1 808	1 511	1 105
Scrap	351	421	485	653	659
Greece					
Unwrought (a)	357	484	676	597	260
Irish Republic					
Unwrought (a)	70	59	153	69	95
Italy					
Unwrought	6 112	5 890	6 974	5 392	5 520
Unwrought alloys	562	333	190	85	110
Netherlands					
Concentrates	5 608	9 280	10 586	6 180	—
Unwrought	2 579	2 714	2 358	2 263	3 763
Unwrought alloys	719	1 105	697	463	222
Scrap	309	458	393	476	236
Portugal					
Unwrought (a)	776	641	536	748	938
Spain					
Concentrates	1 273	2 354	1 989	1 878	2 739
Unwrought (a)	2 266	2 431	2 752	3 224	3 194
Austria					
Unwrought (a)	501	492	560	686	831
Czechoslovakia					
Unwrought (a)	2 558	2 619	2 424	2 100	* 800
Finland					
Unwrought (a)	111	132	63	42	65
Hungary					
Unwrought & semi-manufactures	950	657	372	550	230
Norway					
Unwrought	417	448	420	434	421
Unwrought alloys	85	83	102	80	70
Poland					
Unwrought	3 520	2 987	890	767	1 005
Soviet Union					
Concentrates (e)	* 800	* 100	...	...	* 350
Unwrought (a) (e)	* 6 700	* 1 000	...	...	* 3 400
Sweden					
Unwrought	487	454	433	311	237
Unwrought alloys	62	89	381	221	266
Scrap	153	125	167	164	100
Switzerland					
Unwrought (a)	994	983	1 220	941	720
Turkey					
Unwrought (a)	897	1 053	1 436	1 174	855
Yugoslavia					
Unwrought (a)	1 458	1 134	1 110	(g) 206	...
Algeria					
Unwrought (a)	538	565	138	* 250	* 185
Egypt					
Unwrought & scrap	297	312	* 300	* 300	206
Morocco					
Unwrought (a)	122	138	170	127	175

Tin

**Imports of Tin**

tonnes

Country	1988	1989	1990	1991	1992
Canada					
Unwrought	4 115	3 959	3 760	3 337	3 587
Mexico					
Concentrates	3 415	13 081	8 732	6 764	3 739
Unwrought	177	279	506	719	549
Scrap	467	432	265	277	88
USA					
Concentrates (b)	2 837	216	—	2	—
Unwrought	43 632	34 235	33 810	29 102	27 347
Unwrought alloys	1 924	6 373	6 335	8 430	10 070
Scrap	916	976	1 114	1 055	922
Argentina					
Unwrought	551	696	544	* 600	775
Chile					
Unwrought	389	435	298	537	474
Colombia					
Unwrought (a)	327	398	397	321	276
Peru					
Unwrought (a)	130	173	152	130	* 120
Venezuela					
Unwrought (a)	1 471	487	491	* 800	475
Hong Kong					
Concentrates	18 308	20 457	8 710	8 367	9 505
Unwrought (a)	6 152	6 877	7 022	9 425	16 684
India (f)					
Unwrought (a)	2 944	1 908	2 089	1 540	1 485
Scrap	2 729	1 425	2 163	972	102
Iran (d)					
Unwrought	176	193	410	826	* 250
Japan					
Unwrought	32 004	32 673	32 771	34 349	27 539
Unwrought alloys	3 513	3 010	3 526	4 329	3 613
Korea, Republic of					
Concentrates	4 123	3 691	4 228	2 535	250
Unwrought (a)	4 924	10 380	6 050	6 606	7 394
Malaysia					
Concentrates	40 030	42 398	38 511	51 038	56 014
Unwrought (a)	1 469	1 041	1 936	4 689	4 998
Philippines					
Unwrought (a)	733	671	850	975	730
Singapore					
Concentrates	8 846	3 831	4 214	1 350	667
Unwrought	5 764	2 506	3 846	5 272	5 473
Scrap	621	510	365	376	212
Taiwan					
Unwrought (a)	5 343	4 588	5 165	7 349	7 447
Australia					
Unwrought (a) (c)	378	577	905	772	798
New Zealand (c)					
Unwrought (a)	264	73	103	96	53

Note(s):

(1) In this table the term 'unwrought' tin corresponds to item 687.1 of the Standard International Trade Classification (Revision 3) 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

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

(f) Years ended 31 March following that stated

(g) Data for the Federal Republic of Yugoslavia only

**Production of Titanium Minerals**

Country	1988	1989	1990	1991	1992
Portugal Ilmenite	59	81	43	9	...
Norway Ilmenite	898 035	929 830	788 522	615 416	708 149
Soviet Union Ilmenite	* 460 000	* 460 000	* 430 000	* 400 000	* 350 000
Rutile	* 10 000	* 10 000	* 9 500	* 9 000	* 8 000
Sierra Leone Ilmenite	42 118	62 310	54 639	60 371	60 331
Rutile	126 332	128 198	144 401	154 800	149 000
South Africa (c)	* 350 000	415 000	403 000	484 000	530 000
Canada (a) Ilmenite (b)	* 2 800 000	* 3 400 000	* 3 200 000	* 2 000 000	* 2 200 000
USA Ilmenite	* 240 000	* 240 000	* 240 000	* 250 000	* 270 000
Rutile	25 000	25 000	29 000	27 000	29 000
Brazil Ilmenite	142 167	144 212	101 264	69 064	76 558
Rutile	1 514	2 613	2 350	* 2 000	* 2 000
China Ilmenite	* 150 000	271 000	184 000	229 000	304 900
India Ilmenite	229 693	240 656	* 280 000	311 537	* 300 000
Rutile	9 584	9 931	* 11 000	13 635	* 10 000
Malaysia Ilmenite	486 305	533 637	530 237	336 347	337 744
Sri Lanka Ilmenite	97 085	101 354	74 350	62 823	* 60 000
Rutile	13 759	5 589	7 580	3 085	* 5 000
Thailand Ilmenite	16 455	16 955	10 554	17 071	2 922
Leucoxene	1 798	30	120	4	45
Australia Ilmenite	1 610 000	1 696 000	1 602 000	1 476 000	1 786 000
Rutile	231 000	243 000	245 000	193 000	183 000
Leucoxene	12 946	18 000	19 000	20 000	20 000
World total Ilmenite (Wt. of concs)	8 100 000	9 200 000	8 600 000	7 200 000	7 900 000
Rutile (Wt. of concs)	470 000	490 000	507 000	486 000	474 000
All forms (TiO <sub>2</sub> content)	* 4 159 000	* 4 650 000	* 4 384 000	* 3 822 000	* 4 167 000

## Note(s):

- (1) The figures in this table refer to gross tonnage of titanium concentrates
- (2) Some ilmenite is converted to synthetic rutile in Australia, India, Japan, Taiwan and USA
- (a) Canada produces some ilmenite which is sold as such and not processed into slag, but tonnages are small
- (b) Processed into slag. In 1992 Canada produced 753 000 tonnes (80% TiO<sub>2</sub>)
- (c) Ti content of titanium minerals and slag

## Titanium

**Exports of Titanium**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Metal	3 089	4 592	4 702	3 846	6 366
Oxides	165 607	169 012	144 693	171 552	170 543
Belgium-Luxembourg					
Metal	243	293	250	225	396
Oxides	100 548	108 579	96 997	109 956	112 184
France					
Titanium minerals	481	4 735	38	867	162
Metal	2 143	3 115	2 725	1 940	2 300
Oxides	160 887	167 340	147 471	167 779	176 265
Germany, Federal Republic of					
Ilmenite	1 112	1 380	288	741	141
Other titanium minerals	2 634	3 467	2 828	2 157	1 621
Metal	2 370	3 778	2 240	2 113	3 920
Oxides	236 833	229 693	187 494	220 186	224 368
Italy					
Titanium minerals	1 280	440	10 589	22	3
Metal	454	900	693	939	955
Oxides (b)	* 29 400	* 37 700	* 24 300	* 26 500	* 25 700
Netherlands					
Ilmenite	2 426	1 975	1 689	1 618	13 400
Other titanium minerals	52 808	46 833	28 637	27 786	29 014
Metal	104	289	176	167	276
Oxides	40 508	41 526	28 639	(b)* 29 200	(b)* 37 000
Spain					
Oxides	21 943	23 811	17 441	17 226	29 230
Austria					
Metal	6 998	3 388	1 740	294	196
Oxides	1 695	1 923	1 475	1 151	1 132
Czechoslovakia					
Oxides (b)	* 2 500	* 3 700	* 3 400	* 5 400	* 8 800
Finland					
Oxides (b)	* 55 000	* 58 900	* 50 000	* 44 200	* 46 800
Norway					
Titanium minerals	692 879	678 364	576 419	387 682	431 795
Oxides (b)	* 12 900	* 18 800	* 13 800	* 20 400	* 29 700
Soviet Union					
Metal (b)	* 3 200	* 5 200	* 1 900	* 4 100	* 6 600
Sweden					
Metal	445	536	768	451	759
Oxides	637	426	925	1 787	1 545
Switzerland					
Metal	174	235	256	355	317
Oxides	918	1 566	766	595	463
Yugoslavia					
Oxides	20 932	22 410	15 358	(a) —	...
Sierra Leone					
Rutile	114 000	140 000	142 000	143 900	147 600
South Africa					
Titanium minerals (b)	* 55 500	* 91 500	* 103 700	* 115 400	* 126 800
Titanium slag (b)	* 379 400	* 494 000	* 426 000	* 528 000	* 621 100
Oxides (b)	* 2 700	* 2 900	* 600	* 200	* 5 100
Canada					
Titanium minerals & slag (b)	* 1 172 900	* 1 169 600	* 949 800	* 752 100	* 949 500
Metal	440	480	1 038	681	441
Oxides	32 470	44 536	48 039	48 243	53 000
Mexico					
Oxides	20 547	21 111	25 472	24 967	36 105
USA					
Titanium minerals	10 162	20 138	20 060	28 960	35 644
Metal	11 162	13 695	16 011	12 420	8 330
Oxides	123 326	213 566	270 943	190 360	272 611
Brazil					
Titanium minerals	...	2 643	2 690	597	633
China					
Titanium minerals	...	(b)* 25 800	(b)* 28 800	(b)* 21 500	13 475
Metal	(b)* 900	(b)* 800	634	115	579
Oxides	(b)* 25 400	(b)* 23 800	11 870	12 806	10 638

