

British Geological Survey

# World Mineral Statistics 1998-2002

dti Minerals Programme





BRITISH GEOLOGICAL SURVEY

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# WORLD MINERAL STATISTICS 1998–2002

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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 Department for International Development.*

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

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## PREFACE

I am writing this preface at a time of transition with respect to the provision of mineral statistics by the BGS. Funding by the DTI for mineral statistics ends on 31 March 2004. The BGS expresses its gratitude to the DTI for the support this work has received since 1973. We are now seeking to provide a new range of mineral statistics services through a range of media including the Worldwide Web. The BGS will continue to publish world mineral production figures and will increasingly move towards offering a range of commodity market commentaries and analyses focusing on key issues of the moment. Nevertheless, I could not allow the publication of the final *World Mineral Statistics* book to go by without some historical reflections

During the ninety years that these statistical compilations cover, they have recorded in figures all the major changes in the world of minerals during that time. These have included the rise and fall of African copper, the extraordinary – and ultimately wasteful – efforts of the Soviet empire to achieve self-sufficiency, the burgeoning growth of iron ore output from Australia, Brazil and elsewhere, the decline in South Africa's domination of gold and of Canada's pre-eminence in nickel, the inexorable fall in western Europe's coal output as the vast resources of the USA, Canada, Colombia, South Africa and Australia opened up, and most recently the astonishing growth in the economy of China with all its implications for the world minerals industry. As well as geographic changes, the sheer scale of the increase in total output of most minerals in the past ninety years is impressive: in 1913 the world production of natural petroleum was a little over fifty million tonnes (with less than one per cent coming from the Middle East), and now it is more than three thousand million tonnes. The world's total production of copper in 1913 was scarcely more than the output from today's largest mine alone – which supplies six per cent of total world demand - and china clay production, most of it from the UK, was one million tonnes whereas today it is more than twenty-one million tonnes.

When the book was re-launched as *World Mineral Statistics* in 1977 my predecessor wrote in the preface that its object was 'to present as comprehensively and accurately as possible factual data about the world mineral industry's activities, which are a measure of the unceasing contribution of the geological sciences to man's material welfare and progress'. This aim will remain at the forefront of our endeavours. The volume *European Mineral Statistics* will continue to be produced, with the support of the Office of the Deputy Prime Minister (ODPM), and we shall continue to compile world production statistics. As well as the printed books, much statistical information is also available as downloads on the web site [www.mineralsUK.com](http://www.mineralsUK.com).

Trade information for the latest year covered by this volume is necessarily incomplete since the tables are prepared before many countries have produced their annual trade statistics. Trade data for some major trading countries are reconstructed by searching the official publications of their trading partners. Such reconstructed figures are shown as estimates in the tables.

In each successive volume account has been taken of revisions and information received after the publication of the previous issue, thus data for every year are as up to date as is practicable. The objective remains to present the latest complete production information obtained from official bodies in individual countries. Trade data have been obtained both from national statistical offices and from compilations made by other organisations. The co-operation afforded to the British Geological Survey by numerous national and international organisations is gratefully acknowledged.

I look forward to your continued interest and support as our mineral statistics services evolve in the years ahead.

*David A. Falvey, PhD*  
*Executive Director*

*British Geological Survey*  
*Keyworth*  
*Nottingham NG12 5GG*

*26 January 2004*

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Asbestos	Mercury
Barytes & fluorspar	Natural gas
Bauxite	Nickel
Chromium	Petroleum
Coal	Phosphate rock
Copper	Salt, gypsum & potash
Diamond	Silver
Gold	Tin
Iron ore	Uranium
Manganese ore	Zinc & lead

## EXPLANATORY NOTES

### *Coverage*

*World Mineral Statistics* covers the majority of economically important, and internationally traded, mineral commodities. For each commodity constant efforts are made to ensure that as many producing and trading countries as possible are reported and that trade data cover all major traded forms. For some commodities, where statistics on production and trade are not publicly available, estimates are made. Users of this compilation are advised that more statistical information than can be included in a publication of this nature is held in the British Geological Survey 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*

Countries are ordered alphabetically in geographical groupings as follows:

- Europe
- 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.

### *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*

*South Africa* Some 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 Africa 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.

Export statistics may include re-exports.

Tables showing trade in the following metals covered by Harmonised System Chapter 81 include under the term 'metal', unwrought and wrought forms, powder, alloys, waste and scrap, unless these are separately shown: antimony, bismuth, cadmium, chromium, cobalt, manganese, molybdenum, tantalum–niobium, titanium, tungsten, vanadium and zirconium. Trade tables of other metals include only unwrought forms under the term 'metal'.

#### *Exclusion of Warranty*

Use by recipients of information provided by the BGS, is at the recipients' own risk. BGS has taken care to ensure that information provided is as free from error as is reasonably practical. In view of the disparate sources of information at BGS's disposal, including such material donated to BGS, that BGS accepts in good faith as being accurate, the Natural Environment Research Council (NERC) gives no warranty, expressed or implied, as to the quality, accuracy, performance, and merchantability of the information supplied, or to the information's suitability for any use whether made known to BGS or otherwise. NERC/BGS accepts no liability whatever in respect of loss, damage, injury or other occurrence however caused.

#### *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.

Particular acknowledgement is made to the Mines Departments and other government agencies of many countries whose regular statements, yearbooks and other reports are worthy of direct consultations by readers in search of detail.

Specialist commodity organisations which have kindly allowed information to be reproduced include the International Copper Study Group, the International Lead and Zinc Study Group, the International Nickel Study Group and the International Fertilizer Industry Association Ltd. In a few instances, information on specific commodities has been obtained directly from company sources. The co-operation of other members of the International Consultative Group on Non-Ferrous Metal Statistics is also gratefully acknowledged.

Supplementary information is also obtained from publications dealing with a wider range of commodities such as Société de l'Industrie Minérale, *Annuaire Statistique Mondial des Minerais et Métaux*; Mining Journal, *Mining Annual Review*; World Bureau of Metal Statistics, *World Metal Statistics*; World Bureau of Metal Statistics, UBS Warburg and Enron Metals Limited, *Metallstatistik*; publications of the Interstate Statistical Committee of the CIS, the United States Geological Survey, and the United Nations Statistics Division and UN 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 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





# **STATISTICAL TABLES**

**Production of Bauxite**

tonnes

Country	1998	1999	2000	2001	2002
Albania	4 128	4 624	*3 000	*3 000	*3 000
Bosnia and Herzegovina	...	...	20 700	77 000	113 000
France	170 000	170 000	185 000	185 000	174 000
Greece	1 714 023	1 882 505	1 965 561	2 047 255	2 372 000
Hungary	908 900	935 200	1 046 470	1 000 044	720 000
Romania	161 865	-----	-----	-----	-----
Russia	4 092 000	4 513 000	5 000 000	4 805 000	4 497 500
Serbia and Montenegro	238 489	503 434	630 000	630 000	611 500
Turkey	458 028	207 743	458 537	242 040	287 403
Ghana	384 406	355 261	503 824	692 620	683 654
Guinea	16 678 818	17 419 100	17 991 900	17 191 700	17 480 500
Mozambique	6 103	7 883	8 130	8 597	9 119
Jamaica	12 646 439	11 688 481	11 126 524	12 369 647	13 119 448
USA (b) (d)	225 288	*270 000	*200 000	*200 000	*200 000
Brazil (c)	11 566 798	12 661 746	13 974 480	*13 800 000	*13 200 000
Guyana	2 267 368	2 359 272	2 689 451	2 011 301	1 639 266
Suriname	3 931 108	3 714 595	3 610 381	4 393 640	4 001 602
Venezuela	4 825 647	4 166 450	4 360 720	4 584 893	5 190 806
China	*6 400 000	*7 100 000	*7 900 000	8 650 000	*12 000 000
India (f)	6 609 525	7 049 943	7 992 782	8 688 752	9 776 633
Indonesia	1 055 647	1 116 323	1 150 800	1 237 000	1 283 000
Iran (a)	336 006	461 639	485 130	283 877	323 600
Kazakhstan	3 436 800	3 606 500	3 729 600	3 685 100	4 376 700
Malaysia	160 271	222 724	123 270	64 161	39 975
Pakistan (e)	4 953	11 216	10 377	3 728	12 233
Vietnam	46 360	*30 000	16 000	20 000	*20 000
Australia	44 653 000	48 416 000	53 802 000	53 799 000	54 134 000
World Total	123 000 000	129 000 000	139 000 000	141 000 000	146 000 000

## Note(s):

(1) This table includes production of refractory bauxite

- (a) Years ended 20 March following that stated
- (b) Data for Alabama only
- (c) Including beneficiated and direct shipping ore
- (d) Years ended 30 September of that stated
- (e) Years ended 30 June of that stated
- (f) Years ended 31 March following that stated

## Production of Alumina

tonnes (Al<sub>2</sub>O<sub>3</sub> content)

Country	1998	1999	2000	2001	2002
Azerbaijan	*3 000	76 000	63 000	87 500	91 000
Bosnia and Herzegovina	-----	37 000	219 400	100 000	-----
France	444 000	472 000	508 000	*510 000	*500 000
Germany	*600 000	583 000	717 021	715 164	716 660
Greece	622 000	621 700	668 300	678 934	*720 000
Hungary	337 500	295 000	357 100	330 000	293 700
Irish Republic	1 322 536	1 395 735	1 410 674	1 448 730	1 400 000
Italy	925 000	973 000	1 022 000	993 000	1 010 000
Romania	250 266	277 388	416 587	319 403	350 164
Russia	2 465 400	2 687 000	2 865 000	3 046 400	3 131 000
Serbia and Montenegro	152 519	156 012	186 135	200 660	237 396
Slovakia	26 507	-----	-----	-----	-----
Spain	1 110 000	1 112 000	1 123 000	1 199 000	1 300 000
Turkey	156 825	159 122	155 448	145 993	152 869
Ukraine	1 290 720	1 230 200	1 365 000	1 343 400	1 350 900
United Kingdom	96 000	90 000	88 500	83 900	73 800
Guinea	499 630	568 479	540 922	674 300	698 000
Canada	1 072 700	1 068 800	1 023 000	1 036 000	1 125 400
Jamaica	3 440 167	3 569 633	3 600 125	3 542 385	3 630 587
USA	*5 654 000	*5 144 000	*4 786 000	*4 340 000	*4 338 000
Brazil	3 322 100	3 515 100	3 754 100	3 519 700	3 855 400
Suriname	1 771 889	1 853 052	1 906 073	1 893 254	1 902 706
Venezuela	1 553 445	1 468 489	1 755 265	1 833 162	1 777 904
China	3 340 000	3 837 400	4 328 100	4 746 500	5 478 400
India	1 855 000	1 930 000	2 107 000	2 170 000	2 580 000
Japan	737 600	736 600	781 700	739 000	723 900
Kazakhstan	1 084 500	1 157 692	1 216 679	1 231 126	1 386 457
Australia	13 853 000	14 532 000	15 680 000	16 313 000	16 382 000
World Total	48 000 000	49 500 000	52 600 000	53 200 000	55 200 000

## Note(s):

(1) Where possible figures in this table show the alumina equivalent (Al<sub>2</sub>O<sub>3</sub>) of total hydrate produced, whether or not calcined

**Production of Primary Aluminium**

tonnes

Country	1998	1999	2000	2001	2002
Bosnia and Herzegovina	30 000	70 000	94 751	96 000	103 500
France	423 600	455 100	441 100	459 800	463 000
Germany	612 381	633 803	643 545	651 592	652 845
Greece	146 100	159 900	162 600	162 000	163 900
Hungary	34 000	34 000	33 850	34 600	35 294
Iceland	183 400	221 434	225 721	242 526	263 700
Italy	187 000	187 200	189 800	187 500	190 400
Netherlands	264 700	287 388	301 689	293 068	284 364
Norway (a)	994 195	1 007 989	1 031 000	1 034 000	1 044 000
Poland	51 500	51 600	55 473	54 606	58 777
Romania	174 040	174 100	179 039	181 830	187 088
Russia	3 010 000	3 149 000	3 247 000	3 302 000	3 347 413
Serbia and Montenegro	76 736	80 916	95 465	108 123	111 919
Slovakia	108 000	105 200	109 000	110 062	111 600
Slovenia	70 800	77 200	75 600	76 632	87 600
Spain	360 400	375 500	365 700	376 400	380 100
Sweden	96 098	99 340	101 086	101 000	99 000
Switzerland	32 106	34 439	35 539	36 288	40 224
Turkey	61 803	61 705	61 501	61 730	62 501
Ukraine	106 678	115 425	119 290	121 034	112 459
United Kingdom	258 397	269 700	305 099	340 778	344 318
Cameroon	81 600	90 410	86 384	80 900	67 000
Egypt	187 200	186 700	188 900	190 800	195 000
Ghana	56 100	114 200	155 500	161 670	131 858
Mozambique	-----	-----	53 800	266 000	273 200
Nigeria	25 500	15 900	-----	-----	-----
South Africa	676 999	689 230	673 486	662 497	676 000
Canada	2 374 118	2 389 834	2 373 460	2 582 746	2 708 910
Mexico	61 848	62 736	61 200	51 500	39 000
USA	3 712 700	3 778 600	3 668 400	2 637 000	2 707 000
Argentina	186 605	204 600	263 870	243 840	267 776
Brazil	1 208 000	1 249 600	1 271 400	1 132 000	1 318 400
Suriname	27 416	6 638	-----	-----	-----
Venezuela	586 499	570 321	571 463	579 000	604 000
Bahrain	501 308	502 663	509 038	522 042	517 004
China	2 435 300	2 808 900	2 989 200	3 575 800	4 321 000
Dubai	386 648	440 700	536 000	536 000	536 000
India (b)	543 451	612 968	624 206	635 573	688 921
Indonesia	134 300	112 300	192 300	208 800	162 800
Iran (c)	123 758	137 422	141 494	148 844	*170 000
Japan	16 302	10 904	6 536	6 632	6 413
Tajikistan	195 630	229 100	300 000	324 000	307 589
Australia	1 627 000	1 718 000	1 769 000	1 797 000	1 836 000
New Zealand	317 600	326 800	328 400	322 300	333 900
World Total	22 700 000	23 900 000	24 600 000	24 700 000	26 000 000

## Note(s):

- (a) May include some super purity aluminium  
(b) Years ended 31 March following that stated  
(c) Years ended 20 March following that stated