**Exports of Titanium**

Country	1988	1989	1990	1991	1992
Hong Kong					
Oxides (c)	13 210	14 544	8 698	9 030	13 071
India (e)					
Ilmenite	119 108	92 983	82 430	98 150	68 295
Japan					
Metal	10 759	13 584	13 188	8 551	8 976
Oxides	81 495	86 433	90 979	92 568	75 684
Korea, Republic of					
Titanium minerals	147 350	146 708	136 440	111 135	87 485
Oxides	3 921	5 936	5 952	6 521	7 377
Malaysia					
Ilmenite	367 363	352 192	203 504	202 743	157 722
Singapore					
Oxides	2 683	3 452	1 542	18 595	11 217
of which: Re-exports	2 623	3 131	1 233	3 130	7 378
Sri Lanka					
Ilmenite	94 700	115 300	67 000	20 000	43 000
Rutile	5 982	4 500	6 760	140	2 035
Taiwan					
Oxides	501	767	4 964	2 451	3 576
Thailand					
Ilmenite	2 909	40 474	13 033	14 168	19 412
Australia					
Ilmenite	1 046 000	1 001 000	1 041 000	976 000	944 000
Rutile	238 000	252 000	186 000	174 000	196 000
Leucoxene	12 976	23 000	26 000	11 000	11 000
Oxides	(b)* 26 500	(d) 38 673	(d) 67 129	(d) 56 415	(d) 100 637

## Note(s):

- (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 3) items 522.56 and 533.1
- (2) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) Data for the Federal Republic of Yugoslavia only
- (b) BGS estimates, based on known imports into certain countries
- (c) Re-exports
- (d) Years ended 30 June of that stated
- (e) Years ended 31 March following that stated

## Titanium

**Imports of Titanium**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ilmenite	299 561	380 392	247 902	197 930	184 458
Other titanium minerals	157 342	108 965	126 713	98 686	135 730
Titanium slag	47 825	46 483	55 930	57 866	58 991
Metal	16 686	15 967	17 840	13 043	13 855
Oxides	41 452	48 560	38 818	46 502	58 090
Belgium-Luxembourg					
Ilmenite	72 379	78 549	48 900	68 835	75 004
Other titanium minerals	29 728	36 592	56 806	18 398	27 327
Metal	1 640	1 162	789	691	1 221
Oxides	35 655	45 800	40 997	49 136	57 426
Denmark					
Oxides	13 389	15 224	12 085	12 031	13 461
France					
Ilmenite	101 730	61 493	46 628	36 093	85 564
Other titanium minerals	144 675	139 535	151 715	79 224	116 795
Titanium slag	120 457	167 709	110 535	139 624	112 820
Metal	3 716	6 017	5 288	3 566	3 834
Oxides	60 241	66 233	60 023	69 876	77 509
Germany, Federal Republic of					
Ilmenite	449 361	459 017	494 344	398 534	466 794
Other titanium minerals	20 988	16 955	22 798	16 589	15 075
Titanium slag	244 726	255 792	262 990	247 401	296 308
Metal	5 185	6 616	5 986	4 299	6 222
Oxides	121 803	138 118	120 096	133 197	147 756
Greece					
Oxides	10 149	14 507	12 172	14 526	15 772
Irish Republic					
Oxides	1 553	1 419	1 315	1 194	1 249
Italy					
Ilmenite	46 967	45 208	...	25	41 093
Other titanium minerals	1 602	4 878	985	4 066	3 533
Titanium slag	84 753	120 460	81 687	61 867	57 277
Metal	3 858	3 494	3 961	3 273	2 445
Oxides	71 264	83 575	67 266	76 226	90 192
Netherlands					
Ilmenite	4 766	2 062	3 420	10 136	43 920
Other titanium minerals	75 071	34 939	56 579	47 760	74 129
Titanium slag	46 157	50 197	—	—	—
Metal	353	771	787	474	556
Oxides	43 856	50 163	53 018	46 443	46 412
Portugal					
Oxides	8 189	5 383	12 817	13 480	14 905
Spain					
Ilmenite	138 556	140 167	94 142	110 629	106 977
Other titanium minerals	4 269	1 815	2 331	3 575	2 177
Metal	533	806	1 508	1 535	1 333
Oxides	19 636	27 492	24 915	32 400	44 690
Austria					
Metal	2 613	2 074	641	312	301
Oxides	15 793	18 267	14 294	13 877	15 523
Bulgaria					
Titanium minerals (b)	* 3 000	* 3 100	* 1 900	* 1 300	* 1 300
Oxides (b)	* 2 100	* 2 200	* 500	* 400	* 200
Czechoslovakia					
Oxides (b)	* 3 000	* 2 900	* 2 000	* 1 900	* 1 900
Finland					
Titanium minerals (b)	* 43 100	* 22 000	* 46 100	* 52 400	* 36 500
Oxides	2 330	3 027	3 717	3 934	4 911
German Democratic Republic					
Oxides (b)	* 25 100	* 25 000	* 15 100	—	—
Norway					
Oxides	7 693	9 287	7 801	7 544	6 070
Romania					
Titanium minerals (b)	* 4 800	* 8 200	* 3 200	* 1 900	* 2 000
Oxides (b)	* 2 000	* 2 600	* 6 000	* 1 100	* 1 700
Soviet Union					
Titanium minerals (b)	* 34 000	* 24 400	* 12 000	* 6 400	...
Oxides (b)	* 15 300	* 16 500	* 11 700	* 10 600	* 2 100

## Imports of Titanium

Country	1988	1989	1990	1991	1992
Sweden					
Titanium minerals	1 376	1 809	1 203	663	265
Metal	551	1 007	1 134	691	1 236
Oxides	26 731	28 290	25 572	25 713	23 608
Switzerland					
Oxides	18 552	22 088	17 470	17 190	17 589
Turkey					
Titanium minerals	3 219	1 576	3 208	4 456	3 273
Oxides	15 873	17 919	23 367	23 752	27 695
Yugoslavia					
Titanium minerals	46 058	52 518	23 701	(a) —	...
Oxides	5 014	5 744	3 604	(a) 934	...
Algeria					
Oxides	7 821	8 654	11 628	7 932	...
Egypt					
Oxides	2 296	2 148	...	...	...
Morocco					
Oxides	3 517	2 418	2 423	4 600	...
South Africa					
Oxides	1 384	1 020	731	1 670	4 971
Zimbabwe					
Oxides	...	...	1 192	...	...
Canada					
Titanium minerals (g)	32 061	58 246	27 523	43 304	* 20 000
Metal	1 637	2 621	2 541	1 614	1 280
Oxides	22 412	21 046	18 194	30 558	40 451
Mexico					
Ilmenite	29 101	60 531	121 952	106 202	* 100 000
Rutile sand	2 064	1 413	1 509	2 400	2 327
Oxides	3 078	6 769	5 288	8 388	15 322
USA					
Ilmenite	418 976	459 403	374 725	240 897	338 764
Rutile (c)	260 087	264 895	274 605	263 188	315 571
Titanium slag	434 645	386 146	373 409	385 236	606 899
Metal	6 648	7 769	5 608	4 389	7 749
Oxides	185 758	166 378	147 592	165 974	169 360
Argentina					
Titanium minerals	2 015	1 032	...	...	1 880
Brazil					
Ilmenite	50 000	105 000	25 000	* 50 000	...
Rutile	3 491	3 006	2 141	1 443	1 571
Oxides	17 516	34 316	22 451	21 004	29 746
Chile					
Oxides	3 883	4 797	4 834	5 313	6 633
Colombia					
Oxides	8 193	8 972	8 643	8 742	12 393
Uruguay					
Oxides	3 881	...	...	1 047	1 768
Venezuela					
Oxides	18 602	6 136	10 380	15 765	14 338
China					
Metal	(b)* 300	(b)* 500	80	399	1 156
Oxides	(b)* 16 100	19 214	27 319	25 176	40 469
Hong Kong					
Oxides	20 906	24 014	16 046	18 233	24 737
India (d)					
Oxides	10 315	19 013	17 002	8 476	5 908
Indonesia					
Oxides	12 088	18 055	22 277	22 499	29 039
Iran (f)					
Oxides	3 098	4 341	...	...	...
Israel					
Oxides	4 904	3 563	3 575	4 086	5 378