## Exports of Bauxite, Alumina and Aluminium

tonnes

Country	1998	1999	2000	2001	2002
Albania					
Scrap	380	537	1 763	3 070	3 530
Armenia					
Scrap	*14 000	9 965	15 810	(b) *10 300	8 893
Austria					
Unwrought	14 444	8 317	7 666	12 071	14 271
Unwrought alloys	72 884	77 157	84 770	89 985	94 594
Scrap	44 360	55 512	54 104	55 565	57 505
Azerbaijan					
Alumina	3 280	75 559	213 303	93 039	94 528
Unwrought	7 643	22 808	13 102	5 894	...
Scrap	492	3 836	12 174	3 762	(b) *500
Belarus					
Unwrought (a)	(b) *3 000	(b) *2 200	(b) *6 000	678	1 121
Scrap	4 008	4 056	4 700	2 500	2 064
Belgium-Luxembourg					
Bauxite	28 452	9 093	133 827	63 483	73 550
Alumina	2 381	3 203	5 098	3 608	8 955
Unwrought	53 783	35 818	29 754	142 931	234 880
Unwrought alloys	57 272	30 923	31 821	41 445	52 402
Scrap	135 234	132 901	142 861	161 980	151 468
Bosnia and Herzegovina					
Unwrought (a) (b)	*23 800	*58 700	*86 300	*91 700	*91 000
Scrap (b)	*3 300	*4 100	*6 100	*8 200	*7 500
Bulgaria					
Unwrought (a)	3 075	1 169	506	(b) *3 300	(b) *1 400
Scrap	3 481	8 637	21 721	(b) *12 800	(b) *11 900
Croatia					
Bauxite	5 849	29 491	21 015	5 981	3 869
Scrap	3 554	5 575	8 033	8 311	10 187
Cyprus					
Unwrought	285	2 689	15 477	6 236	1 028
Czech Republic					
Unwrought (a)	42 726	62 394	47 454	38 362	34 611
Scrap	21 233	26 118	26 241	30 520	33 636
Denmark					
Alumina	3 984	4 250	4 141	3 481	4 520
Unwrought alloys	28 778	28 452	23 333	26 092	23 363
Scrap	30 029	31 489	34 292	48 753	45 342
Estonia					
Unwrought (a)	(b) *5 900	37 870	(b) *21 400	(b) *3 744	(b) *43 100
Scrap	6 996	7 475	16 144	9 994	9 108
Finland					
Unwrought (a)	37 072	39 631	40 730	33 670	23 544
Scrap	4 046	6 242	8 529	7 913	15 189
France					
Bauxite	29 577	20 650	25 619	4 157	14 013
Alumina	117 898	123 213	129 376	166 329	167 309
Alumina hydrate	71 739	55 438	68 272	117 496	103 258
Unwrought	78 955	78 335	81 992	78 306	81 601
Unwrought alloys	99 711	74 915	75 453	72 663	75 069
Scrap	165 766	198 915	247 753	248 291	274 551
Georgia					
Unwrought	...	6 602	5 865	3 175	...
Scrap	(b) *7 600	(b) *7 600	27 816	23 842	9 321
Germany					
Bauxite	35 759	32 399	35 361	35 894	42 524
Alumina	233 561	198 433	191 531	167 226	201 103
Alumina hydrate	433 391	452 136	515 888	537 767	488 918
Unwrought	25 612	33 335	53 127	71 793	59 597
Unwrought alloys	211 075	266 917	321 684	294 918	327 962
Scrap	528 396	549 248	546 235	557 252	499 791

**Exports of Bauxite, Alumina and Aluminium**

tonnes

Country	1998	1999	2000	2001	2002
Greece					
Bauxite	477 582	391 130	666 578	567 470	535 074
Alumina	313 398	285 459	249 681	279 120	327 476
Alumina hydrate	13 595	12 063	6 500	34 493	12 261
Unwrought	42 384	54 366	84 799	6 368	56 730
Unwrought alloys	18 923	5 850	9 663	9 457	6 142
Scrap	5 460	10 865	16 410	9 444	12 794
Hungary					
Bauxite	4 612	5 158	2 711	2 371	2 250
Alumina	254 550	227 970	278 685	258 945	241 441
Unwrought (a)	21 733	12 653	12 185	10 894	11 730
Scrap	18 113	17 536	24 313	29 656	24 428
Iceland					
Unwrought (a)	162 035	221 444	209 680	257 952	282 472
Scrap	4 844	4 916	6 136	8 367	6 191
Irish Republic					
Alumina	1 505 074	1 443 841	1 873 414	1 891 293	1 564 481
Alumina hydrate	21 238	2 556	4 563	20 746	22 656
Unwrought alloys	5 476	5 993	5 879	3 287	4 389
Scrap	8 821	10 883	14 765	14 470	19 240
Italy					
Bauxite	4 312	107 978	255 878	69 646	49 307
Alumina	487 700	538 556	601 032	646 064	721 558
Alumina hydrate	12 493	21 793	33 622	29 901	35 623
Unwrought	11 751	9 293	2 894	2 639	5 986
Unwrought alloys	23 952	20 324	30 940	28 817	35 982
Scrap	12 469	11 224	21 689	19 416	17 707
Latvia					
Unwrought	6 958	16 337	23 419	26 973	37 243
Scrap	7 318	6 340	6 115	2 389	1 477
Lithuania					
Scrap	18 308	18 416	31 742	22 873	...
Moldova					
Scrap	4 577	19 242	...	...	2 637
Netherlands					
Bauxite	50 656	50 869	35 211	76 216	35 719
Alumina	241 320	172 798	287 473	144 613	125 292
Alumina hydrate	51 157	55 960	47 315	24 904	37 548
Unwrought	209 059	192 342	177 895	169 741	356 282
Unwrought alloys	259 682	288 157	275 788	300 275	225 385
Scrap	166 635	184 500	168 405	153 947	186 791
Norway					
Unwrought	126 168	119 024	138 907	156 506	135 792
Unwrought alloys	862 949	868 931	902 908	1 031 140	992 055
Scrap	20 362	19 259	24 721	37 376	40 797
Poland					
Unwrought (a)	48 300	37 094	36 275	30 519	32 349
Scrap	11 700	22 700	49 630	62 915	65 404
Portugal					
Unwrought (a)	34 213	69 426	106 601	96 870	84 709
Scrap	12 349	14 087	14 682	19 266	24 671
Romania					
Alumina	11 692	56 510	239 780	196 600	5 128
Unwrought	102 200	77 573	72 767	73 320	88 022
Scrap	4 242	19 946	32 905	6 577	6 963
Russia					
Bauxite	999 322	260 493	14 699	5 779	881
Alumina	349 195	142 605	85 969	4 497	1 414
Alumina hydrate	6 347	3 953	1 850	3 726	2 932
Unwrought	2 519 619	2 638 907	2 562 217	2 539 280	2 276 030
Unwrought alloys	270 783	476 770	632 410	556 321	513 143
Scrap (b)	*437 700	*502 600	*341 300	*181 000	*96 700
Serbia and Montenegro					
Bauxite	549	48 398	2 124	713	----
Unwrought	(a) 61 394	66 420	(a) (b) *74 300	92 143	113 182
Unwrought alloys	...	3 097	...	3 651	3 353
Scrap	6 907	2 975	423	4 718	5 532

## Exports of Bauxite, Alumina and Aluminium

Country	1998	1999	2000	2001	2002
Slovakia					
Unwrought	117 123	370 000	143 438	147 985	158 568
Scrap	5 596	5 077	6 583	4 744	5 417
Slovenia					
Alumina	10 171	4 481	6 979	10 452	11 760
Unwrought (a)	51 054	56 505	60 836	71 092	77 428
Scrap	5 723	6 016	7 393	9 522	12 329
Spain					
Alumina	160 074	259 073	208 414	292 210	179 478
Alumina hydrate	240 130	306 990	268 920	231 485	11 685
Unwrought	20 419	1 968	2 890	5 191	2 429
Unwrought alloys	87 324	78 382	79 183	86 974	68 484
Scrap	9 449	19 921	34 991	30 251	37 236
Sweden					
Unwrought	800	1 286	8 982	3 183	2 529
Unwrought alloys	46 831	63 531	44 335	62 986	78 675
Scrap	49 202	42 182	66 697	63 869	70 721
Switzerland					
Unwrought (a)	8 388	11 581	15 691	5 536	7 139
Scrap	78 889	86 476	88 590	100 096	96 217
Turkey					
Alumina	27 187	22 903	17 613	29 123	23 425
Unwrought (a)	24 308	24 525	10 319	6 289	3 745
Scrap	8 593	10 504	12 992	12 098	10 582
Ukraine					
Alumina	*900 000	*800 000	1 155 112	1 106 584	1 215 196
Unwrought (a)	187 739	318 178	374 847	291 873	223 699
Scrap	47 633	36 229	41 377	(b) *12 000	(b) *5 300
United Kingdom					
Alumina	18 640	(d) 17 197	(d) 12 581	11 795	(d) 22 596
Alumina hydrate	34 778	...	(b) *30 600	42 451	(b) *25 000
Unwrought	32 067	12 415	89 761	16 855	9 405
Unwrought alloys	193 134	225 110	261 274	243 780	241 033
Scrap	122 591	104 823	141 207	204 605	242 293
Algeria					
Scrap	8 359	7 256	6 530	...	...
Cameroon					
Unwrought (a)	57 400	70 700	68 285	56 726	...
Egypt					
Unwrought (a)	63 778	69 868	*70 000	64 097	66 897
Ghana					
Bauxite	615 851	247 249	...	...	...
Unwrought (a)	*55 000	124 400	114 300	...	...
Guinea					
Bauxite	14 168 000	13 606 000	14 005 000	*12 800 000	*13 100 000
Alumina	521 199	560 000	570 938	*670 000	*700 000
Morocco					
Scrap	3 174	6 394	8 445	7 658	...
Mozambique					
Bauxite	6 103	7 883	8 130	8 597	9 119
Sierra Leone					
Bauxite	----	----	----	...	...
South Africa					
Unwrought (a)	556 985	630 634	504 438	461 037	584 610
Scrap	22 121	17 052	27 683	29 443	34 994
Tunisia					
Scrap	426	1 604	2 830	2 934	...
Zambia					
Scrap	...	1 152	1 257	3 197	4 308
Canada					
Alumina	111 949	114 259	125 802	106 042	114 241
Unwrought	870 427	804 929	804 936	1 172 264	1 007 616
Unwrought alloys	986 011	1 056 981	1 032 337	873 646	1 125 623
Scrap	281 348	296 424	290 654	287 774	290 898
Cuba					
Scrap (b)	*2 400	*2 300	*1 800	*1 500	*8 300

**Exports of Bauxite, Alumina and Aluminium**

tonnes

Country	1998	1999	2000	2001	2002
Dominican Republic					
Scrap	...	...	5 987	5 295	...
Guatemala					
Unwrought (a)	1 773	4 577	10 099	3 736	3 070
Honduras					
Scrap	1 866	3 799	5 270	4 661	...
Jamaica					
Bauxite	4 052 087	2 795 368	2 118 908	3 617 767	4 074 111
Alumina	3 496 027	3 621 983	3 642 538	3 551 954	3 635 859
Mexico					
Unwrought (a)	6 951	7 081	10 313	7 545	5 525
Scrap	77 159	91 126	83 366	78 294	81 415
Panama					
Scrap	7 205	6 952	8 619	8 501	8 381
USA					
Bauxite	110 181	161 260	154 566	119 642	50 476
Alumina	1 258 515	1 144 458	1 108 536	1 217 725	1 225 724
Alumina hydrate	70 871	67 486	58 944	57 827	81 483
Unwrought	98 766	123 843	111 054	41 722	35 648
Unwrought alloys	172 802	199 415	168 293	297 061	277 452
Scrap	452 586	449 843	622 892	451 989	528 528
Argentina					
Unwrought	23 437	47 038	44 570	69 120	67 005
Unwrought alloys	64 293	76 700	143 289	113 413	136 364
Scrap	5 434	3 566	3 757	6 447	10 680
Brazil					
Bauxite	4 315 642	4 511 896	4 166 202	3 426 658	3 368 055
Alumina	853 541	1 078 126	1 241 435	1 171 462	1 204 513
Unwrought	631 332	658 994	615 903	467 051	614 770
Unwrought alloys	61 110	129 588	144 051	120 872	134 621
Scrap	11 713	13 375	2 975	420	1 006
Chile					
Scrap	4 095	5 151	6 422	8 203	...
Colombia					
Scrap	8 285	12 270	10 861	9 728	10 074
Guyana					
Bauxite	2 346 113	2 389 004	2 532 924	1 836 389	1 514 743
Suriname					
Alumina	1 732 921	1 857 667	1 869 252	1 909 265	1 886 347
Unwrought	26 843	6 788	----	----	----
Venezuela					
Bauxite	164 282	323 728	211 724	150 274	...
Alumina	298 955	309 914	486 764	645 674	...
Unwrought	274 014	323 014	286 329	264 039	(a) 437 414
Unwrought alloys	74 762	91 762	101 936	133 988	...
Scrap	16 001	20 088	23 053	21 630	...
Bahrain					
Unwrought (a)	360 000	365 000	52 365	10 926	4 280
China					
Bauxite	84 258	847	1	145	290
Alumina	32 613	14 406	9 642	25 339	23 710
Alumina hydrate	40 552	35 225	44 973	56 656	56 629
Unwrought	237 756	99 540	81 189	294 902	620 999
Unwrought alloys	89 142	107 062	127 921	113 927	167 049
Scrap	4 995	6 910	7 557	9 189	9 605
Dubai					
Unwrought (a)	374 696	441 663	515 873	452 754	377 276
Scrap	16 226	23 749	...	...	...
Hong Kong					
Alumina	3 737	2 160	2 366	2 850	1 945
Unwrought	190 570	162 817	137 376	87 972	87 549
Unwrought alloys	59 076	52 138	55 670	46 393	58 348
Scrap	96 147	86 067	66 534	46 052	35 933