## Titanium

**Imports of Titanium**

tonnes

Country	1988	1989	1990	1991	1992
Japan					
Titanium minerals	642 209	616 090	757 595	576 003	484 602
Metal	924	1 062	786	1 084	1 481
Oxides	48 980	71 306	65 170	61 061	62 550
Jordan					
Oxides	2 203	1 402	1 449	1 968	2 674
Korea, Republic of					
Rutile sand	6 940	6 806	8 068	7 431	7 584
Titanium minerals	55 177	62 102	31 804	92 054	101 260
Metal	486	757	1 633	1 592	1 527
Oxides	37 048	41 785	40 686	45 895	54 612
Malaysia					
Titanium minerals	20 662	5 399	...	23 058	16 713
Oxides	10 299	15 980	...	19 172	23 122
Pakistan (e)					
Oxides	3 677	...	5 070	4 373	5 964
Philippines					
Titanium minerals	1 550	1 535	1 427	1 007	1 980
Oxides	7 934	14 945	12 852	12 033	15 059
Saudi Arabia					
Oxides	6 427	5 102	7 125	7 977	...
Singapore					
Oxides	11 100	14 976	5 784	14 726	28 600
Taiwan					
Titanium minerals	...	19 096	18 617	20 014	11 949
Oxides	48 703	56 933	56 878	67 250	63 879
Thailand					
Rutile	2 033	3 230	3 222	3 889	3 211
Other titanium minerals	141	1 043	2 575	5 184	4 366
Oxides	15 122	21 884	20 952	24 759	32 583
Australia					
Titanium minerals (e)	...	33 146	22 033	38	2
Oxides (e)	1 202	1 369	2 153	1 506	2 863
New Zealand (e)					
Oxides	6 505	6 839	8 015	6 428	7 535

## Note(s):

- (1) Significant quantities of titanium slag are traded, but it is not always possible to identify this material in national trade accounts
- (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 3) items 522.56 and 533.1
- (3) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) Data for the Federal Republic of Yugoslavia only
- (b) BGS estimates, based on known exports from certain countries
- (c) Including synthetic rutile
- (d) Years ended 31 March following that stated
- (e) Years ended 30 June of that stated
- (f) Years ended 20 March following that stated
- (g) Ti content



## Mine Production of Tungsten

tonnes (metal content)

Country	1988	1989	1990	1991	1992
United Kingdom	27	28	42	9	—
Portugal (c)	1 379	1 375	1 405	971	1 120
Spain	81	57	49	* 50	* 45
Austria	950	1 177	1 043	994	1 134
Czechoslovakia	* 50	* 50	25	* 25	* 20
Soviet Union	* 9 200	* 9 300	* 8 800	* 8 000	* 6 500
Sweden	352	80	—	—	—
Turkey	393	* 350	* 350	—	—
Rwanda	41	105	156	175	* 175
Uganda	75	32	48	98	66
Zaire (b)	20	16	17	* 15	—
Mexico	206	170	183	194	162
USA	350	400	400	200	50
Bolivia	924	1 118	1 014	1 065	851
Brazil (a)	738	679	316	223	205
Peru	654	974	1 118	981	631
China	* 25 000	30 360	32 370	31 960	25 520
India	19	12	6	* 15	* 15
Japan	226	252	218	240	298
Korea, Dem. P.R. of	* 500	* 500	* 1 000	* 1 000	* 1 000
Korea, Republic of	2 029	1 701	1 361	780	247
Mongolia	* 1 000	* 1 000	* 500	* 300	* 300
Myanmar (b)	307	233	351	275	375
Thailand (c)	605	560	269	227	92
Australia (c)	1 281	1 371	1 086	237	159
World total	46 000	52 000	52 000	48 000	39 000

(a) Mainly scheelite

(b) Including tin-wolframite concentrates

(c) Wolframite and scheelite

**Exports of Tungsten**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Tungsten ore	449	41	24	0	8
Metal	467	766	876	1 080	656
Carbide	378	463	461	169	94
Belgium-Luxembourg					
Metal	204	158	156	148	161
France					
Metal	431	443	275	298	416
Carbide	198	331	189	153	236
Germany, Federal Republic of					
Metal	1 034	1 444	1 895	2 167	1 931
Italy					
Metal	158	130	131	327	173
Netherlands					
Tungsten ore	165	74	214	—	149
Metal	598	1 104	804	415	244
Portugal					
Tungsten ore	2 384	1 930	2 216	2 878	1 530
Spain					
Tungsten ore	87	115	—	132	—
Austria					
Metal	1 119	1 318	1 032	1 047	639
Sweden					
Tungsten ore	688	598	110	217	48
Metal	96	10	12	17	11
Carbide	53	22	9	24	346
Switzerland					
Metal	89	92	94	74	125
Turkey					
Tungsten ores & concentrates	433	1 800	36	11 096	—
Rwanda					
Tungsten ores & concentrates	25	159	283	* 390	* 300
Mexico					
Tungsten ores & concentrates	465	321	333	493	96
USA					
Tungsten ores & concentrates	153	151	89	8	33
Metal	1 810	2 088	2 264	1 846	1 199
Ammonium paratungstate (a)	174	189	374	770	470
Carbide	619	1 374	1 080	839	749
Bolivia					
Tungsten ore	1 478	1 972	1 716	2 083	1 491
Peru					
Tungsten ores & concentrates	1 006	1 432	1 849	* 1 400	* 1 300
China					
Tungsten ores & concentrates	27 290	30 901	16 450	6 071	2 325
Metal	408	791	336	420	637
Ammonium paratungstate	...	...	8 265	9 197	...
Carbide (d)	* 220	* 250	* 240	* 200	* 120
Hong Kong					
Tungsten ore (c)	2 008	3 925	2 516	1 836	3 052
Israel					
Metal (d)	* 50	* 150	* 240	* 220	* 270
Japan					
Metal	312	588	733	1 279	1 050
Korea, Republic of					
Tungsten ore	203	48	—	46	—
Metal	328	526	265	538	505
Carbide	574	704	690	633	681
Myanmar (b)					
Tungsten ores & concentrates	592	550	* 600	* 500	* 400

**Exports of Tungsten**

Country	1988	1989	1990	1991	1992
Singapore					
Tungsten ore (c)	708	614	713	1 401	804
Metal	165	120	138	133	125
of which: Re-exports	10	43	17	10	6
Thailand					
Tungsten ore	1 069	864	590	840	218
Australia					
Tungsten ores & concentrates	2 205	1 887	1 810	1 272	503

## Note(s):

- (1) Significant 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) Re-exports
  - (d) BGS estimates, based on known imports into certain countries

**Imports of Tungsten**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Tungsten ore	20	85	111	38	7
Metal	792	624	717	577	667
Carbide	584	473	294	237	272
Belgium-Luxembourg					
Metal	345	305	229	460	352
Carbide	309	276	164	166	150
France					
Metal	256	215	262	470	237
Carbide	293	288	257	268	244
Germany, Federal Republic of					
Tungsten ore	4 105	4 819	1 394	566	396
Metal	1 443	1 813	1 609	2 225	1 353
Carbide	642	980	887	876	758
Italy					
Metal	135	229	276	127	144
Carbide	394	467	343	253	263
Netherlands					
Tungsten ore	436	310	453	—	—
Metal	423	778	771	337	98
Spain					
Metal	33	44	50	35	36
Austria					
Tungsten ore	1 249	807	691	439	110
Metal	925	2 583	1 112	678	712
Finland					
Metal	39	28	51	7	16
Poland					
Tungsten concentrates	820	—	—	—	—
Soviet Union					
Tungsten concentrates	* 11 600	* 9 700	* 9 700	* 3 900	...
Sweden					
Tungsten ore	756	659	314	410	342
Metal	233	261	247	162	205
Carbide	198	585	475	18	94
Switzerland					
Metal	75	71	83	88	95
Turkey					
Metal	71	34	25	25	19
South Africa					
Tungsten ores & concentrates	436	296	220	60	...
Metal	32	45	34	21	4
Carbide	69	184	157	30	46
Canada					
Metal	218	209	128	144	161
Carbide	487	357	290	290	348
Mexico					
Metal	74	177	198	39	36
USA					
Tungsten ore	14 853	15 679	11 854	14 411	4 411
Metal	1 856	2 212	1 725	3 443	2 419
Ammonium paratungstate (a)	655	431	462	842	378
Carbide	633	703	736	486	444
Hong Kong					
Tungsten ore	1 419	3 658	2 031	516	1 303
India (c)					
Tungsten ore	468	736	358	406	507
Metal	51	70	59	72	82
Indonesia					
Metal	28	9	71	133	80
Israel					
Metal	253	...	...	...	...

## Imports of Tungsten

Country	1988	1989	1990	1991	1992
Japan					
Tungsten ore	2 785	2 316	2 589	1 200	717
Metal	465	378	348	591	320
Korea, Dem. P.R. of					
Tungsten ore (d)	* 150	* 250	* 450	* 100	* 100
Korea, Republic of					
Tungsten ores & concentrates	—	2 115	3 007	3 412	5 274
Metal	67	78	64	64	72
Malaysia					
Metal	281	335	628	160	296
Singapore					
Tungsten ore	764	685	978	1 334	409
Metal	130	154	117	128	139
Taiwan					
Metal	96	132	624	132	143
Australia (b)					
Metal	49	105	82	41	50

## Note(s):

- (1) Significant 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
  - (c) Years ended 31 March following that stated
  - (d) BGS estimates, based on known exports from certain countries

## Vanadium

**Mine Production of Vanadium**

tonnes (metal content)

Country	1988	1989	1990	1991	1992
Soviet Union	* 9 600	* 9 600	* 9 000	* 8 500	* 7 000
South Africa	17 632	18 568	17 106	15 478	14 035
USA	* 1 900	* 2 200	* 1 800	* 1 000	* 2 700
China	* 4 500	* 4 500	* 4 500	* 4 500	* 4 700
World total	33 600	34 900	32 400	29 500	28 400

## Note(s):

(1) 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**

Country	1988	1989	1990	1991	1992
United Kingdom					
Metal	24	44	22	31	36
Belgium-Luxembourg					
Vanadiferous residues	3 080	2 765	4 433	7 107	6 157
Pentoxide	116	202	66	18	21
Vanadium-titanium pig iron	—	36	—	—	49
Denmark					
Vanadium-titanium pig iron	8	37	38	348	199
France					
Vanadiferous residues	529	134	132	177	120
Pentoxide	269	84	35	43	140
Vanadium-titanium pig iron	—	—	6	100	16
Metal	58	1	3	29	1
Germany, Federal Republic of					
Vanadiferous residues	195	871	171	1 507	1 343
Pentoxide	447	155	220	46	66
Vanadium-titanium pig iron	75	90	150	51	77
Metal	369	408	401	239	262
Italy					
Vanadiferous residues	3 163	1 887	...	36	282
Soviet Union					
Vanadiferous residues	10 890	10 510	6 600	...	...
South Africa					
Pentoxide (b)	28 281	29 950	21 989	20 561	24 054
USA					
Pentoxide	1 342	3 171	2 570	1 805	1 126
China					
Pentoxide	(a)* 4 900	(a)* 3 800	(a)* 3 400	(a)* 2 100	4 196

## Note(s):

- (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) Includes V<sub>2</sub>O<sub>5</sub> content of vanadiferous residues

## Vanadium

**Imports of Vanadium**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Pentoxide	104	256	226	135	46
Metal	235	232	257	193	256
Belgium-Luxembourg					
Vanadiferous residues	61	5 498	—	—	31
Pentoxide	3 717	5 929	5 657	3 329	3 551
France					
Pentoxide	88	252	282	178	183
Vanadium-titanium pig iron	75	75	—	1	1
Metal	141	90	85	15	65
Germany, Federal Republic of					
Vanadiferous residues	27 933	32 559	25 923	23 624	13 734
Pentoxide	1 623	1 454	597	260	896
Metal	59	25	19	46	139
Italy					
Vanadiferous residues	806	430	184	478	822
Pentoxide	84	71	40	74	128
Austria					
Vanadiferous residues	21 137	22 827	18 908	26 058	11 349
Pentoxide	2 258	1 917	972	804	734
Turkey					
Pentoxide	109	...	...	...	...
Vanadium-titanium pig iron	895	...	...	...	...
Canada					
Pentoxide	1 468	1 263	838	851	1 305
USA					
Vanadiferous residues	17 834	45 636	50 464	4 793	3 578
Pentoxide	688	448	1 004	352	424
Metal	13	256	115	102	734
Brazil					
Pentoxide	979	937	740	657	...
Japan					
Pentoxide	5 339	4 313	4 796	4 613	3 538
Metal	173	154	104	136	110
Korea, Republic of					
Pentoxide	7	38	113	151	201

## Note(s):

- (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



## Mine Production of Zinc

tonnes (metal content)

Country	1988	1989	1990	1991	1992
United Kingdom	5 502	5 771	6 673	1 078	...
France	31 100	25 010	23 921	27 122	16 500
Germany, Federal Republic of	75 600	63 900	58 100	54 000	14 300
Greece	21 200	24 600	26 700	30 000	26 200
Irish Republic	176 500	168 800	166 400	187 500	194 100
Italy	37 900	44 000	42 400	37 400	31 000
Spain	281 724	269 723	257 500	264 600	206 300
Austria	19 134	15 749	17 661	16 354	15 787
Bulgaria	44 100	39 700	34 700	29 100	29 400
Czechoslovakia	6 600	6 600	7 400	7 800	* 6 200
Finland	63 879	62 009	53 923	57 310	32 817
Greenland	77 000	72 000	48 000	—	—
Norway	17 528	16 634	17 296	19 631	21 058
Poland	220 000	204 000	178 000	176 000	186 000
Romania	* 58 000	* 55 500	* 36 000	* 26 800	* 25 800
Soviet Union	* 670 000	* 650 000	* 624 000	* 580 000	* 540 000
Sweden	200 393	173 515	164 128	161 170	171 539
Turkey	37 447	39 194	39 066	32 500	27 500
Yugoslavia	71 200	88 930	83 788	74 000	47 200
Algeria	6 700	6 400	4 300	4 300	4 000
Morocco	10 935	17 757	21 249	27 290	22 462
Namibia	37 250	42 760	40 507	35 638	36 192
South Africa	89 551	77 334	74 792	64 425	71 928
Tunisia	9 000	9 500	7 400	5 200	2 200
Zaire	75 700	72 800	61 800	42 400	22 300
Zambia	27 450	23 500	37 564	24 800	19 200
Canada	1 347 424	1 216 139	1 203 161	1 156 582	1 324 675
Honduras	23 475	33 676	28 971	38 280	32 702
Mexico	262 228	284 058	322 487	300 706	289 119
USA	256 400	288 300	543 200	546 600	551 600
Argentina	36 849	43 155	38 664	39 253	40 978
Bolivia	56 957	74 789	103 849	129 778	143 936
Brazil	155 531	178 439	158 025	130 000	149 000
Chile	19 182	18 370	25 146	30 998	29 730
Peru (a)	485 429	597 412	583 934	627 824	602 614
China	527 300	620 400	618 900	750 000	758 100
India	59 100	65 200	70 000	104 900	152 800
Iran	25 000	25 000	14 800	31 100	65 000
Japan	147 217	131 794	127 273	133 004	134 510
Korea, Dem. P.R. of	* 150 000	* 110 000	* 100 000	* 120 000	* 120 000
Korea, Republic of	21 820	23 202	22 792	22 039	21 883
Myanmar	1 600	1 400	1 700	1 000	1 000
Philippines	1 435	1 200	53	—	—
Saudi Arabia	1 500	2 600	2 500	4 000	—
Thailand	77 719	76 335	74 759	91 761	75 328
Australia	760 308	803 000	933 000	1 023 000	1 025 000
World total	6 800 000	6 900 000	7 100 000	7 300 000	7 300 000