## Exports of Bauxite, Alumina and Aluminium

Country	1998	1999	2000	2001	2002
India					
Bauxite (c)	98 942	596 801	1 248 175	979 570	1 785 350
Alumina (c)	216 879	86 062	189 310	263 104	1 101 614
Alumina hydrate (c)	29 927	31 496	77 116	107 707	110 895
Unwrought (c)	29 227	95 394	72 890	64 107	49 212
Unwrought alloys (c)	4 618	5 667	48 359	57 871	55 756
Indonesia					
Bauxite	740 199	826 927	879 204	876 272	1 048 804
Unwrought	133 306	72 129	167 239	131 392	121 290
Unwrought alloys	14 749	7 744	4 923	18 177	21 383
Scrap	4 662	4 294	3 634	7 241	8 690
Iran					
Unwrought (a)	15 213	25 602	34 624	(b) *33 500	46 026
Israel					
Unwrought (a)	2 300	2 800	1 300	(b) *3 400	(b) *3 700
Scrap	(b) *15 600	(b) *15 300	17 866	(b) *14 100	(b) *17 800
Japan					
Alumina	94 028	107 971	124 859	101 333	115 639
Alumina hydrate	151 147	199 347	212 458	176 821	180 506
Unwrought (a)	7 147	10 513	10 011	...	12 447
Scrap	26 695	27 636	34 625	...	55 420
Jordan					
Alumina hydrate	5 178	6 713	44	----	----
Scrap	4 567	5 534	5 172	5 764	6 477
Kazakhstan					
Alumina	1 002 376	1 159 644	1 356 398	1 249 767	1 371 077
Unwrought (a)	49 635	(b) *50 400	(b) *98 200	(b) *70 400	(b) *47 100
Scrap (b)	*56 700	*56 200	*89 700	*31 800	*3 700
Korea, Dem. P.R. of					
Unwrought (a) (b)	*3 400	*9 000	*3 100	*2 600	*4 700
Korea, Republic of					
Alumina	618	10 486	42 796	3 283	12 877
Unwrought	55 454	26 651	4 462	1 459	6 028
Unwrought alloys	14 916	5 167	7 363	6 550	18 270
Scrap	3 348	1 799	1 914	935	1 403
Kyrgyzstan					
Scrap	11 600	40 289	42 675	3 594	9 223
Lebanon					
Scrap	5 196	6 801	7 228	7 752	...
Malaysia					
Bauxite	87 100	92 500	113 810	51 680	...
Scrap	14 278	3 768	6 897	30 572	...
Oman					
Scrap	1 379	2 087	2 716	2 259	2 503
Philippines					
Scrap	19 383	16 705	21 634	26 418	...
Qatar					
Scrap	4 352	7 058	...	6 005	8 852
Saudi Arabia					
Unwrought	15 850	6 812	1 373	1 509	8 944
Scrap	18 797	27 060	24 646	41 109	44 987
Singapore					
Alumina	11 981	9 057	7 943	1 013	1 587
Unwrought	58 345	77 812	74 994	92 691	127 591
Scrap	44 750	40 803	41 736	42 189	42 199
Taiwan					
Unwrought	3 025	11 540	13 185	13 907	12 473
Unwrought alloys	145 859	82 818	89 961	82 241	101 113
Scrap	14 311	28 032	47 284	42 457	46 088
Tajikistan					
Unwrought	186 778	225 095	273 406	287 000	304 000
Scrap (b)	...	...	*2 800	*400	*10 200
Thailand					
Unwrought	7 925	4 631	160 943	5 139	9 535
Scrap	17 686	11 065	70 654	13 389	15 321
Turkmenistan					
Scrap (b)	...	...	*3 000	*5 700	*8 500

**Exports of Bauxite, Alumina and Aluminium**

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Country	1998	1999	2000	2001	2002
Australia					
Bauxite	*5 500 000	*7 000 000	*7 500 000	*7 500 000	*7 500 000
Alumina	10 460 475	10 737 791	12 071 264	12 645 044	12 606 639
Alumina hydrate	343 273	392 753	377 542	338 896	285 292
Unwrought	1 153 723	1 187 874	1 223 694	1 205 901	1 130 088
Unwrought alloys	160 982	201 941	157 328	278 494	397 148
Scrap	66 654	80 043	70 809	91 043	106 762
New Zealand					
Unwrought (a)	294 923	297 432	296 146	293 492	298 455
Scrap	12 801	12 638	12 716	19 682	22 346

## 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 7601 of the Harmonised System 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) BGS estimates, based on known imports into certain countries
  - (c) Years ended 31 March following that stated
  - (d) Including some bauxite

## Imports of Bauxite, Alumina and Aluminium

Country	1998	1999	2000	2001	2002
<b>Austria</b>					
Bauxite	26 811	26 336	24 404	25 581	21 354
Alumina	29 867	41 975	50 969	43 134	41 141
Alumina hydrate	5 888	3 252	5 612	5 937	6 538
Unwrought	134 156	110 380	116 717	160 372	136 767
Unwrought alloys	119 015	115 108	139 214	139 329	170 541
Scrap	118 056	126 037	139 274	----	----
<b>Azerbaijan</b>					
Bauxite	----	...	603 461	168 425	216 774
<b>Belarus</b>					
Alumina	8 227	12 938	20 149	23 009	15 039
Unwrought	9 164	9 331	9 859	10 192	9 528
Scrap	589	2 253	4 282	2 142	2 805
<b>Belgium-Luxembourg</b>					
Bauxite	43 411	87 263	93 710	112 399	106 310
Alumina	11 825	10 029	9 709	8 785	9 983
Alumina hydrate	51 887	42 151	43 516	35 659	43 902
Unwrought	350 391	253 655	245 989	448 703	473 246
Unwrought alloys	146 289	159 506	185 915	151 061	196 413
Scrap	178 243	155 114	193 631	185 465	157 885
<b>Bulgaria</b>					
Unwrought (a)	9 058	6 136	13 105	...	...
<b>Croatia</b>					
Bauxite	57 069	81 288	62 267	76 243	42 464
Unwrought (a)	25 593	36 061	31 487	32 087	40 555
<b>Cyprus</b>					
Unwrought alloys	6 004	5 283	6 885	6 749	7 629
<b>Czech Republic</b>					
Bauxite	13 632	14 323	12 013	15 212	15 391
Alumina	17 825	14 761	17 095	24 771	22 117
Alumina hydrate	11 832	10 727	10 935	9 960	11 981
Unwrought	57 281	48 057	41 552	43 792	64 108
Unwrought alloys	48 415	56 214	64 904	76 779	78 849
Scrap	34 197	35 897	34 678	26 013	23 986
<b>Denmark</b>					
Bauxite	8 627	7 328	11 178	20 077	6 140
Alumina	12 444	16 856	17 027	18 897	20 228
Unwrought (a)	45 623	43 640	45 418	48 723	61 538
Scrap	22 982	20 922	20 371	163 573	52 460
<b>Estonia</b>					
Alumina	2 965	253	2 927	1 757	270
Unwrought	62	39	460	2 744	4 858
<b>Finland</b>					
Bauxite	21 079	8 275	3 848	3 544	3 790
Alumina	2 006	2 564	2 179	2 204	2 042
Alumina hydrate	43 101	33 673	36 424	41 950	44 570
Unwrought	17 192	20 702	20 721	21 586	13 704
Unwrought alloys	20 648	22 513	31 299	28 948	24 253
Scrap	46 938	48 048	30 155	29 829	30 310
<b>France</b>					
Bauxite	1 578 486	1 472 094	1 569 306	1 667 959	1 347 713
Alumina	507 418	578 950	460 901	785 981	670 046
Alumina hydrate	111 903	97 541	98 719	46 522	43 727
Unwrought	191 512	144 583	190 495	182 477	148 344
Unwrought alloys	284 396	320 070	337 271	324 411	325 980
Scrap	192 112	159 335	150 091	145 422	133 794
<b>Germany</b>					
Bauxite	1 531 027	2 200 973	2 170 064	1 965 709	1 950 542
Alumina	832 168	770 127	650 080	777 003	867 297
Alumina hydrate	290 460	326 953	359 940	480 679	378 146
Unwrought	637 505	525 335	610 431	625 469	721 430
Unwrought alloys	834 429	807 818	975 753	976 513	945 177
Scrap	479 496	446 510	441 033	419 586	483 052

**Imports of Bauxite, Alumina and Aluminium**

tonnes

Country	1998	1999	2000	2001	2002
<b>Greece</b>					
Bauxite	27 456	40 852	282 649	252 246	246 155
Alumina	6 334	2 399	5 225	3 711	952
Unwrought	85 870	73 680	95 031	78 683	79 463
Unwrought alloys	37 410	39 524	40 679	44 151	39 444
Scrap	4 306	7 989	16 678	19 148	17 329
<b>Hungary</b>					
Bauxite	1 897	21 334	25 212	88 950	116 037
Unwrought (a)	156 988	154 127	192 980	203 346	224 720
Scrap	9 760	9 566	9 344	7 016	17 071
<b>Iceland</b>					
Alumina	377 078	463 691	406 011	465 373	524 249
Unwrought	1 134	1 438	4 120	2 451	22 605
<b>Irish Republic</b>					
Bauxite	3 299 255	3 248 871	3 232 037	3 493 883	3 732 789
Alumina	10 500	5 490	9 493	7 768	7 544
Unwrought (a)	10 316	10 182	12 219	11 474	6 750
Scrap	2 058	2 040	2 301	695	503
<b>Italy</b>					
Bauxite	2 132 204	2 324 818	2 226 746	2 324 849	2 256 065
Alumina	200 800	209 097	213 732	126 284	126 299
Alumina hydrate	106 053	101 023	115 215	145 496	134 724
Unwrought	270 690	297 565	321 717	307 267	381 046
Unwrought alloys	337 340	355 201	383 057	362 897	400 139
Scrap	360 129	358 044	368 341	429 647	300 058
<b>Latvia</b>					
Unwrought	138	294	1 786	2 634	2 052
Scrap	3 888	8 812	10 380	11 977	24 125
<b>Lithuania</b>					
Alumina hydrate	8 456	14 231	9 718	5 338	...
Scrap	5 833	4 819	6 583	1 654	...
<b>Macedonia</b>					
Unwrought	7 232	6 726	2 367	742	...
<b>Netherlands</b>					
Bauxite	57 122	39 105	108 474	95 110	92 667
Alumina	832 751	695 599	826 316	726 542	554 967
Alumina hydrate	129 002	138 863	154 745	131 097	141 991
Unwrought	430 688	447 344	492 419	350 467	332 873
Unwrought alloys	92 214	136 768	124 172	170 095	193 099
Scrap	224 627	215 563	239 333	206 963	150 466
<b>Norway</b>					
Bauxite	14 261	31 007	24 325	34 811	20 898
Alumina	1 899 852	1 920 834	2 034 199	1 977 187	2 063 999
Alumina hydrate	38 386	39 732	42 387	37 426	42 984
Unwrought	83 382	168 755	160 813	163 090	225 972
Unwrought alloys	64 552	17 256	91 639	60 982	56 209
Scrap	76 079	87 744	86 441	95 290	100 006
<b>Poland</b>					
Bauxite	30 100	29 447	27 063	37 835	49 504
Alumina	118 800	116 700	126 656	109 044	97 085
Alumina hydrate	24 000	21 900	24 499	25 766	25 562
Unwrought	44 500	48 900	54 469	49 259	74 302
Unwrought alloys	43 000	57 400	67 290	68 294	73 770
Scrap	20 900	19 200	16 057	12 080	9 616
<b>Portugal</b>					
Alumina	8 687	8 668	10 115	10 638	9 820
Unwrought	7 160	10 110	6 314	5 072	5 276
Unwrought alloys	102 015	149 605	188 624	169 878	167 619
Scrap	944	2 016	4 306	2 746	9 043
<b>Romania</b>					
Bauxite	303 426	612 281	1 428 143	1 152 415	843 557
Alumina	140 689	146 877	186 972	81 407	31 763
<b>Russia</b>					
Bauxite	17 000	58 000	299 651	324 761	358 620
Alumina	3 658 027	3 815 878	3 770 061	3 685 906	3 636 780
Alumina hydrate	10 504	29 948	70 027	20 253	2 234
Unwrought (a)	33 947	98 502	153 792	68 913	32 591
Scrap	6 362	595	151	181	311

## Imports of Bauxite, Alumina and Aluminium

Country	1998	1999	2000	2001	2002
Serbia and Montenegro					
Alumina	566	6 588	5 440	15 500	9 454
Unwrought (a)	3 831	1 688	2 997	4 770	10 982
Slovakia					
Bauxite	531	2 759	4 125	28 803	8 211
Alumina	210 200	206 947	212 117	232 601	220 837
Alumina hydrate	40 800	53	92	374	368
Unwrought (a)	24 839	30 968	51 099	36 909	53 060
Scrap	1 100	4 193	2 181	4 163	11 508
Slovenia					
Bauxite	51 137	50 237	54 840	87 940	35 020
Alumina	177 720	181 496	177 313	194 001	262 669
Unwrought	64 059	64 779	78 859	107 987	84 945
Scrap	3 400	6 366	10 874	13 739	13 262
Spain					
Bauxite	2 578 888	2 414 176	2 757 733	3 059 122	2 887 349
Alumina	37 213	39 821	59 544	61 147	53 469
Alumina hydrate	18 704	16 295	19 818	35 064	19 509
Unwrought	88 719	79 073	90 024	67 047	55 894
Unwrought alloys	88 263	141 633	140 965	149 069	166 771
Scrap	52 081	54 864	57 095	63 125	70 908
Sweden					
Bauxite	28 222	27 707	13 219	28 463	1 920
Alumina	128 180	89 286	154 467	133 786	172 761
Alumina hydrate	*50 000	46 797	62 269	54 262	55 379
Unwrought	66 469	32 565	32 542	16 612	13 991
Unwrought alloys	71 998	72 028	76 515	80 571	106 217
Scrap	7 525	10 782	20 548	24 295	18 450
Switzerland					
Alumina	65 504	68 026	72 695	65 877	81 002
Alumina hydrate	18 600	19 868	20 916	19 621	17 953
Unwrought	94 919	76 248	67 842	67 203	66 958
Unwrought alloys	46 314	47 401	68 454	63 319	52 470
Scrap	17 098	14 142	18 745	15 910	12 565
Turkey					
Bauxite	24 844	25 247	35 758	25 323	33 361
Alumina	9 425	11 517	13 688	14 164	16 311
Unwrought	69 474	61 775	92 299	72 786	109 683
Unwrought alloys	73 704	71 072	80 861	52 939	84 829
Scrap	24 398	22 517	28 263	11 090	9 478
Ukraine					
Bauxite	3 075 299	2 880 090	4 043 524	3 456 200	4 054 524
Unwrought (a)	888	971	1 059	860	2 055
United Kingdom					
Bauxite (e)	278 737	217 514	222 319	271 404	...
Alumina	381 804	541 344	568 317	713 808	(b) 802 088
Alumina hydrate	79 427	102 100	73 170	63 687	...
Unwrought	310 767	307 607	120 138	135 094	211 441
Unwrought alloys	184 942	136 950	158 217	211 245	159 614
Scrap	138 125	141 971	123 185	112 240	121 334
Algeria					
Unwrought (a)	4 970	4 051	6 022	...	...
Cameroon					
Alumina	153 480	197 437	178 031	221 325	...
Egypt					
Bauxite	381 795	389 068	*400 000	262 935	375 419
Alumina	*380 000	*380 000	*400 000	*400 000	*400 000
Alumina hydrate	5 800	31 500	*20 000	...	9 560
Ghana					
Alumina	*100 000	*120 000	107 866	52 202	...
Kenya					
Alumina	2 190	2 567	2 956	...	3 988
Unwrought (a)	3 783	1 527	2 098	...	5 088
Scrap	1 038	...	1 669	...	6 626
Morocco					
Bauxite	43 751	48 968	40 935	52 087	...
Alumina	5 373	6 026	4 874	6 797	...
Unwrought (a)	3 700	3 543	5 667	6 042	...