(a) Recoverable

**Production of Slab Zinc**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	76 028	79 773	93 309	100 651	96 813
Belgium (a)	323 758	306 022	356 533	385 053	310 620
France	304 032	287 344	264 132	299 497	318 800
Germany, Federal Republic of	356 300	353 500	337 600	345 700	383 100
Italy	242 117	246 000	248 100	256 000	252 600
Netherlands	211 019	202 962	(b) 208 537	(b) 211 082	(b) 218 410
Portugal	5 500	5 000	5 500	2 100	2 200
Spain	245 400	246 400	252 700	262 200	351 900
Austria	26 321	27 473	28 313	16 310	5 973
Bulgaria	82 023	94 996	75 457	46 100	54 700
Finland	149 758	154 230	163 063	172 020	162 798
German Democratic Republic	* 20 000	* 18 500	* 12 700	—	—
Norway	122 203	120 510	124 804	129 254	127 564
Poland	173 566	163 727	132 131	126 067	135 000
Romania	39 631	29 849	11 500	8 700	11 600
Soviet Union	* 710 000	* 690 000	* 640 000	* 540 000	* 470 000
Turkey	22 500	24 200	20 100	17 400	18 800
Yugoslavia	127 524	119 394	113 705	(c) 87 372	71 100
Algeria	20 000	28 000	23 600	29 500	31 500
South Africa	85 193	84 997	92 300	91 500	83 200
Zaire	61 400	54 000	38 203	28 200	18 800
Zambia	20 220	12 900	10 800	6 600	7 300
Canada	703 206	669 677	591 786	660 552	671 702
Mexico	192 529	193 279	199 295	189 082	151 615
USA	329 786	358 209	358 412	375 733	399 512
Argentina	35 448	34 267	34 217	38 566	37 292
Brazil	143 974	162 255	154 086	163 000	187 414
Peru	119 739	137 800	117 634	154 572	126 399
China	425 400	620 400	763 100	612 000	718 900
India	68 940	71 572	79 093	85 600	128 100
Japan	678 175	664 507	687 461	730 829	729 454
Korea, Dem. P.R. of	* 160 000	* 120 000	* 110 000	* 130 000	* 120 000
Korea, Republic of	225 987	241 743	257 043	285 830	255 929
Thailand	64 694	62 674	63 257	62 435	61 314
Australia	302 000	294 000	303 000	324 000	333 000
World total	6 900 000	7 000 000	7 000 000	7 000 000	7 100 000

(a) Including alloys

(b) Sales

(c) Excluding data from August to December for the Republic of Croatia

# Exports of Zinc

Zinc  
tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ores & concentrates	9 330	13 363	21 927	2 398	122
Unwrought	7 089	8 896	7 671	15 469	13 073
Unwrought alloys	6 610	7 442	11 414	14 763	13 781
Scrap	25 079	30 256	25 636	25 919	23 526
Belgium-Luxembourg					
Ore	52 277	84 368	50 881	40 128	56 017
Unwrought	154 652	166 242	136 794	130 677	158 001
Unwrought alloys	46 392	35 969	45 160	72 480	49 462
Scrap	15 674	20 167	18 881	14 450	15 510
Denmark					
Unwrought (a)	96	67	681	215	46
Scrap	5 631	5 040	4 916	4 272	4 616
France					
Ore	31 190	26 823	24 620	12 208	7 600
Unwrought	66 222	71 426	74 081	81 443	146 765
Unwrought alloys	9 291	14 345	9 393	5 008	3 567
Scrap	23 086	28 844	19 411	21 098	25 267
Germany, Federal Republic of					
Ore	* 135 100	* 125 500	* 70 600	35 456	50 182
Unwrought	109 226	97 171	75 000	73 921	117 948
Unwrought alloys	18 733	22 112	22 832	28 335	25 890
Scrap	29 468	29 165	26 419	28 825	28 341
Greece					
Ores & concentrates	40 300	46 833	53 391	53 541	70 073
Scrap	198	810	232	733	2 013
Irish Republic					
Ores & concentrates	347 856	341 516	319 139	357 817	402 805
Italy					
Ore	21 325	20 230	20 918	1 079	6 387
Unwrought	50 803	45 243	51 151	34 771	34 254
Unwrought alloys	1 546	3 606	5 430	5 186	6 925
Scrap	4 750	7 584	3 857	2 476	1 257
Netherlands					
Unwrought	179 807	161 996	156 814	140 255	143 306
Unwrought alloys	3 834	5 181	5 605	8 339	7 276
Scrap	23 652	29 290	23 621	21 473	20 688
Spain					
Ore	109 613	140 647	133 263	105 880	116 641
Unwrought (a)	146 231	147 646	137 077	144 472	239 110
Austria					
Unwrought (a)	7 066	6 360	5 626	1 850	3 007
Scrap	2 399	2 539	2 527	2 652	3 114
Bulgaria					
Unwrought (a) (b)	* 16 000	* 23 200	* 21 200	* 21 600	* 21 600
Czechoslovakia					
Ore (b)	* 2 800	* 1 900	* 6 000	* 4 000	* 3 800
Finland					
Ore	1 608	2 690	9	—	—
Unwrought	122 720	134 006	134 959	148 919	138 759
Unwrought alloys	5 417	4 487	5 138	4 458	3 648
Scrap	2 595	4 424	5 172	6 795	7 780
Greenland					
Ores & concentrates	136 392	130 494	95 544	—	—
Hungary					
Scrap	1 937	2 281	3 153	...	4 945
Norway					
Ore	4 796	6 831	5 708	5 561	4 607
Unwrought	94 932	100 709	106 122	109 278	109 257
Unwrought alloys	5 912	4 212	8 032	3 982	4 020
Scrap	1 083	2 179	1 299	2 675	2 524
Poland					
Unwrought	25 191	17 651	31 314	25 992	60 105
Soviet Union					
Ores & concentrates (h)	...	...	...	14 500	24 637
Unwrought (a) (b)	* 48 200	* 34 500	* 30 300	* 17 700	* 72 500
Sweden					
Ore	373 196	327 410	313 305	322 221	328 931
Unwrought (a)	833	201	855	225	512
Scrap	3 170	4 628	5 371	5 891	6 135

## Zinc

**Exports of Zinc**

tonnes

Country	1988	1989	1990	1991	1992
Switzerland					
Unwrought (a)	411	386	916	364	132
Scrap	1 192	1 208	1 238	1 267	1 440
Turkey					
Ores & concentrates	28 692	11 524	12 755	16 615	13 088
Yugoslavia					
Concentrates	1 735	4 117	13 330	(g) —	...
Unwrought (a)	58 820	42 638	53 429	(g) 8 630	...
Algeria					
Unwrought (a)	20 676	22 094	14 252	12 984	...
Morocco					
Ore	23 098	35 332	33 325	36 082	38 000
Namibia					
Concentrates	78 656	86 931	79 840	65 517	75 246
South Africa					
Ores & concentrates (c)	19 648	15 351	10 975	3 737	—
Unwrought	272	234	1 816	3 900	3 300
Tunisia					
Ore	17 510	19 425	17 700	10 000	5 200
Zaire					
Unwrought	38 813	...	37 500	* 30 200	5 400
Zambia					
Unwrought	12 798	39 519	6 067	6 300	6 100
Canada					
Ore (c)	814 737	608 590	700 910	571 501	694 505
Unwrought	539 061	495 177	452 914	520 533	510 087
Unwrought alloys	17 759	13 819	3 409	8 130	6 139
Scrap	16 942	11 583	38 295	33 327	31 972
Honduras					
Ores & concentrates (c)	23 475	27 983	28 971	38 280	32 702
Mexico					
Ores & concentrates	142 328	162 937	238 982	252 253	300 734
Unwrought	80 543	90 871	93 291	88 890	55 000
USA					
Ore (c)	195 533	255 394	380 932	490 216	546 041
of which: Re-exports	161 944	176 517	160 486	151 511	234 009
Unwrought (a)	5 605	8 104	7 043	6 333	6 030
Scrap	95 147	97 703	88 475	73 179	57 024
Argentina					
Ores & concentrates	5 115	6 877	11 855	7 000	5 164
Unwrought	—	11 263	14 005	14 400	7 934
Bolivia					
Ore	115 659	169 873	210 366	267 599	286 969
Brazil					
Unwrought	6 511	20 216	34 202	49 032	280 817
Chile					
Concentrates	34 352	39 754	49 672	59 848	50 486
Peru					
Concentrates	693 582	764 531	981 407	876 052	930 753
Unwrought (a)	51 381	91 260	64 677	94 726	70 534
China					
Ores & concentrates	108 175	115 266	76 228	76 960	65 312
Unwrought (a)	13 838	20 109	16 711	6 284	84 860
Hong Kong					
Unwrought (a)	29 924	37 922	57 606	57 816	66 270
of which: Re-exports	29 788	37 431	56 576	56 799	64 302
Scrap	1 105	3 912	9 536	9 333	10 343
of which: Re-exports	368	1 171	5 596	7 327	8 328
Indonesia					
Scrap	507	109	271	—	346
Iran (d)					
Ore	57 772	35 968	...	...	...
Japan					
Unwrought	21 129	17 862	21 254	18 147	30 124
Unwrought alloys	5 513	4 065	4 400	4 242	4 316
Scrap	5 017	5 973	8 519	8 141	8 459

## Exports of Zinc

Zinc  
tonnes

Country	1988	1989	1990	1991	1992
Korea, Dem. P.R. of					
Unwrought (a) (b)	* 99 900	* 75 300	* 54 400	* 57 900	* 37 800
Korea, Republic of					
Unwrought (a)	70 657	73 583	56 310	27 626	58 408
Malaysia					
Scrap	385	492	...	1 139	1 670
Myanmar (e)					
Concentrates	6 500	9 000	5 500	3 871	...
Philippines					
Concentrates	2 885	3 931	1 284	—	—
Scrap	622	888	866	514	186
Saudi Arabia					
Scrap	2 637	2 606	3 138	911	...
Singapore					
Unwrought	31 751	40 378	22 604	12 920	12 896
of which: Re-exports	30 980	39 412	22 210	11 954	12 337
Scrap	926	2 366	1 364	1 001	591
Taiwan					
Unwrought (a)	4 368	8 387	2 410	1 080	5 869
Thailand					
Unwrought (a)	12 967	13 837	6 059	10	—
Australia					
Ores & concentrates	979 652	1 004 000	1 217 000	1 406 000	1 489 000
Unwrought	207 000	203 000	244 000	253 000	259 000
Scrap (f)	3 420	3 125	3 665	4 023	4 771
New Zealand (f)					
Scrap	1 179	1 046	876	389	879

### Note(s):

(1) In this table the term 'unwrought' zinc corresponds to item 686.1 of the Standard International Trade Classification (Revision 3) 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

(f) Years ended 30 June of that stated

(g) Data for the Federal Republic of Yugoslavia only

(h) Data for the Russian Federation only

## Zinc

## Imports of Zinc

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Ores & concentrates	187 826	207 603	278 301	207 171	185 766
Unwrought	134 000	127 344	123 641	120 120	122 639
Unwrought alloys	4 957	6 312	4 682	1 987	2 792
Scrap	6 487	6 578	5 028	2 634	2 848
Belgium-Luxembourg					
Ore	611 709	605 123	626 045	692 011	428 254
Unwrought (a)	41 017	41 712	35 156	46 464	150 940
Scrap	20 247	18 513	20 354	17 870	19 376
Denmark					
Unwrought	12 065	10 917	13 651	13 587	16 341
Unwrought alloys	2 169	2 228	2 295	2 752	1 841
Scrap	898	88	244	182	113
France					
Ore	523 738	533 365	595 386	630 641	624 440
Unwrought	88 328	83 591	88 933	82 204	97 872
Unwrought alloys	22 834	25 435	21 566	22 033	27 523
Scrap	10 029	11 418	9 753	5 971	5 768
Germany, Federal Republic of					
Ore	604 455	595 494	592 604	624 814	640 414
Unwrought	180 163	186 489	222 750	270 008	283 247
Unwrought alloys	12 925	15 623	19 519	22 584	23 275
Scrap	28 916	30 539	25 349	17 855	20 399
Greece					
Unwrought (a)	17 827	20 167	22 319	17 198	13 215
Irish Republic					
Unwrought (a)	1 877	2 830	1 769	2 031	1 120
Scrap	188	347	254	108	21
Italy					
Ore	429 581	392 304	400 711	411 633	443 267
Unwrought	58 760	75 609	76 905	71 238	82 483
Unwrought alloys	12 502	14 200	15 380	16 653	15 279
Scrap	9 657	11 164	5 840	5 577	10 392
Netherlands					
Ore	478 840	419 139	465 923	410 911	457 031
Unwrought	36 072	36 108	25 493	24 831	29 160
Unwrought alloys	1 343	1 272	694	1 128	522
Scrap	4 176	8 144	5 055	5 664	5 210
Portugal					
Unwrought (a)	13 131	13 112	17 653	17 416	17 579
Scrap	2 542	456	2 418	2 240	225
Spain					
Ore	33 398	48 764	142 988	130 553	401 067
Unwrought	4 467	6 235	3 986	6 542	1 826
Unwrought alloys	2 034	3 293	4 003	4 966	4 487
Scrap	2 164	1 887	1 511	2 332	933
Austria					
Ore	15 326	26 184	19 376	12 206	6 301
Unwrought (a)	16 243	13 441	16 298	27 613	43 517
Scrap	355	1 030	808	1 023	1 294
Bulgaria					
Ore (h)	* 50 900	* 57 600	* 57 700	* 41 500	* 51 900
Czechoslovakia					
Unwrought (a)	54 000	62 000	54 000	...	...
Finland					
Ore	187 411	154 442	266 689	236 902	259 342
Unwrought (a)	63	550	110	573	2 697
German Democratic Republic					
Ore (h)	* 76 800	* 58 500	* 39 100	—	—
Unwrought (a) (h)	* 36 000	* 25 400	* 17 400	—	—
Hungary					
Unwrought (g)	26 358	19 186	12 911	...	10 626
Iceland					
Unwrought (a)	131	129	171	167	163
Malta					
Unwrought (a)	179	162	...	...	...

# Imports of Zinc

Zinc  
tonnes

Country	1988	1989	1990	1991	1992
Norway					
Ore	99 332	84 719	158 829	160 116	171 760
Unwrought (a)	510	1 429	935	435	556
Scrap	1 722	3 064	1 607	5 619	3 864
Poland					
Unwrought	2 486	2 542	947	860	475
Romania					
Unwrought (a)	(h)* 2 300	748	(h)* 1 500	(h)* 1 700	6 073
Soviet Union					
Ore	(h)* 57 000	(h)* 75 100	(h)* 42 200	(j) 32 214	(j) —
Unwrought (a)	(h)* 62 700	(h)* 31 700	(h)* 10 000	(h)* 1 000	(j) 4 455
Sweden					
Unwrought	39 718	40 192	40 304	33 364	29 993
Unwrought alloys	3 598	3 014	3 042	2 091	2 147
Scrap	117	107	92	205	60
Switzerland					
Unwrought (a)	20 379	20 030	26 122	22 229	20 240
Turkey					
Unwrought	19 371	(a) 16 152	(a) 29 841	(a) 20 714	(a) 31 481
Yugoslavia					
Concentrates	61 144	54 079	55 430	(i) 19 187	...
Unwrought (a)	44 291	84 155	50 515	(i) 2 865	...
Algeria					
Ores & concentrates	32 598	60 501	25 837	...	...
Egypt					
Unwrought (b)	10 641	9 901	...	...	7 643
Ivory Coast					
Unwrought	2 509	...	...	...	...
Kenya					
Unwrought (a)	8 689	...	6 736	...	...
Morocco					
Unwrought (a)	2 923	4 242	5 700	5 132	4 832
South Africa					
Unwrought (a)	5 390	13 300	5 528	2 477	4 318
Scrap	261	201	299	411	...
Tanzania					
Unwrought (a)	859	81 529	...	...	...
Tunisia					
Unwrought	2 348	4 112	(a) 4 063	(a) 4 554	(a) 4 482
Canada					
Ores & concentrates (c)	34 538	34 469	170 918	176 805	151 679
Unwrought	8 027	4 707	9 482	4 687	5 679
Scrap	2 474	1 379	1 614	655	1 526
Costa Rica					
Unwrought (a)	4 549	5 467	4 741	3 623	4 660
El Salvador					
Unwrought (a)	1 140	253	737	683	...
Guatemala					
Unwrought (a)	3 352	1 515	834	550	244
Honduras					
Unwrought (a)	246	1 029	863	1 551	578
Jamaica					
Unwrought	815	708	...	...	...
USA					
Ore (c)	405 710	388 596	240 785	170 616	488 956
Unwrought (a)	740 868	712 186	632 477	549 369	644 491
Scrap	5 727	9 291	31 720	31 596	31 176
Argentina					
Unwrought	1 880	1 000	1 742	...	4 612
Brazil					
Ores & concentrates	94 238	92 027	86 715	111 903	119 358
Unwrought (a)	7 486	9 462	12 735	10 955	8 943
Chile					
Unwrought (a)	9 250	9 173	4 697	4 748	6 931