## Imports of Bauxite, Alumina and Aluminium

tonnes

Country	1998	1999	2000	2001	2002
<b>Nigeria</b>					
Bauxite	5 398	11 130	5 710	...	...
Unwrought (a)	63 096	3 335	10 854	...	...
<b>South Africa</b>					
Bauxite	11 663	9 307	13 766	8 301	7 943
Alumina	1 240 430	1 281 124	1 548 314	1 297 663	1 336 891
Alumina hydrate	12 339	11 236	5 851	11 945	10 717
Unwrought (a)	6 675	50 526	8 158	5 433	4 819
Scrap	1 969	1 374	2 920	7 063	4 270
<b>Tunisia</b>					
Alumina hydrate	36 943	43 041	49 629	52 708	...
Unwrought (a)	4 586	2 671	5 256	4 771	...
<b>Canada</b>					
Bauxite	3 888 711	3 064 154	2 838 270	2 861 649	2 780 236
Alumina	3 198 867	3 396 761	3 739 759	3 976 446	4 054 597
Unwrought	32 639	50 001	45 258	21 495	24 247
Unwrought alloys	169 029	196 476	231 145	201 493	171 837
Scrap	107 425	123 068	127 321	114 388	137 872
<b>Costa Rica</b>					
Unwrought (a)	6 224	10 163	11 344	11 701	10 746
<b>El Salvador</b>					
Unwrought (a)	3 956	4 257	4 479	4 130	5 378
<b>Mexico</b>					
Bauxite	42 315	33 105	46 214	27 969	33 923
Alumina	165 091	139 653	137 471	111 345	116 459
Alumina hydrate	62 498	59 225	69 776	55 697	63 494
Unwrought	63 514	73 778	81 736	69 379	...
Unwrought alloys	111 981	128 468	152 125	351 466	262 649
Scrap	47 649	88 266	107 185	87 041	99 911
<b>Panama</b>					
Unwrought (a)	1 459	1 779	1 100	1 304	2 057
<b>USA</b>					
Bauxite, crude dried	10 800 000	8 900 000	6 800 000	7 430 000	6 420 000
Bauxite, calcined	393 000	299 000	310 000	242 000	237 000
Alumina	4 151 311	3 896 251	3 929 109	3 186 874	3 091 001
Unwrought	1 355 321	1 359 698	1 087 624	1 380 368	1 379 841
Unwrought alloys	1 094 085	1 368 630	1 475 486	1 296 738	1 538 383
Scrap	500 938	614 356	624 892	415 769	3 945 751
<b>Argentina</b>					
Bauxite	34 169	27 721	36 506	42 445	42 928
Alumina	288 504	425 212	474 492	465 236	517 128
Alumina hydrate	23 423	22 035	26 217	24 891	13 912
<b>Brazil</b>					
Bauxite	11 643	5 882	8 387	8 547	8 735
Alumina	20 442	23 105	6 915	7 347	5 924
Unwrought	3 400	1 056	1 621	7 744	7 904
Unwrought alloys	2 421	1 051	708	988	979
Scrap	4 126	4 400	4 230	12 182	13 535
<b>Chile</b>					
Bauxite	10 852	2 011	...	...	...
Alumina	7 545	6 115	7 019	8 165	...
Unwrought	14 597	11 173	14 557	14 545	...
<b>Colombia</b>					
Bauxite	14 630	17 008	35 685	16 741	32 682
Alumina	8 694	6 675	7 220	7 927	6 470
Unwrought	20 864	20 673	24 706	24 599	28 710
Unwrought alloys	15 486	7 267	7 182	5 343	7 121
<b>Ecuador</b>					
Bauxite	12 610	7 124	39 045	54 497	119 054
Unwrought (a)	8 304	5 452	8 358	6 876	9 426
<b>Peru</b>					
Bauxite	4 674	1 170	1 087	4 083	1 040
Alumina	3 795	2 457	4 337	1 887	1 854
Unwrought (a)	2 840	1 190	1 509	1 139	2 475

## Imports of Bauxite, Alumina and Aluminium

Country	1998	1999	2000	2001	2002
Uruguay					
Bauxite	9 148	6 403	8 758	6 188	6 870
Alumina	1 533	1 501	1 897	1 420	1 314
Unwrought	3 270	2 802	3 188	2 014	646
Venezuela					
Bauxite	17 582	18 982	22 470	12 814	...
Alumina	12 053	6 031	10 259	8 417	...
Unwrought (a)	641	422	1 267	390	...
Abu Dhabi					
Scrap	5 093	9 477	...	...	...
Bahrain					
Alumina	968 830	785 522	913 638	968 823	932 869
China					
Bauxite	148 533	243 489	403 516	320 771	402 825
Alumina	1 574 909	1 623 186	1 881 714	3 346 019	4 571 076
Alumina hydrate	2 351	9 605	8 257	5 316	13 068
Unwrought	203 208	380 626	614 823	226 360	270 563
Unwrought alloys	103 780	153 378	299 306	303 278	311 193
Scrap	277 168	399 268	804 629	367 802	447 280
Dubai					
Bauxite	28 526	31 191	...	...	...
Alumina	726 399	806 904	*1 000 000	*1 000 000	*1 000 000
Unwrought	6 625	5 474	4 636	23 385	33 206
Scrap	8 213	8 162	...	...	...
Hong Kong					
Alumina	3 307	2 258	2 358	3 087	2 597
Unwrought	350 211	207 391	191 310	115 757	121 771
Unwrought alloys	51 123	55 056	51 453	47 133	66 320
Scrap	81 810	66 524	42 911	21 393	19 854
India					
Bauxite (c)	59 027	29 902	27 099	20 830	44 183
Alumina (c)	11 499	14 819	12 855	15 480	25 557
Unwrought (c)	53 523	37 126	37 238	60 376	55 653
Unwrought alloys (c)	22 803	10 113	9 199	11 881	15 071
Scrap (c)	67 125	81 503	60 100	109 664	97 276
Indonesia					
Alumina	218 030	199 426	362 776	425 444	332 962
Alumina hydrate	96 288	91 718	91 569	107 101	104 842
Unwrought	63 380	78 288	78 313	48 717	42 926
Unwrought alloys	26 759	28 632	49 072	54 947	63 710
Scrap	1 534	878	2 807	3 690	5 662
Iran					
Bauxite	9 019	2 854	26 686	22 640	210 535
Alumina	*250 000	*270 000	*280 000	*300 000	*340 000
Unwrought (g)	7 102	10 807	11 408	...	49 640
Scrap	16 498	18 177	22 404	23 677	20 528
Israel					
Unwrought (a)	48 045	46 053	45 934	...	...
Japan					
Bauxite	1 977 481	1 953 644	2 096 283	2 051 014	1 872 834
Alumina	32 285	36 418	38 404	37 506	33 432
Alumina hydrate	68 931	49 682	53 365	51 020	51 537
Unwrought	1 859 817	1 833 005	1 963 630	1 814 508	1 726 805
Unwrought alloys	691 995	826 226	941 607	796 093	848 330
Scrap	152 998	160 654	130 423	120 838	133 374
Jordan					
Alumina	12 042	36 759	21 053	24 907	15 206
Unwrought (a)	6 884	6 926	10 719	13 685	13 935
Korea, Republic of					
Bauxite	162 983	168 254	215 674	109 371	172 423
Alumina	60 110	67 007	71 097	79 876	74 524
Alumina hydrate	102 003	135 399	155 507	201 583	172 912
Unwrought	497 457	730 031	683 793	722 447	785 044
Unwrought alloys	86 646	150 356	205 931	158 158	187 311
Scrap	54 968	105 963	101 949	133 450	187 451
Lebanon					
Alumina	2 965	3 058	...	1 559	...
Unwrought	20 854	14 248	16 001	15 567	...

**Imports of Bauxite, Alumina and Aluminium**

tonnes

Country	1998	1999	2000	2001	2002
Malaysia					
Alumina	41 914	57 907	38 938	...	...
Unwrought	71 600	102 000	110 438	96 366	...
Unwrought alloys	34 500	82 100	79 505	...	...
Scrap	23 615	47 297	34 729	...	...
Oman					
Alumina	141	141	1 603	5 305	3 751
Pakistan					
Alumina (d)	6 267	6 144	5 685	4 773	5 431
Unwrought (a) (d)	4 764	3 554	9 379	3 982	9 173
Scrap (d)	56 786	56 512	58 397	62 993	73 167
Philippines					
Alumina	10 228	13 108	14 673	2 203	...
Unwrought (a)	24 308	34 402	34 418	3 672	...
Scrap	108	257	436	709	...
Saudi Arabia					
Bauxite	148 263	166 125	52 770	232	114 109
Alumina	*6 500	202 008	7 822	6 133	10 944
Unwrought (a)	3 821	3 081	2 515	1 421	1 988
Singapore					
Alumina	2 061	2 131	2 609	3 846	3 553
Alumina hydrate	26 162	5 938	12 017	6 571	3 726
Unwrought	82 097	76 658	81 032	230 893	271 772
Scrap	4 791	3 030	2 903	3 045	3 344
Sri Lanka					
Unwrought (a)	2 954	3 336	...	2 202	5 088
Syria					
Scrap	9 781	9 320	2 981	6 425	...
Taiwan					
Bauxite	71 931	57 556	67 891	64 632	25 204
Alumina	33 754	32 739	38 741	33 240	36 713
Alumina hydrate	53 791	51 739	54 613	50 538	49 776
Unwrought	314 429	387 253	419 544	274 711	366 818
Unwrought alloys	135 131	171 226	185 170	142 738	153 954
Scrap	167 070	139 504	138 603	115 018	107 425
Tajikistan					
Alumina (f)	*356 600	*353 100	*402 400	...	*327 000
Thailand					
Bauxite	26 678	39 081	35 946	40 935	44 781
Alumina	10 043	13 086	18 405	19 804	46 833
Alumina hydrate	48 549	58 665	48 632	72 696	50 310
Unwrought	89 268	82 393	113 133	(a) 337 572	124 554
Unwrought alloys	106 866	77 242	242 964	...	134 769
Scrap	3 123	7 156	11 485	13 126	17 602
Australia					
Bauxite	12 602	6 562	9 837	9 501	11 648
Alumina	11 291	9 273	10 065	9 517	10 732
Unwrought (a)	5 900	5 259	6 025	7 573	4 424
Scrap	6 474	7 429	8 802	9 973	12 507
New Zealand					
Alumina	628 558	632 299	*620 000	604 355	638 339
Unwrought (a)	10 954	12 919	9 688	5 727	10 685
Scrap	5 386	3 163	1 761	1 078	1 264

## 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 7601 of the Harmonised System 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) Including some bauxite
- (c) Years ended 31 March following that stated
- (d) Years ended 30 June of that stated
- (e) Excluding refractory grade bauxite
- (f) BGS estimates, based on known exports from certain countries
- (g) Years ended 20 March following that stated



**Mine Production of Antimony**

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Russia	4 000	4 356	8 000	4 152	*4 000
Turkey	*20	*20	*20	*20	*20
Morocco	160	250	----	----	----
South Africa	4 243	5 278	5 064	5 476	*5 500
Canada	428	425	433	278	166
Guatemala	420	----	----	8 162	401
Mexico	1 301	273	52	81	155
USA	489	450	*340	----	----
Bolivia	4 735	2 790	1 907	2 072	2 343
Peru (a)	364	255	461	274	*275
China	97 400	89 600	99 300	97 000	121 547
Kyrgyzstan	1 298	1 320	1 505	*1 500	*1 500
Tajikistan	*1 500	*1 800	*2 000	*2 500	*3 000
Thailand	260	70	100	20	10
Australia (b)	*2 400	*2 500	*2 200	*1 800	*2 100
<b>World Total</b>	<b>119 000</b>	<b>109 000</b>	<b>121 000</b>	<b>123 000</b>	<b>141 000</b>

## 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) Years ended 30 June of that stated

## Exports of Antimony

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Metal	47	8	1	37	103
Belgium-Luxembourg					
Oxide (a)	*6 700	*8 700	*11 300	*11 700	*11 400
Estonia					
Metal	126	...	...	13	...
Oxide	258	...	...	...	...
France					
Metal	132	13	292	60	104
Oxide	5 292	4 371	5 156	3 715	3 391
Germany					
Metal	38	48	36	38	1 035
Oxide	1 061	1 141	968	783	543
Greece					
Metal	5	26	1	54	22
Italy					
Metal	3	36	13	36	70
Netherlands					
Metal	914	206	286	186	115
Oxide	1 027	792	649	872	345
Russia					
Ore	1 484	1 000	...	398	8 670
Metal	660	(a) *270	(a) *90	662	1 233
Oxide	715	97	143	172	90
Serbia and Montenegro					
Metal (a)	...	...	*540	*1 070	*90
Spain					
Metal	6	11	16	92	10
Oxide	829	819	701	974	934
Sweden					
Metal	25	0	4	4	15
Turkey					
Metal	540	412	84	50	...
United Kingdom					
Metal	100	88	870	473	252
Oxide	5 139	(a) *4 000	(a) *4 400	1 297	1 845
South Africa					
Ore (c)	3 655	4 278	4 146	4 500	5 519
Metal	11	4	4	60	(a) *20
Oxide	4 609	5 501	5 105	5 520	10 149
Canada					
Ores and concentrates	519	----	----	----	...
Mexico					
Metal	331	415	538	243	57
Oxide	2 901	5 433	7 276	11 419	...
USA					
Ores and concentrates	3 997	2 506	2 618	518	37
Metal	1 015	642	1 163	1 891	1 183
Oxide	3 953	3 866	7 532	7 448	4 281
Bolivia					
Ore	1 310	806	1 131	570	1 558
Metal	61	322	202	222	196
Oxide	4 508	2 657	1 312	2 081	1 501
Peru					
Metal	352	332	241	371	160
China					
Ores and concentrates	2 375	20	0	----	----
Metal	22 365	45 339	45 091	22 097	20 276
Oxide	28 062	36 704	36 086	36 067	49 539
Sulphide	5 636	1 975	2 395	5 622	2 447
Dubai					
Metal	20	64	...	...	...
Hong Kong					
Metal	15 290	10 705	6 825	4 988	934