## Imports of Zinc

tonnes

Country	1988	1989	1990	1991	1992
Colombia					
Unwrought (a)	18 903	14 890	8 750	14 104	15 062
Ecuador					
Unwrought (a)	53 692	2 695	2 649	3 909	2 529
Uruguay					
Unwrought	1 882	1 487	1 455	1 717	1 383
Venezuela					
Unwrought	21 228	5 277	9 272	12 727	14 171
Unwrought alloys	12 694	6 595	4 369	4 156	4 563
China					
Unwrought (a)	61 985	19 198	4 141	11 705	42 153
Hong Kong					
Unwrought	20 866	25 458	38 777	27 210	29 506
Unwrought alloys	44 633	29 779	36 041	60 588	57 472
Scrap	1 176	3 647	6 407	6 592	8 605
India (d)					
Ores & concentrates	22 537	31 380	42 155	15 073	60 170
Unwrought	74 932	78 173	74 158	38 365	19 927
Unwrought alloys	2 052	2 146	1 537	231	236
Scrap	2 808	1 654	551	638	148
Indonesia					
Unwrought (a)	51 705	44 447	55 315	56 722	67 898
Scrap	936	476	195	326	342
Iran (e)					
Unwrought	4 751	6 466	16 749	...	...
Israel					
Unwrought (a)	7 956	7 240	...	9 116	10 021
Japan					
Ore	1 068 407	1 028 985	1 186 231	1 156 089	1 233 112
Unwrought	112 772	132 746	140 470	142 194	105 831
Unwrought alloys	17 530	17 968	14 333	12 342	9 557
Scrap	764	759	409	338	248
Jordan					
Unwrought	692	1 005	1 121	868	1 336
Korea, Dem. P.R. of					
Ores & concentrates (h)	* 16 600	* 36 400	* 7 800	* 19 100	* 6 900
Korea, Republic of					
Ores & concentrates	456 345	449 999	485 327	468 242	471 588
Unwrought (a)	20 453	20 345	25 283	22 353	25 079
Scrap	12 881	2 890	543	327	24
Macao					
Unwrought	4 071	2 503	620	128	40
Malaysia					
Unwrought	17 518	15 994	18 167	22 223	20 216
Unwrought alloys	6 451	...	6 915	8 150	10 220
Pakistan (f)					
Unwrought	15 385	...	29 396	17 876	13 305
Philippines					
Unwrought (a)	27 556	29 981	29 485	31 038	39 064
Saudi Arabia					
Unwrought	9 443	6 683	6 662	(a) 9 123	...
Singapore					
Unwrought	45 365	52 520	56 210	36 039	73 874
Scrap	520	737	550	1 042	1 254
Sri Lanka					
Unwrought (a)	1 571	...	1 319	1 603	1 206
Taiwan					
Unwrought	63 574	56 908	72 279	125 946	128 828
Unwrought alloys	18 109	13 910	13 449	30 790	15 610
Scrap	151 681	163 383	155 345	134 190	125 200
Thailand					
Ores & concentrates	0	0	1 000	33 865	40 428
Unwrought	1 398	1 362	827	5 260	8 492
Unwrought alloys	2 435	1 421	3 910	5 988	3 271



## Imports of Zinc

Zinc  
tonnes

Country	1988	1989	1990	1991	1992
Australia					
Ores & concentrates (f)	...	20 359	32 295	23 767	22 176
New Zealand (f)					
Unwrought (a)	17 061	19 148	25 550	17 428	18 731

### Note(s):

- (1) In this table the term 'unwrought' zinc corresponds to item 686.1 of the Standard International Trade Classification (Revision 3) 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) BGS estimates, based on known exports from certain countries
- (i) Data for the Federal Republic of Yugoslavia only
- (j) Data for the Russian Federation only

**Production of Zirconium Minerals**

tonnes

Country	1988	1989	1990	1991	1992
Soviet Union	* 85 000	* 85 000	* 85 000	* 65 000	* 85 000
South Africa (a)	* 130 000	* 150 000	* 170 000	* 240 000	* 250 000
USA	114 651	118 388	102 073	103 140	108 156
Brazil (b)	28 029	32 970	16 905	18 590	16 874
China	* 15 000	17 889	16 542	* 16 500	* 16 500
India	* 16 000	* 17 200	* 17 500	* 18 200	* 18 000
Malaysia	25 671	18 704	4 279	5 579	2 608
Sri Lanka	...	21 983	19 727	26 123	13 368
Thailand	5 098	1 496	490	2 573	1 723
Australia	479 000	511 000	437 000	288 000	355 000
World total	918 000	975 000	870 000	784 000	867 000

## Note(s):

(1) In this table the term 'zirconium minerals' is understood to mean zircon, unless otherwise stated

(a) Including baddeleyite ( $ZrO_2$ )

(b) Including caldasite rock containing zircon and baddeleyite

**Exports of Zirconium**

Country	1988	1989	1990	1991	1992
United Kingdom					
Concentrates	345	844	888	1 357	1 262
Metal	94	216	143	56	245
Belgium-Luxembourg					
Concentrates	509	678	626	144	172
Metal	273	21	31	45	39
France					
Concentrates	3 291	3 286	857	816	713
Germany, Federal Republic of					
Concentrates	7 913	5 139	2 821	1 879	1 016
Metal	78	59	97	82	158
Italy					
Concentrates	9 325	5 648	4 301	4 827	8 945
Metal	230	786	553	1 223	947
Netherlands					
Concentrates	14 742	15 552	24 263	21 041	21 664
Spain					
Concentrates	641	1 264	1 425	32	96
Zirconium sand	6 095	1 470	1 601	2 061	3 430
Sweden					
Metal	82	89	109	101	172
South Africa					
Concentrates (a)	* 134 800	* 142 600	* 122 300	* 139 400	* 145 300
USA					
Concentrates	22 966	50 621	31 280	31 490	32 418
Metal	1 288	1 375	1 318	1 415	1 731
Brazil					
Concentrates	527	9 364	4 051	4 002	1 006
Malaysia					
Concentrates	28 263	15 073	3 249	4 698	1 698
Australia					
Concentrates	464 000	474 000	332 000	324 000	(b) 310 000

## Note(s):

(1) 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) Standard grade only

## Zirconium

**Imports of Zirconium**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom					
Concentrates	43 411	55 228	35 685	36 388	37 708
Metal	159	253	140	122	147
Belgium-Luxembourg					
Concentrates	3 719	2 227	1 756	1 142	1 836
Metal	198	181	189	212	287
France					
Concentrates	45 761	52 164	49 714	46 167	43 273
Metal	306	193	296	208	449
Germany, Federal Republic of					
Metal	402	415	468	418	474
Italy					
Concentrates	82 863	84 814	56 399	85 198	66 656
Metal	285	210	63	200	86
Netherlands					
Concentrates	27 707	45 304	52 737	52 198	33 753
Portugal					
Concentrates	2 780	1 270	1 795	1 828	1 479
Spain					
Concentrates	42 646	39 765	29 594	41 226	52 930
Zirconium sand	6 200	9 372	9 171	9 951	8 668
Austria					
Concentrates	1 836	1 821	1 606	1 434	729
Bulgaria					
Concentrates (a)	* 1 200	* 1 300	* 1 300	* 500	* 500
Czechoslovakia					
Concentrates (a)	* 1 500	* 800	* 250	* 230	...
Finland					
Concentrates	—	2 589	1 001	1 721	2 776
German Democratic Republic					
Concentrates (a)	* 1 600	* 1 400	* 1 500	—	—
Soviet Union					
Concentrates (a)	* 8 200	* 9 000	* 8 200	* 2 700	* 1 000
Sweden					
Concentrates	232	32	117	79	43
Metal	262	269	300	525	264
Turkey					
Concentrates	620	370	613	61	428
Zirconium sand	5 719	...	...	...	...
Canada					
Concentrates	7 623	10 426	9 841	7 102	8 172
Metal	282	296	289	270	286
Mexico					
Zirconium sand	8 467	9 889	5 644	7 981	9 651
USA					
Concentrates	76 332	73 129	26 783	34 688	42 772
Metal	356	500	410	520	557
Argentina					
Zirconium sand	3 660	4 494	...	...	...
Brazil					
Concentrates	15 058	8 909	4 749	3 768	5 098
Indonesia					
Concentrates	...	345	329	985	1 469
Japan					
Concentrates	197 592	172 848	119 008	148 343	129 703
Metal	510	641	683	676	624
Korea, Republic of					
Concentrates	24 430	21 813	24 515	21 445	11 820
Metal	52	75	67	74	88
Malaysia					
Concentrates	710	3 146	...	2 075	2 612
Philippines					
Zirconium sand	589	579	490	511	419

**Imports of Zirconium**

Country	1988	1989	1990	1991	1992
Taiwan					
Concentrates	...	26 078	7 064	8 004	9 645
Zirconium sand	6 732	6 617	6 008	8 297	9 147
Thailand					
Concentrates	—	1 658	1 108	1 904	1 204

## Note(s):

- (1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys
- (a) BGS estimates, based on known exports from certain countries

## Other Mineral Commodities

**Production of Beryl**

tonnes

Country	1988	1989	1990	1991	1992
Portugal	4	* 4	* 4	* 4	* 4
Soviet Union	* 2 000	* 2 000	* 1 600	* 1 300	* 1 200
Madagascar	15	30	3	* 3	7
Namibia	...	...	25	6	0
Zambia	1 343	880	1 633	836	504
Zimbabwe	32	46	28	29	23
USA	5 313	4 592	4 548	4 339	4 826
Argentina	39	89	25	27	* 30
Brazil	913	800	* 850	* 850	* 850
China	* 1 350	* 1 350	* 1 400	* 1 400	* 1 400