**Exports of Antimony**

Country	1998	1999	2000	2001	2002
India					
Oxide (b)	76	60	146	189	237
Indonesia					
Ore	...	1 028	1 245	----	----
Metal	...	...	...	331	58
Japan					
Metal	343	187	180	162	471
Oxide	1 925	2 339	2 321	1 924	2 524
Kazakhstan					
Metal	217	----	(a) *70	...	...
Korea, Republic of					
Metal	26	43	44	10	103
Oxide	604	308	195	213	111
Kyrgyzstan					
Metal	1 043	748	857	(a) *600	(a) *700
Oxide	919	783	755	(a) *730	1 016
Singapore					
Metal	11	246	530	4 123	2 608
Oxide	471	555	675	581	782
Taiwan					
Metal	379	411	749	269	268
Oxide	1 240	1 144	1 345	977	1 123
Thailand					
Metal	163	47	193	130	123
Oxide	787	3	50	10	12
Australia					
Ores and concentrates	2 863	2 971	2 357	830	1 780

Note(s):

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

(b) Years ended 31 March following that stated

(c) Sb content

## Imports of Antimony

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Metal	221	131	174	205	270
Oxide	226	262	252	146	190
Belarus					
Metal	26	15	32	39	18
Belgium-Luxembourg					
Ore	1 703	238	66	6	491
Metal	8 321	6 828	12 858	11 928	13 379
Oxide	1 016	888	1 612	900	1 583
Bulgaria					
Metal	129	98	60	...	...
Czech Republic					
Metal	67	12	2	53	76
Oxide	289	394	429	548	626
Estonia					
Metal	125	...	...	...	...
Oxide	195	1	1	1	----
Finland					
Oxide	177	164	215	269	238
France					
Ore	128	7	8	223	6
Metal	8 316	7 564	8 345	6 854	6 645
Oxide	1 218	1 283	2 520	2 090	2 093
Germany					
Ore	442	578	500	494	...
Metal	746	1 231	741	599	309
Oxide	5 170	4 850	6 835	6 384	6 915
Greece					
Metal	58	98	47	98	40
Italy					
Ore	453	272	611	446	727
Metal	956	1 882	1 429	1 929	1 551
Oxide	4 543	4 374	4 391	4 366	5 037
Netherlands					
Ore	7	153	265	144	54
Metal	1 748	1 414	762	775	268
Oxide	2 675	2 539	3 061	2 293	1 287
Norway					
Metal	10	5	3	9	3
Oxide	353	227	338	157	234
Poland					
Metal	50	36	70	58	...
Oxide	...	466	605	611	711
Portugal					
Metal	24	7	5	3	10
Oxide	235	183	263	331	254
Romania					
Metal	87	45	63	70	64
Russia					
Metal	834	1 230	1 374	1 338	368
Oxide	204	374	640	856	398
Serbia and Montenegro					
Metal	61	65	42	43	87
Slovenia					
Metal	19	14	3	29	118
Spain					
Metal	1 510	1 143	1 511	2 277	2 314
Oxide	1 004	1 041	813	828	544
Sweden					
Metal	81	60	26	108	176
Oxide	409	453	396	401	485
Switzerland					
Ores and concentrates	283	22	121	10	154
Metal	27	52	25	44	52
Oxide	681	786	969	1 033	720
Turkey					
Metal	55	30	11	20	98
Oxide	...	244	241	209	314

## Imports of Antimony

Country	1998	1999	2000	2001	2002
Ukraine					
Metal	24	21	47	...	...
United Kingdom					
Metal	950	133	461	345	177
Oxide	2 105	1 707	2 082	4 103	3 191
Algeria					
Metal	72	200	120	...	...
Egypt					
Oxide	61	289	...	117	...
Morocco					
Metal	32	25	32	41	...
South Africa					
Metal	204	221	120	255	139
Oxide	149	166	131	134	137
Tunisia					
Metal	45	45	35	42	...
Canada					
Metal	391	384	481	446	638
Oxide	2 138	2 174	2 059	1 776	1 757
Mexico					
Ores and concentrates	4 198	2 967	3 068	757	...
Metal	761	1 008	1 253	2 944	300
Oxide	1 440	1 832	6 313	11 876	16 834
USA					
Ore	2 644	3 606	4 632	2 611	1 317
Metal	13 298	14 753	14 193	12 622	4 103
Oxide	23 106	23 010	28 487	27 657	27 935
Argentina					
Metal	275	197	207	277	138
Brazil					
Ores and concentrates	9	25	4	12	2
Metal	1 136	1 062	1 258	1 200	1 131
Oxide	204	158	345	536	334
Colombia					
Metal	92	73	64	56	55
Venezuela					
Metal	77	26	34	26	...
China					
Ores and concentrates	3 681	144	80	217	13 073
Metal	2 782	1 246	472	188	139
Oxide	1 038	1 312	1 206	316	410
Hong Kong					
Metal	5 613	3 486	1 930	4 580	736
Oxide	2 459	2 040	1 184	1 063	1 478
India					
Metal (a)	1 406	1 949	1 589	2 584	1 917
Oxide (a)	214	289	273	342	327
Indonesia					
Metal	192	196	394	278	230
Oxide	365	336	388	499	406
Iran					
Metal	573	1 413	1 119	510	10
Japan					
Ores and concentrates	698	96	40	20	21
Metal	8 513	8 576	10 965	7 372	6 920
Oxide	8 887	8 270	8 497	7 382	7 113
Sulphide	243	250	1 069	434	...
Kazakhstan					
Metal	55	62	1	45	15
Korea, Republic of					
Metal	8 920	12 515	12 563	10 051	13 762
Oxide	1 149	3 974	5 407	5 357	5 820
Malaysia					
Metal	1 367	...	393	111	...

## Antimony

**Imports of Antimony**

tonnes

Country	1998	1999	2000	2001	2002
Pakistan					
Metal (b)	99	127	120	96	137
Philippines					
Metal	10	139	62	57	...
Singapore					
Metal	19	458	691	5 910	1 924
Oxide	1 366	1 798	2 401	1 594	1 754
Sri Lanka					
Metal	23	40	40	20	41
Taiwan					
Metal	2 962	5 008	5 062	2 957	4 411
Oxide	5 530	7 159	7 330	6 256	6 744
Thailand					
Ores and concentrates	138	553	-----	29	29
Metal	847	562	857	443	370
Oxide	521	829	1 192	904	1 030
Australia					
Metal	139	203	265	337	181
Oxide	622	559	533	534	608
New Zealand					
Metal	73	69	70	42	42

Note(s) :-

- (a) Years ended 31 March following that stated  
(b) Years ended 30 June of that stated

**Production of White Arsenic**

Country	1998	1999	2000	2001	2002
Belgium	*1 500	*1 500	*1 500	*1 000	*1 000
France	*2 000	*1 000	*1 000	*1 000	*1 000
Georgia	*400	----	----	----	----
Germany	*200	*200	*200	*100	*100
Russia	*1 500	*1 500	*1 500	*1 500	*1 500
Ghana	*5 000	*7 000	*3 000	----	----
Namibia (a)	233	----	----	738	852
Canada	*250	*250	*250	*250	*250
Mexico	3 396	3 193	3 329	3 143	2 569
Bolivia	284	437	318	846	*850
Chile (c)	11 690	9 789	10 712	*10 000	*10 000
Peru	624	1 611	2 495	1 958	*2 000
China	*15 500	*16 000	*16 000	*16 000	*16 000
Iran (b)	323	173	120	219	...
Japan	*40	*40	*40	*40	*40
Kazakhstan	*1 500	*1 500	*1 500	*1 500	*1 500

## 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, Finland, Hungary, Morocco, Spain and United Kingdom are believed to produce arsenic

- (a) Output of Tsumeb Corp. only, trioxide equivalent of reported black arsenic  
(b) Orpiment and realgar concentrates  
(c) Exports

**Exports of Arsenic**

tonnes

Country	1998	1999	2000	2001	2002
Belgium-Luxembourg					
Metallic arsenic	----	5	12	29	62
Denmark					
Metallic arsenic	1 301	----	----	----	----
France					
Metallic arsenic	8	5	7	22	...
Germany					
Metallic arsenic	17	22	27	8	9
Italy					
Metallic arsenic	14	5	15	----	----
Netherlands					
Metallic arsenic	41	31	46	39	45
United Kingdom					
Metallic arsenic	22	45	11	5	5
Namibia					
White arsenic	314	----	----	362	799
USA					
Metallic arsenic	534	1 408	76	62	135
Bolivia					
White arsenic	284	438	318	249	237
Chile					
White arsenic	11 690	9 789	10 712	...	...
China					
White arsenic (a)	*23 900	*16 500	...	...	...
Metallic arsenic	2 184	2 497	2 505	2 039	2 263
Japan					
Metallic arsenic	17	28	42	29	6
Australia					
Metallic arsenic	127	70	107	156	139
New Zealand					
Metallic arsenic	106	96	5	----	----

## Note(s):

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

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



## Imports of Arsenic

Country	1998	1999	2000	2001	2002
Austria					
Metallic arsenic	22	1	----	28	16
Belgium-Luxembourg					
Metallic arsenic	40	46	149	73	75
Czech Republic					
Metallic arsenic	15	18	20	18	24
Denmark					
Metallic arsenic	920	...	----	----	0
France					
Metallic arsenic	72	68	87	50	17
Germany					
Metallic arsenic	32	25	10	8	5
Greece					
Metallic arsenic	21	26	27	15	31
Irish Republic					
Metallic arsenic	19	20	218	31	127
Italy					
Metallic arsenic	102	77	75	48	91
Netherlands					
Metallic arsenic	75	92	77	137	77
Norway					
Metallic arsenic	36	61	54	44	36
Poland					
White arsenic	64	74	...	...	...
Metallic arsenic	40	25	25	11	30
Spain					
Metallic arsenic	93	112	153	87	136
Sweden					
Metallic arsenic	15	20	20	18	19
Switzerland					
Metallic arsenic	8	3	3	2	4
Turkey					
White arsenic	...	1	1	10	...
Metallic arsenic	...	13	58	23	49
United Kingdom					
Metallic arsenic	81	108	109	87	86
South Africa					
Metallic arsenic	...	...	42	60	27
Canada					
Metallic arsenic	668	1 711	257	391	262
USA					
White arsenic	38 636	29 131	31 117	31 498	24 702
Metallic arsenic	1 000	1 298	830	1 030	879
Hong Kong					
Metallic arsenic	71	58	39	----	18
India					
White arsenic (a)	2 170	873	714	1 056	1 157
Metallic arsenic (a)	183	310	67	261	186
Indonesia					
Metallic arsenic	123	256	390	273	256
Japan					
Metallic arsenic	----	103	45	3	3
Korea, Republic of					
Metallic arsenic	48	85	101	72	97
Philippines					
Metallic arsenic	22	...	10	12	...
Taiwan					
White arsenic	159	99	40	1	20
Thailand					
Metallic arsenic	24	56	81	80	82

**Imports of Arsenic**

tonnes

Country	1998	1999	2000	2001	2002
Australia					
White arsenic	2 122	...	...	...	...
Metallic arsenic	148	61	42	103	50
New Zealand					
Metallic arsenic	...	21	189	998	187

Note(s) :-

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

(a) Years ended 31 March following that stated

**Production of Asbestos**

Country	1998	1999	2000	2001	2002
Bulgaria	672	354	66	----	----
Greece	35 068	32 000	*10 000	*1 000	----
Russia	601 859	674 000	752 000	735 000	*750 000
Serbia and Montenegro	1 457	361	563	194	372
Slovakia	19 000	2 000	...	...	...
Egypt (b)	147	...	...	...	...
South Africa					
Chrysotile	27 752	18 836	18 782	13 393	13 311
Swaziland					
Chrysotile	27 693	22 912	12 690	...	----
Zimbabwe					
Chrysotile	123 295	87 872	151 954	118 969	167 954
Canada					
Chrysotile	302 000	340 000	307 000	262 000	201 000
USA (a)	5 760	7 190	5 260	5 260	2 720
Argentina	309	259	254	*250	*250
Brazil	198 332	188 386	209 332	172 695	194 732
Colombia (c)	128 446	61 125	59 249	96 140	62 785
China	297 000	329 000	276 000	257 581	...
India					
Amphibole (e)	20 111	18 550	15 397	11 148	14 340
Iran (d)	2 258	2 123	3 460	3 500	...
Japan					
Chrysotile	1 389	1 052	...	...	...
Kazakhstan	155 400	139 300	233 200	271 200	291 200
<b>World Total</b>	<b>1 900 000</b>	<b>1 900 000</b>	<b>2 100 000</b>	<b>2 000 000</b>	<b>2 000 000</b>

## Note(s):

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

(a) Sold or used by producers

(b) Years ended 30 June of that stated

(c) Crude

(d) Years ended 20 March following that stated

(e) Years ended 31 March following that stated

**Exports of Unmanufactured Asbestos**

tonnes

Country	1998	1999	2000	2001	2002
Belarus	3 604	4 334	65	3	0
Belgium-Luxembourg	685	1	0	----	----
Czech Republic	51	1	...	...	...
France	----	...	46	59	...
Greece	35 185	28 360	8 946	252	29
Lithuania	2 982	3 967	643	139	...
Poland	300	1	14	...	...
Russia	241 681	261 138	332 417	340 397	370 929
Spain	15	5	126	36	1
United Kingdom	45	49	2	1	1
South Africa	24 875	20 314	16 627	11 965	5 495
Swaziland	*19 000	*20 000	*20 000	...	...
Zimbabwe	113 008	204 575	134 859	*147 000	195 158
Canada	319 430	332 406	315 326	272 596	235 138
USA	18 896	21 997	18 765	14 748	7 178
Brazil	51 239	49 419	63 134	53 918	99 341
China	18 591	10 720	11 814	18 431	5 029
India (a)	348	172	403	1 129	169
Japan	32	20	----	54	29
Kazakhstan	123 906	107 428	153 553	199 254	186 780
Saudi Arabia	8 608	17 970	9 727	4 626	4 594

Note(s):