**Production of Borates**

tonnes

Country	1988	1989	1990	1991	1992
Finland	10 727	9 355	11 790	2 952	3 200
Soviet Union	* 200 000	* 200 000	* 180 000	* 160 000	* 130 000
Turkey	1 230 828	1 136 000	1 198 730	1 117 483	1 038 054
USA (a)	1 149 000	1 114 000	1 094 000	1 240 000	1 009 000
Argentina	269 574	261 308	144 020	115 644	124 955
Bolivia	586	9 609	3 076	7 932	18 131
Chile	32 122	130 512	131 753	97 135	202 716
Peru	* 15 000	25 000	20 000	26 000	* 30 000
China (b)	* 95 000	* 74 000	* 75 000	* 76 000	* 77 000

Note(s):

(1) In addition to the countries listed, the Federal Republic of Germany and Iran are believed to produce borates

(a) Sold or used by producers

(b) B<sub>2</sub>O<sub>3</sub> equivalent**Production of Germanium Metal**

tonnes

Country	1988	1989	1990	1991	1992
Austria	6	6	5	—	—
Soviet Union	* 12	* 12	* 12	* 15	* 12
USA (a)	* 21	* 20	* 18	* 15	* 13
China	* 6	* 6	* 10	* 10	* 8
Japan	4	3	3	3	3

Note(s):

(1) Significant quantities of germanium are also believed to be recovered from imported or domestic material in Belgium, France, Federal Republic of Germany and to a lesser extent in Italy

(a) Including production of secondary metal

**Production of Primary Magnesium Metal**

tonnes

Country	1988	1989	1990	1991	1992
France	13 776	14 600	14 600	14 000	13 600
Italy	5 589	5 768	5 937	3 919	1 211
Norway	50 317	52 872	48 222	44 300	30 400
Soviet Union	* 90 000	* 91 000	* 88 000	* 80 000	* 70 000
Yugoslavia	6 176	6 106	5 788	(a) 5 360	(b) 4 055
Canada	8 000	7 200	26 726	35 512	25 800
USA	141 983	152 066	139 333	131 288	136 947
Brazil	5 866	5 613	8 700	7 800	7 300
China	* 3 200	3 658	5 900	6 000	10 500
Japan	9 012	12 075	12 843	11 559	7 119

(a) Excluding data from August to December for the Republic of Croatia

(b) Data for the Federal Republic of Yugoslavia only

**Production of Nepheline Syenite**

tonnes

Country	1988	1989	1990	1991	1992
Norway	244 665	249 295	305 000	* 300 000	* 350 000
Soviet Union	1 639 000	1 697 000	1 650 000	* 1 600 000	* 1 000 000
South Africa	...	...	...	20 966	174 864
Canada	547 000	552 000	535 000	484 000	554 000

**Production of Perlite**

tonnes

Country	1988	1989	1990	1991	1992
Greece	573 253	607 486	* 600 000	655 899	* 575 000
Italy	* 70 000	* 71 000	* 71 000	* 70 000	* 65 000
Czechoslovakia (a)	43 390	45 396	41 702	40 719	* 40 000
Hungary	120 562	108 678	95 572	87 750	* 93 000
Soviet Union	* 170 000	* 160 000	* 150 000	* 80 000	* 50 000
Turkey	154 231	132 941	138 510	87 994	192 500
Mexico	39 169	37 354	42 439	48 860	42 637
USA	753 000	655 000	659 000	711 000	762 000
Argentina	19 764	21 880	22 502	25 211	* 15 000
Iran	1 280	2 240	2 266	6 275	5 000
Japan	* 200 000	* 202 000	* 203 000	* 203 000	* 203 000
Philippines	43 460	6 772	3 150	2 894	* 2 800
Australia	4 736	* 5 000	* 5 000	* 5 000	* 5 000
New Zealand	2 938	2 500	1 972	1 674	2 000

Note(s):

(1) In addition to the countries listed, Algeria, Bulgaria, Canada, China, Iceland, Mozambique and Yugoslavia are believed to produce perlite

(a) Expanded

**Production of Selenium Metal**

tonnes

Country	1988	1989	1990	1991	1992
Belgium	* 250	* 250	* 250	* 250	* 250
Germany, Federal Republic of	* 100	* 125	* 125	* 110	* 125
Finland	24	27	37	37	32
German Democratic Republic	* 25	...	...	—	—
Sweden	20	23	29	23	37
Yugoslavia	61	55	59	(b) 64	(c) 58
Zambia (d)	24	21	23	22	32
Canada	321	213	369	227	345
Mexico	13	20	12	3	0
USA	286	253	287	260	243
Chile (a)	30	52	37	66	63
Peru	5	9	9	12	14
Japan	471	471	495	537	573

Note(s):

(1) In addition to the countries listed, India, and Soviet Union are believed to produce selenium metal

(a) Exports

(b) Excluding data from August to December for the Republic of Croatia

(c) Data for the Federal Republic of Yugoslavia only

(d) Years ended 31 March following that stated

**Production of Strontium Minerals**

tonnes

Country	1988	1989	1990	1991	1992
United Kingdom	25 553	20 885	24 734	2 000	2 000
Spain	45 631	35 134	80 352	* 75 000	* 65 000
Turkey	* 60 000	86 375	73 790	70 000	37 940
Algeria	* 5 400	* 5 400	* 5 400	* 5 400	* 5 400
Mexico	51 626	67 658	66 254	62 180	61 097
Argentina (a)	2 241	1 193	3 112	3 176	2 237
Iran (b)	39 194	56 849	34 140	28 500	13 138
Pakistan	941	966	1 786	1 472	1 448

Note(s):

(1) In addition to the countries listed, China, Federal Republic of Germany, Poland and Soviet Union are believed to produce strontium minerals

(a) May contain unbeneficiated material

(b) Years ended 20 March following that stated



**Production of Tellurium Metal**

tonnes

Country	1988	1989	1990	1991	1992
Canada	19	8	12	16	25
USA	53	69	36	50	50
Peru	4	8	8	13	19
Japan	55	51	50	57	57

Note(s):

(1) In addition to the countries listed, Australia, Federal Republic of Germany and Soviet Union are believed to produce tellurium metal

**Mine Production of Uranium**

tonnes (metal content)

Country	1988	1989	1990	1991	1992
France	3 370	3 334	2 935	2 479	2 880
Portugal	142	129	111	27	29
Spain	228	228	164	195	186
Soviet Union	...	...	* 10 500	* 10 500	* 8 300
Yugoslavia	79	85	53	5	* 5
Gabon	930	890	709	678	594
Namibia	3 510	3 186	3 325	2 450	1 685
Niger	2 962	2 980	2 832	2 964	2 965
South Africa	3 886	2 931	2 438	1 725	1 671
Canada	12 461	11 427	8 770	8 161	9 298
USA	5 051	5 308	3 430	3 040	2 200
Argentina	142	52	9	18	124
Brazil	15	30	5	—	—
China	* 344	* 800	* 800	* 800	* 800
India	* 120	* 210	* 210	* 200	* 230
Australia	3 532	3 800	3 530	3 776	2 334
World total	46 800	45 900	39 800	37 000	33 300
World total (U <sub>3</sub> O <sub>8</sub> equivalent)	55 200	54 200	47 000	43 700	39 300

Note(s):

(1) In addition to the countries listed, Czechoslovakia, Israel and Japan are believed to produce uranium

**Production of Vermiculite**

tonnes

Country	1988	1989	1990	1991	1992
Soviet Union	* 97 000	97 000	* 95 000	* 85 000	* 60 000
Egypt (c)	236	102	28	157	217
Kenya	2 765	4 090	3 440	2 300	2 279
South Africa	209 177	224 500	220 311	214 656	170 399
Zimbabwe	884	1 498	2 135	2 319	4 300
Mexico	218	300	132	117	125
USA (a)	276 000	249 000	209 000	180 000	190 000
Argentina	19 300	590	10	190	100
Brazil (b)	26 903	20 523	31 645	* 20 000	* 20 000
India	4 052	2 764	1 769	1 768	* 2 000
Japan	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
Australia	1 165	...	...	...	...

## Note(s):

(1) In addition to the countries listed, Malawi is believed to produce vermiculite

(a) Sold or used by producers

(b) Including beneficiated and directly shipped material

(c) Years ended 30 June of that stated

**Production of Wollastonite**

tonnes

Country	1988	1989	1990	1991	1992
Finland	19 165	21 634	29 628	27 829	27 928
Mexico	10 506	10 618	11 442	13 877	27 392
USA	81 000	* 80 000	...	...	...
India	34 286	44 042	61 386	61 358	* 62 000

## Note(s):

(1) In addition to the countries listed, China, Japan, Namibia and Turkey are believed to produce wollastonite