(a) Years ended 31 March following that stated

## Imports of Unmanufactured Asbestos

tonnes

Country	1998	1999	2000	2001	2002
Azerbaijan	2 589	2 976	8 252	7 404	9 350
Belarus	21 518	25 639	25 301	20 738	21 631
Belgium-Luxembourg	2	25	98	65	...
Croatia	2 746	1 704	2 586	2 666	3 274
Czech Republic	1 684	1 441	1 402	2 322	785
Estonia	253	255	180	58	61
France	979	15	16	25	0
Germany	191	214	189	168	199
Greece	244	72	501	1 016	1 988
Hungary	7 452	1 486	3 558	2 167	740
Irish Republic	891	8	1 007	1	19
Italy	192	305	87	----	----
Latvia	1 385	1 042	857	664	...
Lithuania	5 877	4 102	1 356	...	...
Macedonia	2 000	*2 000	*2 000	...	...
Moldova	357	300	5	12	123
Poland	9 700	24	19	19	...
Portugal	6 302	8 949	4 710	5 505	7 137
Romania	18 705	13 986	10 244	13 644	12 137
Russia	30 157	23 853	27 259	34 303	11 831
Serbia and Montenegro	1 427	592	607	697	751
Slovenia	1 716	1 487	893	...	...
Spain	21 349	17 847	15 568	13 349	3 085
Turkey	22 674	15 494	19 455	10 557	13 977
United Kingdom	1 840	789	246	347	118
Algeria	8 017	4 673	10 281	...	...
Egypt	7 850	3 347	*3 000	659	...
Ghana	4 613	401	648	2 719	...
Morocco	1 623	1 428	1 759	918	...
Nigeria	12 515	79 108	10 367	...	...
Senegal	1 436	1 542	1 784	2 002	1 383
South Africa	7 013	10 262	10 217	11 060	4 519
Tunisia	4 907	1 700	3 638	900	...
Zambia	*500	1 737	887	1 214	1 097
Canada	138	203	125	111	15
Cuba (d)	*4 400	*2 300	*800	*100	*2 700
El Salvador	1 266	1 688	1 678	1 691	2 478
Mexico	29 102	23 089	26 102	18 182	18 117
Panama	600	897	1 121	1 200	603
USA	15 823	15 808	14 637	21 600	6 849
Argentina	4 847	2 634	2 079	1 756	1 061
Bolivia	1 664	1 660	982	749	990
Brazil	39 597	24 049	35 491	33 136	23 187
Chile	5 125	2 295	2 088	...	...
Colombia	14 554	11 569	12 189	11 852	12 426
Ecuador	2 253	4 044	4 456	4 064	6 221
Peru	2 944	1 188	1 434	1 256	747
Uruguay	1 432	1 187	809	728	...
Venezuela	1 782	2 028	3 734	1 591	...
China	71 694	69 391	72 004	110 489	117 351
Dubai	5 291	6 257	...	...	...
India (c)	106 249	112 936	97 345	143 583	148 821
Indonesia	21 079	30 415	54 891	49 914	45 140
Iran (a)	40 505	65 364	55 265	...	*60 500
Japan	120 813	117 143	98 595	79 463	43 318
Kazakhstan	116	537	1 255	1 890	1 701
Korea, Republic of	29 619	32 519	28 972	26 307	21 503
Kyrgyzstan	18 800	18 901	17 307	20 454	20 786
Lebanon	2 124	1 195	1 325	621	...
Malaysia	14 600	18 000	18 640	...	...
Oman	1 231	3 636	2 347	2 636	543
Pakistan (b)	4 583	2 865	4 160	2 728	907
Philippines	1 500	2 882	3 144	2 929	...
Singapore	18	91	4	----	6

**Imports of Unmanufactured Asbestos**

tonnes

Country	1998	1999	2000	2001	2002
Sri Lanka	1 744	10 903	22 277	23 395	24 141
Syria	1 488	3 267	3 356	1 415	370
Taiwan	5 682	6 572	5 421	3 716	2 968
Thailand	60 093	100 423	120 563	126 915	181 348
Australia	1 471	1 316	1 246	945	515

Note(s) :-

- (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

**Production of Barytes**

Country	1998	1999	2000	2001	2002
Belgium	*40 000	*30 000	*30 000	*30 000	*30 000
Bulgaria	124 000	111 000	*120 000	*120 000	*120 000
France	75 400	75 700	92 000	81 000	85 000
Georgia	390	----	416	1 093	1 042
Germany	123 272	118 489	111 790	108 111	100 993
Greece	*800	*800	*800	*800	*800
Italy	31 792	24 557	11 262	10 809	*10 000
Poland	----	----	----	----	2 708
Romania	10 327	4 632	4 266	2 851	100
Russia	*60 000	*60 000	*60 000	*60 000	*60 000
Slovakia	14 877	15 900	13 700	14 450	25 820
Spain	79 820	39 553	32 653	45 473	52 494
Turkey	160 042	150 058	120 893	102 323	106 943
United Kingdom	64 000	59 000	54 000	*66 000	*59 000
Algeria	37 006	50 510	51 925	43 020	51 773
Morocco	353 206	328 945	343 557	467 056	469 934
Nigeria	245 554	...	...	...	...
South Africa	610	2 844	1 628	----	----
Tunisia	8 011	3 000	3 702	2 208	5 539
Zimbabwe	1 844	3 140	5 032	7 464	5 233
Canada	90 000	123 000	15 000	27 000	18 000
Guatemala	----	75	113	700	...
Mexico	161 555	157 953	127 668	142 017	163 620
USA (b)	476 000	434 000	392 000	400 000	*400 000
Argentina	1 833	4 365	*4 400	*4 500	*3 000
Bolivia	2 500	6 005	3 050	*3 000	6 100
Brazil (d)	48 634	40 824	54 100	54 790	54 895
Chile	1 430	823	1 026	584	384
Colombia	*900	*900	*900	*900	*600
Ecuador	...	2 532	1 476	1 181	...
Peru	7 506	3 512	11 403	11 031	3 806
Afghanistan	*2 000	*2 000	*2 000	*2 000	*2 000
China	2 941 200	1 715 740	3 024 030	3 985 200	2 700 000
India (a)	660 854	363 414	845 001	915 976	675 291
Iran (c)	178 355	165 520	200 015	238 257	*270 000
Kazakhstan	8 900	51 200	15 200	44 600	51 700
Korea, Dem. P.R. of	*100 000	*70 000	*70 000	*70 000	*70 000
Laos	9 050	7 900	1 400	4 400	12 695
Malaysia	1 580	13 506	7 274	649	3 082
Myanmar (a)	18 562	27 679	32 669	*29 000	...
Pakistan (e)	20 657	16 845	22 432	25 831	19 480
Saudi Arabia	10 800	13 200	16 000	...	...
Thailand	105 221	76 092	56 180	23 559	23 500
Vietnam	...	...	...	71 100	60 300
Australia	*15 000	*18 000	*14 000	*16 000	*19 000
World Total	6 300 000	4 500 000	6 100 000	7 300 000	5 900 000

## 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) Years ended 31 March following that stated  
(b) Sold or used by producers  
(c) Years ended 20 March following that stated  
(d) Including beneficiated and directly shipped material  
(e) Years ended 30 June of that stated

## Exports of Barytes

tonnes

Country	1998	1999	2000	2001	2002
Azerbaijan	1 780	1 920	2 667	4 504	840
Belgium-Luxembourg	17 222	11 198	6 177	6 707	1 781
Bulgaria	112 962	110 128	125 440	(b) *120 500	(b) *121 800
Czech Republic	70	36	566	535	986
France	45 000	47 000	60 000	*50 000	...
Georgia	470	2	60	-----	-----
Germany	14 779	14 978	15 906	38 775	32 297
Italy	1 876	432	306	390	2 076
Netherlands	54 463	54 129	49 611	88 229	98 393
Norway	11 514	4 630	5 169	9 227	5 234
Russia	(b) *300	(b) *3 900	(b) *1 800	(b) *2 200	4 653
Slovakia	16 010	15 494	13 197	14 215	11 037
Spain	70 264	18 054	25 431	39 910	44 570
Turkey	123 974	57 558	89 145	136 916	117 862
United Kingdom	6 590	8 196	28 503	58 969	29 545
Morocco	362 340	212 206	327 154	410 867	...
Tunisia	1 002	4 622	3 908	5 726	...
Canada	25 426	15 931	14 238	21 964	15 191
Mexico	18 145	15 349	8 082	3 699	1 974
USA	16 910	24 419	37 221	45 020	47 565
Bolivia	2 500	5 960	3 050	6 855	1 556
Peru	8 353	3 502	7 591	6 082	2 446
Venezuela	3 650	2 663	3 127	...	...
China	1 774 337	1 286 855	2 523 041	2 588 004	1 705 031
Hong Kong	115	1 301	654	1 137	1 250
India (a)	106 232	37 845	153 960	177 721	314 623
Indonesia	3 161	1 350	2 705	7 504	976
Iran	27 577	11 502	23 500	22 274	21 033
Kazakhstan	6 749	28 434	22 203	53 693	45 113
Korea, Dem. P.R. of (b)	*2 800	*7 200	*2 600	*10 900	*4 300
Laos	9 050	7 900	1 400	3 300	...
Oman	441	4 073	4 594	9 192	5 927
Saudi Arabia	5 902	5 364	638	564	2 668
Singapore	7 405	5 537	6 250	8 167	11 742
Thailand	57 652	58 914	35 112	39 387	39 162
Australia	2 055	688	1 078	1 888	5 223

## Note(s):

(1) Trade in barytes is reported under item 2511 of the Harmonised System 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



## Imports of Barytes

Country	1998	1999	2000	2001	2002
Austria	2 488	2 382	3 439	3 151	2 420
Azerbaijan	9 364	14 765	34 332	40 914	17 124
Belarus	2 038	2 748	1 398	1 852	1 575
Belgium-Luxembourg	11 741	15 253	14 738	6 706	5 369
Croatia	105	356	299	111	1 803
Czech Republic	8 004	9 652	9 230	10 594	10 754
Denmark	24 606	27 101	33 413	46 013	53 153
Finland	2 223	2 120	2 644	2 537	3 070
France	25 271	22 576	25 084	19 902	20 442
Georgia	...	2 067	5 910	2 302	...
Germany	255 201	202 026	241 776	251 884	221 000
Greece	1 278	858	1 711	1 657	839
Hungary	2 799	1 095	1 037	1 455	1 878
Irish Republic	114	230	192	176	318
Italy	70 887	66 177	70 143	93 733	79 605
Netherlands	114 635	73 579	98 200	111 042	103 133
Norway	145 616	134 596	158 610	145 445	110 755
Poland	6 700	8 225	7 958	7 358	6 571
Portugal	3 656	2 065	3 893	2 721	2 607
Romania	88 130	15 128	21 086	8 198	16 869
Russia	27 025	34 847	21 110	25 282	29 545
Slovakia	456	...	301	538	1 312
Slovenia	894	827	730	1 026	1 075
Spain	25 696	30 691	27 032	39 311	51 952
Sweden	4 212	2 433	2 149	1 892	1 927
Switzerland	4 520	2 051	2 090	1 917	1 844
Turkey	2 069	515	626	371	202
United Kingdom	98 506	65 703	57 362	77 273	74 858
Algeria	39 041	4 990	14 449	...	...
Cameroon	1 374	1 919	2 298	1 272	...
Congo	----	1 503	----	900	...
Gabon	*1 300	*1 300	*1 300	...	...
South Africa	1 421	1 716	2 423	2 254	2 925
Tunisia	350	2 687	331	8 245	...
Canada	13 642	56 003	57 702	79 927	68 811
Mexico	30 385	3 181	4 767	4 011	39 072
Trinidad and Tobago	33 512	26 000	19 412	14 627	...
USA	1 874 616	858 094	2 085 440	2 500 618	1 528 591
Argentina	2 982	5 922	3 497	5 371	1 689
Colombia	20 391	48 356	...	24 759	24 120
Ecuador	572	2 073	3 759	4 133	2 040
Venezuela	109 890	74 001	59 176	64 291	...
China	249	326	497	457	688
Dubai	1 906	2 845	...	...	...
Hong Kong	365	947	708	1 187	1 105
Indonesia	71 988	55 010	54 426	87 868	57 391
Japan	90 894	113 018	108 156	94 272	79 959
Jordan	100	121	126	221	196
Kazakhstan	7 290	431	...	33 860	157
Korea, Republic of	46 240	80 088	71 957	57 285	79 060
Lebanon	147	547	...	221	...
Malaysia	8 311	13 977	21 950	38 180	...
Oman	10 584	7 564	21 306	28 000	27 296
Philippines	870	1 615	1 255	1 111	...
Saudi Arabia	3 249	38 618	10 510	23 344	19 122
Singapore	4 951	2 687	5 909	6 731	14 047
Syria	2 668	12	5 031	4 380	5 717
Taiwan	5 011	3 748	3 527	3 284	4 625
Thailand	9 711	11 167	6 549	23 577	18 830
Australia	19 190	5 401	17 725	9 747	12 225
New Zealand	949	828	631	864	1 147

Note(s) :-

(1) Trade in barytes is reported under item 2511 of the Harmonised System and is described as 'barytes and witherite'. However, only small quantities of witherite are traded

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

tonnes

Country	1998	1999	2000	2001	2002
Armenia					
Bentonite	*3 000	3 493	2 807	995	328
Azerbaijan					
Bentonite	*35 000	*1 000	----	----	...
Bosnia and Herzegovina					
Bentonite	*10 000	*10 000	*10 000	*10 000	*10 000
Bulgaria					
Bentonite	176 110	242 725	173 534	171 092	211 500
Croatia					
Bentonite	7 581	8 441	10 013	10 580	11 204
Cyprus					
Bentonite	140 000	177 000	167 000	127 000	128 000
Czech Republic					
Bentonite	125 000	160 000	280 000	224 000	174 000
Denmark					
Bentonite	*9 000	...	...	12 166	14 539
Georgia					
Bentonite	*11 000	9 891	7 084	*7 000	...
Germany					
Bentonite	508 738	476 580	464 616	447 913	495 310
Greece					
Bentonite	1 148 408	1 049 657	1 148 694	1 258 872	...
Hungary					
Bentonite	26 724	61 928	5 120	30 441	3 700
Italy					
Bentonite	580 209	562 674	636 589	579 029	...
Fuller's earth	29 470	59 903	25 384	19 815	...
Macedonia					
Bentonite	*30 000	*30 000	*30 000	*30 000	*30 000
Poland					
Fuller's earth	5 400	5 000	4 000	...	...
Romania					
Bentonite	25 434	20 577	37 587	23 779	15 402
Russia					
Bentonite	*500 000	*500 000	*500 000	*500 000	*500 000
Slovakia					
Bentonite	81 010	64 390	77 000	73 000	65 500
Spain					
Bentonite	46 241	137 305	90 152	223 958	225 000
Attapulгите	113 330	90 282	28 307	24 477	115 000
Sepiolite	553 584	508 655	596 324	673 600	636 234
Turkey					
Bentonite	565 708	899 614	636 273	674 178	559 224
Sepiolite	7 213	19 945	18 295	10 253	...
Ukraine					
Bentonite	*25 000	*25 000	*25 000	*25 000	*25 000
United Kingdom					
Fuller's earth (a)	94 400	74 500	65 500	52 000	44 200
Algeria					
Bentonite	15 655	15 491	22 708	21 282	27 118
Fuller's earth	3 942	2 489	3 431	3 254	3 521
Egypt					
Bentonite	*33 000	*50 000	*50 000	*50 000	...
Morocco					
Bentonite	33 311	36 528	43 152	71 741	65 754
Fuller's earth (f)	30 650	21 956	30 665	40 664	43 243
Mozambique					
Bentonite	11 133	11 187	16 418	1 611	580
Senegal					
Attapulгите	110 400	139 300	148 700	121 100	176 454
South Africa					
Bentonite	48 382	50 363	90 129	108 306	93 870
Attapulгите	7 830	7 067	10 287	8 894	...

## Production of Bentonite and Fuller's Earth

Country	1998	1999	2000	2001	2002
Guatemala					
Bentonite	2 278	4 301	3 317	18 469	12 415
Mexico					
Bentonite	185 729	208 611	269 730	415 133	432 941
Fuller's earth	48 016	47 522	51 685	148 194	142 706
Nicaragua					
Bentonite	1 406	1 760	...	...	...
USA					
Bentonite (c)	3 820 000	4 070 000	3 760 000	4 290 000	*4 110 000
Fuller's earth (c)	2 420 000	2 560 000	2 910 000	2 890 000	*3 400 000
Argentina					
Bentonite	131 320	128 809	125 686	130 000	...
Fuller's earth	*1 500	*1 500	*1 500	*1 500	...
Brazil					
Bentonite	264 303	296 489	317 621	197 074	319 302
Chile					
Bentonite	721	1 104	1 314	1 695	632
Colombia					
Bentonite	*8 500	*8 500	*8 500	*8 500	...
Peru					
Bentonite	19 563	19 659	21 059	18 217	20 760
China					
Bentonite	1 330 400	766 860	1 124 340	1 289 700	...
India					
Bentonite (b)	413 160	456 386	*500 000	...	...
Fuller's earth (b)	70 313	138 287	...	...	...
Indonesia					
Bentonite	3 736	5 213	*5 000	*5 000	...
Iran					
Bentonite (d)	118 290	129 561	191 552	174 642	...
Japan					
Bentonite	443 566	428 247	415 115	405 738	...
Korea, Republic of					
Bentonite	59 765	112 258	67 652	116 098	89 905
Fuller's earth	28 805	35 246	28 400	38 378	18 757
Myanmar					
Bentonite (b)	3 871	1 066	998	998	*900
Pakistan					
Bentonite (e)	14 776	15 349	14 354	16 441	17 799
Fuller's earth (e)	14 659	15 565	17 978	13 668	15 951
Philippines					
Bentonite	3 900	1 844	1 500	*1 500	...
Thailand					
Bentonite	5 806	4 535	2 100	200	...
Turkmenistan					
Bentonite	*5 000	*5 000	----	----	----
Uzbekistan					
Bentonite	*15 000	*15 000	*15 000	*15 000	*15 000

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

tonnes

Country	1998	1999	2000	2001	2002
Australia					
Bentonite (e)	104 458	179 804	99 272	95 429	113 047
Fuller's earth	15 670	10 240	11 860	13 194	11 926
New Zealand					
Bentonite	15 465	12 258	9 419	8 300	7 800
World Total Bentonite	11 200 000	11 500 000	11 500 000	12 400 000	12 200 000
World Total Fuller's Earth (g)	3 600 000	3 700 000	4 100 000	4 200 000	4 800 000

## 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 attapulgite, a mineralogically distinct clay mineral but exhibiting similar properties
  - (4) In addition to the countries listed, Austria, Tanzania, Turkmenistan and Zimbabwe are believed to produce bentonite. France and Iran may produce fuller's earth
- (a) Saleable production based on data from producing companies
  - (b) Years ended 31 March following that stated
  - (c) Sold or used by producers
  - (d) Years ended 20 March following that stated
  - (e) Years ended 30 June of that stated
  - (f) Smectite
  - (g) Including attapulgite and sepiolite

## Exports of Bentonite and Fuller's Earth

Country	1998	1999	2000	2001	2002
Armenia					
Bentonite	(c) *700	3 614	2 250	(c) *1 800	439
Austria					
Bentonite	7 281	1 239	2 881	8 142	10 394
Azerbaijan					
Bentonite	34 570	1 111	66	772	2 532
Belgium-Luxembourg					
Bentonite	2 207	3 933	4 084	5 642	14 819
Bosnia and Herzegovina					
Bentonite (c)	*10 200	*11 100	*6 400	*9 100	*13 000
Bulgaria					
Bentonite	112 491	150 309	165 354	(c) *127 300	(c) *124 900
Cyprus					
Bentonite	54 475	82 084	71 060	80 714	81 388
Czech Republic					
Bentonite	23 306	26 099	32 853	46 823	32 002
Denmark					
Bentonite	3 650	4 309	5 113	10 911	14 601
Finland					
Bentonite	24 867	29 875	21 923	15 891	10 286
France					
Bentonite	27 795	30 189	37 805	23 580	20 343
Fuller's earth	2 431	2 312	2 609	267	34
Georgia					
Bentonite	(c) *11 800	10 136	8 166	10 347	...
Germany					
Bentonite	54 018	64 993	42 595	56 589	43 329
Greece					
Bentonite	126 698	39 742	10 810	80 669	...
Hungary					
Bentonite	873	1 673	4 503	5 784	2 118
Italy					
Bentonite	200 241	182 417	209 236	209 107	215 834
Macedonia					
Bentonite	10 546	5 800	7 050	6 981	...
Netherlands					
Bentonite	126 243	142 947	155 660	165 460	178 006
Fuller's earth	17 696	10 421	9 860	8 123	4 019
Romania					
Bentonite	409	6 893	14 789	12 748	4 430
Russia					
Bentonite	3 659	1 351	9 988	7 951	5 598
Slovakia					
Bentonite	45 766	55 948	55 209	65 850	56 645
Fuller's earth	(c) *500	(c) *1 400	1 248	1 091	1 007
Spain					
Bentonite	62 307	61 964	68 216	61 691	63 120
Sepiolite	585 893	612 533	603 895	609 250	581 737
Fuller's earth	20 736	11 999	15 790	14 370	14 721
Sweden					
Bentonite	4 706	5 482	6 917	6 716	9 401
Turkey					
Bentonite	90 182	104 425	123 858	106 104	106 712
Ukraine					
Bentonite	18 500	25 900	46 300	(c) *54 600	(c) *32 400
United Kingdom					
Bentonite	108 868	76 459	75 472	72 983	66 457
Fuller's earth	739	554	429	121	72
Algeria	1 195	1 350	1 570	1 580	860
Egypt	2 040	3 635	...	6 136	...
Morocco					
Bentonite	33 428	31 275	25 007	41 837	...
Fuller's earth	1 043	1 170	1 063	701	...
Mozambique					
Bentonite	6 192	480	172	240	214
Senegal					
Fuller's earth (b)	106 965	139 117	125 221	152 533	*175 000

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

tonnes

Country	1998	1999	2000	2001	2002
South Africa					
Bentonite	1 243	3 073	12 857	12 492	9 963
Canada					
Bentonite	2 306	1 912	314	638	1 560
Guatemala					
Bentonite	2 076	2 693	1 436	5 438	4 446
Mexico					
Bentonite	38 665	58 945	56 288	36 239	31 754
USA					
Bentonite	812 364	743 711	772 803	626 858	722 309
Fuller's earth	119 205	152 708	135 897	145 781	60 418
Argentina					
Bentonite	32 916	32 592	41 126	43 135	48 757
Colombia					
Bentonite	970	320	566	866	952
China					
Bentonite	55 072	83 105	108 748	113 738	140 729
Fuller's earth	3 910	7 116	12 150	27 723	33 525
India					
Bentonite (a)	210 975	123 857	118 613	124 709	91 958
Fuller's earth (a)	...	36 142	19 655	94 735	52 078
Indonesia					
Bentonite	3 813	8 550	19 797	19 407	68 099
Fuller's earth	3 262	7 702	15 059	20 977	17 574
Iran					
...	...	4 710	14 834	13 217	37 666
Israel					
Bentonite (c)	*1 100	*1 000	*2 100	*1 200	*800
Japan					
Bentonite	1 518	2 372	1 780	1 621	1 801
Korea, Republic of					
Bentonite	3 240	4 538	1 807	5 403	1 378
Saudi Arabia					
Bentonite	2 692	728	633	707	915
Singapore					
Bentonite	11 150	5 435	5 012	2 546	2 883
Thailand					
Bentonite	1 303	1 172	2 690	2 341	3 310
Australia					
Bentonite	13 126	13 348	13 443	20 042	63 148
Fuller's earth	2 570	2 160	2 001	----	104

## 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, Harmonised System 2508.10 and 2508.20
- (3) Activated bentonite and fuller's earth, Harmonised System 3802.90, are excluded
- (4) Some countries are believed to include sodium-exchanged bentonite, often referred to as activated bentonite, under Harmonised System 3802.90, e.g. Italy

- (a) Years ended 31 March following that stated
- (b) Attapulgite
- (c) BGS estimates, based on known imports into certain countries

## Imports of Bentonite and Fuller's Earth

Country	1998	1999	2000	2001	2002
Austria					
Bentonite	50 393	40 604	52 361	55 291	54 441
Azerbaijan	128	329	521	1 184	1 551
Belarus	7 222	6 910	11 736	9 066	16 725
Belgium-Luxembourg					
Bentonite	17 118	18 362	23 876	24 730	27 239
Fuller's earth	2 041	2 387	5 045	6 362	6 626
Croatia					
Bentonite	17 074	11 556	7 138	10 094	14 571
Cyprus	215	7 720	1 790	11 060	24 260
Czech Republic					
Bentonite	9 271	11 753	12 887	15 410	12 623
Fuller's earth	539	613	637	595	547
Denmark					
Bentonite	24 482	28 849	36 017	40 261	43 666
Fuller's earth	904	572	228	183	41
Finland					
Bentonite	56 864	53 935	30 609	50 898	27 758
Fuller's earth	1 791	51	42	60	207
France					
Bentonite	160 789	170 190	184 809	162 787	174 735
Fuller's earth	2 174	722	1 731	1 196	1 794
Georgia					
Bentonite	...	3 651	2 251	1 245	...
Germany					
Bentonite	243 554	281 618	233 046	230 303	227 785
Fuller's earth	9 207	7 045	5 419	7 476	7 315
Greece					
Bentonite	9 659	5 740	8 119	3 654	3 639
Hungary	3 363	4 243	3 587	3 797	4 440
Irish Republic					
Bentonite	2 125	775	1 271	1 064	966
Italy					
Bentonite	79 538	77 957	104 562	112 094	103 545
Fuller's earth	12 575	13 346	12 139	12 920	12 954
Lithuania	1 779	1 387	1 670	2 124	...
Netherlands					
Bentonite	244 576	309 914	276 017	236 201	247 142
Fuller's earth	20 800	21 124	24 909	24 615	14 975
Norway					
Bentonite	17 518	16 191	15 220	11 476	11 618
Poland					
Bentonite	71 800	60 333	61 733	64 986	68 020
Fuller's earth	1 100	1 236	920	797	1 432
Portugal					
Bentonite	18 847	12 681	16 679	16 376	16 115
Romania	2 640	1 895	2 700	9 861	14 733
Russia					
Bentonite	131 473	176 089	149 475	127 291	54 852
Fuller's earth	260	836	1 103	2 889	2 123
Slovakia					
Bentonite	8 118	6 614	5 871	4 861	4 008
Slovenia	5 734	5 568	4 657	3 738	4 122
Spain					
Bentonite	51 248	54 139	59 714	64 157	72 294
Fuller's earth	40	351	743	578	1 067
Sweden					
Bentonite	146 144	118 387	62 250	136 742	125 852
Switzerland					
Bentonite	22 075	25 054	26 275	21 715	21 128
Fuller's earth	1 737	2 121	1 802	1 682	1 544
Turkey					
Bentonite	206	246	940	1 213	1 715
United Kingdom					
Bentonite	331 453	246 341	255 942	235 517	216 247
Sepiolite (c)	74 407	63 567	80 538	65 062	69 691
Fuller's earth	51 398	16 326	6 563	5 896	27 264

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

tonnes

Country	1998	1999	2000	2001	2002
Cameroon	...	595	894	744	...
Egypt	4 335	7 339	...	823	...
Morocco	586	200	1 093	1 651	...
Nigeria	11 837	7 561	1 000	...	...
South Africa					
Bentonite	2 701	2 551	2 795	7 069	3 560
Tunisia					
Bentonite	4 865	3 708	4 419	6 202	...
Canada					
Bentonite	324 995	336 280	325 575	254 254	237 926
Fuller's earth	22 817	16 522	10 830	28 284	13 222
Costa Rica					
Bentonite	1 233	1 227	1 244	1 939	2 515
El Salvador					
Bentonite	3 045	1 842	954	3 765	4 266
Mexico					
Bentonite	45 057	41 391	55 213	15 471	20 075
USA					
Bentonite	7 772	8 909	8 465	4 278	29 144
Fuller's earth	288	398	70	31	205
Brazil					
Bentonite	60 814	53 900	82 963	73 246	92 956
Chile					
Bentonite	6 040	6 077	5 824	5 924	5 086
Colombia					
Bentonite	10 258	4 812	3 846	2 833	5 314
Peru					
Bentonite	3 434	2 689	1 641	487	426
Uruguay					
Bentonite	414	506	949	1 090	423
Venezuela					
Bentonite	62 763	12 456	24 488	25 322	...
Bahrain					
Bentonite	...	...	3 320	19 782	20 261
China					
Bentonite	2 083	5 583	5 319	6 775	11 829
Fuller's earth	1 152	457	234	287	2 619
Hong Kong					
Bentonite	3 880	7 024	9 996	8 094	6 346
India (b)	1 232	4 192	3 971	2 858	1 145
Indonesia					
Bentonite	12 206	16 259	29 263	18 643	41 037
Fuller's earth	54	1 782	405	20 839	6 982
Japan					
Bentonite	157 386	173 122	224 126	199 709	208 798
Fuller's earth	8 125	8 239	8 224	9 140	10 075
Jordan	758	823	822	923	1 671
Kazakhstan					
Bentonite	3 042	...	7 848	...	...
Korea, Republic of					
Bentonite	17 067	60 067	54 521	51 900	60 475
Fuller's earth	3 038	4 282	4 658	4 662	5 095
Lebanon	1 021	628	1 256	369	...
Malaysia					
Bentonite	73 012	144 196	201 892	...	...
Fuller's earth	33 635	40 470	60 699	...	...
Pakistan					
Bentonite (a)	1 045	1 355	3 306	1 961	1 681
Philippines					
Bentonite	3 429	2 920	3 406	4 411	...
Fuller's earth	6 634	...	8 937	10 678	...
Saudi Arabia					
Bentonite	26 727	23 198	29 253	26 597	44 542
Singapore					
Bentonite	21 211	10 812	14 175	8 153	7 797



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

Country	1998	1999	2000	2001	2002
Taiwan					
Bentonite	30 692	33 992	33 723	31 421	31 160
Fuller's earth	2 527	3 111	3 883	3 838	3 937
Thailand					
Bentonite	17 961	33 955	42 344	27 364	31 125
Australia					
Bentonite	12 190	13 052	25 300	24 518	17 354
New Zealand	4 026	3 247	3 684	4 034	5 132

## 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, Harmonised System 2508.10 and 2508.20
  - (3) Activated bentonite and fuller's earth, Harmonised System 3802.90, are excluded
  - (4) Some countries are believed to include sodium-exchanged bentonite, often referred to as activated bentonite, under Harmonised System 3802.90, e.g. Italy
- (a) Years ended 30 June of that stated  
 (b) Years ended 31 March following that stated  
 (c) Exports from Spain

**Mine Production of Bismuth**

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Bulgaria	*40	*40	*40	*40	*40
Romania	*40	*40	*40	*40	*40
Russia	*10	*10	*10	*10	*10
Canada	219	255	243	310	228
Mexico	1 204	548	1 112	1 390	1 126
Peru	832	705	744	640	*650
China (a)	239	2 682	1 122	*1 250	*1 300
Japan (b)	479	481	520	551	474
Kazakhstan	...	...	241	252	161
Tajikistan	*5	*5	*5	*5	----
Australia	*100	*100	*100	*100	*100
World Total	3 200	4 900	4 200	4 600	4 100

## Note(s):

- (1) The figures in this table are in some instances derived from reported bismuth content of refined and impure metal plus recoverable 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, Brazil is believed to produce bismuth

- (a) Exports of metal have always been higher than mine production in recent years
- (b) Metal production

## Exports of Bismuth

Country	1998	1999	2000	2001	2002
Austria					
Metal	...	...	10	24	0
Belgium-Luxembourg					
Compounds	1 172	1 373	1 262	1 415	...
Finland					
Metal	17	27	0	----	----
France					
Compounds	14	10	52	12	...
Metal	44	11	31	28	26
Germany					
Compounds	27	28	38	35	...
Metal	102	51	125	104	228
Netherlands					
Metal	300	29	73	6	100
Russia					
Metal	269	11	...	0	22
Spain					
Compounds	40	52	43	72	----
Metal	12	7	4	7	13
Sweden					
Metal	----	24	25	2	13
United Kingdom					
Metal	1 973	2 381	2 987	1 269	1 438
Canada					
Metal	176	190	302	127	104
Mexico					
Metal	2 526	755	908	1 006	1 233
USA					
Compounds	340	196	557	...	...
Metal	266	302	530	597	162
Peru					
Metal	880	660	778	597	641
China					
Metal	1 344	2 694	5 369	2 414	2 621
Hong Kong					
Metal	----	52	5	0	2
Japan					
Metal	5	9	3	31	4
Kazakhstan					
Metal	2	54	229	252	161
Korea, Republic of					
Metal	94	53	63	69	30

Note(s):

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

## Imports of Bismuth

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Metal	6	17	18	67	105
Belgium-Luxembourg					
Metal	3	24	17	1	4
Czech Republic					
Metal	21	31	35	26	42
Denmark					
Metal	5	6	2	3	1
France					
Compounds	130	123	226	101	...
Metal	300	291	446	420	728
Germany					
Compounds	710	861	1 383	1 295	...
Metal	1 314	1 597	1 810	2 038	1 517
Greece					
Metal	2	10	9	8	3
Irish Republic					
Metal	42	42	54	30	33
Italy					
Metal	150	145	190	391	301
Netherlands					
Compounds	597	292	393	360	...
Metal	263	130	1 107	278	108
Poland					
Metal	9	10	9	8	...
Russia					
Metal	6	36	30	40	15
Slovenia					
Metal	40	54	39	35	54
Spain					
Metal	250	119	167	125	139
Sweden					
Metal	11	39	41	16	12
Switzerland					
Metal	13	10	27	18	15
United Kingdom					
Metal	1 382	1 265	1 379	1 515	1 507
South Africa					
Compounds	411	1 696	819	9	...
Canada					
Metal	131	114	139	185	93
USA					
Metal	2 766	2 082	2 412	2 204	1 932
Brazil					
Metal	111	84	128	104	115
China					
Metal	4	95	78	214	220
Hong Kong					
Metal	2	9	72	8	7
India					
Metal (a)	49	40	20	28	55
Indonesia					
Compounds	216	387	43	----	43
Japan					
Metal	373	242	361	241	474
Korea, Republic of					
Metal	8	27	43	31	32
Taiwan					
Compounds	25	20	29	20	24
Metal	37	37	19	43	23
Thailand					
Metal	6	8	8	11	14

**Imports of Bismuth**

Country	1998	1999	2000	2001	2002
Australia Metal	15	3	4	7	20

Note(s) :-

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

(a) Years ended 31 March following that stated

**Production of Bromine**

kilograms

Country	1998	1999	2000	2001	2002
France	8 600 000	8 063 000	7 909 000	*8 000 000	*8 000 000
Germany	*600 000	*500 000	*500 000	*500 000	*500 000
Italy	*300 000	*300 000	*300 000	*300 000	*300 000
Russia	*60 000	*60 000	*60 000	*60 000	*60 000
Spain	*100 000	*100 000	*100 000	*100 000	*100 000
Ukraine	1 866 000	2 559 000	1 284 000	...	...
United Kingdom	35 900 000	24 800 000	33 200 000	27 854 000	24 542 000
USA (a)	230 000 000	239 000 000	228 000 000	212 000 000	222 000 000
China	*40 000 000	*42 000 000	*42 000 000	*40 000 000	*42 000 000
India	1 477 000	886 700	1 062 200	927 660	1 579 000
Israel	185 000 000	181 000 000	210 000 000	206 000 000	*206 000 000
Japan	*20 000 000	*20 000 000	*20 000 000	*20 000 000	*20 000 000
Jordan	----	----	----	----	8 000
World Total	524 000 000	519 000 000	544 000 000	517 000 000	526 000 000

## Note(s):

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

**Exports of Bromine**

Country	1998	1999	2000	2001	2002
Belgium-Luxembourg	27 007 000	32 234 800	25 565 000	21 200 000	21 462 800
Germany	38 400	17 700	12 300	15 000	13 700
Italy	1 000	6	...	16 000	2 259
Netherlands	...	11 027 100	...	9 091 000	11 625 600
Poland	27 000	8 000	8 154	...	...
Serbia and Montenegro	...	51 000	-----	...	-----
Ukraine	1 314 924	589 900	1 007 083	...	...
United Kingdom	7 011 058	5 335 234	10 850 261	11 304 252	8 851 092
USA	1 666 235	2 180 599	1 865 377	4 186 964	6 689 797
China	58 144	113 669	147 644	...	76 245
India (a)	10 000	10 983	22 476	18 606	9 300

## Note(s):

(1) This table does not purport to be comprehensive: trade in bromine is not separately distinguished from other halogens by many countries

(a) Years ended 31 March following that stated

**Imports of Bromine**

kilograms

Country	1998	1999	2000	2001	2002
Austria	164 200	83 000	125 300	228 000	254 900
Belgium-Luxembourg	28 104 000	32 810 600	27 580 000	23 057 000	25 627 900
Denmark	2 000	39 000	-----	-----	82
Finland	70 000	63 346	114 000	92 000	57 054
France	9 295 000	10 769 000	...	11 914 000	12 437 700
Germany	2 667 000	2 281 100	4 095 300	2 121 000	1 775 500
Irish Republic	51 000	17 877	22 158	22 000	5 739
Italy	241 000	212 828	...	113 000	104 414
Poland	63 000	37 000	43 259	...	...
Spain	150 000	199 494	226 237	233 000	166 487
Sweden	5 000	2 000	6 000	-----	...
Turkey	...	69 172	69 811	91 505	...
United Kingdom	8 001 874	6 927 595	5 986 773	5 387 458	2 814 164
Canada	1 090 190	1 193 598	1 405 207	1 813 693	1 683 427
Mexico (b)	350 000	261 000	156 410	126 000	...
USA	1 196 316	2 354 535	5 474 881	5 607 199	2 018 236
China	1 919 719	2 538 086	4 015 225	*4 600 000	9 553 650
India (a)	2 368 783	1 037 859	1 995 890	1 991 850	2 601 930
Korea, Republic of	923 099	...	...	14 000	...
Taiwan	28 227	75 153	84 260	29 850	59 755
Thailand	...	20 501	42 000	2 367	2 367

Note(s) :-

(1) This table does not purport to be comprehensive: trade in bromine is not separately distinguished from other halogens by many countries

- (a) Years ended 31 March following that stated  
(b) May include some fluorine



**Production of Cadmium**

Country	1998	1999	2000	2001	2002
Belgium	1 318	1 235	1 148	1 236	117
Bulgaria	195	217	233	234	252
Finland	520	696	683	604	400
France	177	195	160	176	154
Germany	617	703	458	539	422
Italy	470	359	287	352	362
Macedonia	...	236	335	73	111
Netherlands	739	731	655	455	485
Norway	276	244	302	367	209
Poland	----	----	6	330	440
Russia	*800	*900	*925	*925	*925
Serbia and Montenegro	17	----	----	----	----
Spain	196	----	----	----	----
Turkey	69	64	----	----	----
United Kingdom	440	547	503	425	292
Algeria	13	----	----	----	----
Canada (a)	2 090	1 911	1 941	1 493	1 664
Mexico	1 275	1 275	1 268	1 421	1 382
USA (a)	1 240	1 185	1 890	*680	*700
Argentina	34	----	----	34	----
Brazil	*130	*130	*130	*130	*130
Peru	405	466	483	456	422
China	2 125	2 154	2 368	2 507	*2 500
India (b)	295	278	326	431	483
Japan	2 337	2 567	2 472	2 460	2 444
Kazakhstan	(a) 1 622	(a) 1 246	257	170	479
Korea, Dem. P.R. of	*200	*200	*200	*200	*200
Korea, Republic of	1 178	1 791	1 911	1 879	1 827
Uzbekistan	*100	*100	*100	*100	*100
Australia	585	462	525	378	378
World Total	19 500	19 900	19 600	18 100	16 900

Note(s):

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

(a) Including cadmium sponge and/or secondary metal

(b) Years ended 31 March following that stated

**Exports of Cadmium**

tonnes

Country	1998	1999	2000	2001	2002
Belgium-Luxembourg					
Metal	2 172	1 089	1 956	1 525	607
Sulphide	22	15	12	31	17
Bulgaria					
Metal	301	286	286	(a) *420	...
Czech Republic					
Metal	...	45	141	87	0
Finland					
Metal	415	762	834	682	34
France					
Metal	1 155	1 252	2 533	3 614	1 232
Germany					
Metal	758	382	600	1	1
Italy					
Metal	212	363	5	739	377
Sulphide	35	23	2	5	4
Macedonia					
Metal	134	164	(a) *600	...	...
Netherlands					
Metal	1 108	1 206	791	891	741
Norway					
Metal	454	280	347	357	117
Poland					
Metal	10	0	0	198	49
Oxide	25	9	7	...	...
Russia					
Metal	(a) *650	(a) *270	(a) *540	(a) *1 220	2 228
Spain					
Metal	20	41	10	1	0
Sweden					
Oxide	15	87	96	54	78
United Kingdom					
Metal	28	215	19	87	282
Canada					
Metal	2 050	2 170	2 060	1 399	1 614
Mexico					
Metal	1 215	1 431	1 288	1 494	537
USA					
Metal	606	104	314	272	585
Sulphide	29	107	1 109	52	25
Peru					
Metal	347	479	508	386	470
China					
Metal	225	12	25	254	251
Hong Kong					
Metal	66	----	...	42	106
Japan					
Metal	17	4	...	57	333
Sulphide	11	9	...	2	1
Kazakhstan					
Metal	1 216	...	...	1 042	1 089
Korea, Republic of					
Metal	799	2 120	2 205	1 680	1 749
Thailand					
Metal	39	1	19	----	2
Uzbekistan					
Metal (a)	*150	...	*40	*20	*250
Australia					
Metal	700	448	540	323	395

Note(s):

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

## Imports of Cadmium

Country	1998	1999	2000	2001	2002
Austria					
Metal	1	7	1	2	1
Oxide	56	40	44	5	1
Belgium-Luxembourg					
Metal	7 802	5 332	8 263	7 828	5 121
Sulphide	----	9	0	46	4
Czech Republic					
Sulphide	16	16	21	36	11
France					
Metal	990	930	1 058	1 488	1 682
Oxide	...	923	665	1 032	910
Germany					
Metal	34	7	6	8	8
Oxide	165	165	150	149	152
Sulphide	5	7	8	11	8
Italy					
Metal	20	37	35	45	46
Oxide	479	168	94	76	95
Sulphide	8	2	2	1	0
Netherlands					
Metal	426	149	25	544	0
Poland					
Metal	20	7	2	6	...
Oxide	51	41	141	...	...
Russia					
Metal	1 614	...	...	0	0
Spain					
Metal	91	126	43	94	4
Oxide	...	71	22	56	70
Sweden					
Metal	248	284	26	65	150
Oxide	...	26	20	10	----
Switzerland					
Metal	8	8	13	7	6
Turkey					
Metal	20	5	8	9	14
Oxide	...	28	46	28	...
United Kingdom					
Metal	632	462	790	942	213
Canada					
Sulphide	3	11	...	0	...
USA					
Metal	620	490	425	107	81
Oxide	605	475	386	...	378
Brazil					
Oxide	132	124	129	...	...
China					
Metal	854	869	2 739	3 456	5 195
Hong Kong					
Metal	38	19	0	33	62
India					
Metal (a)	1 238	2 339	1 046	348	539
Indonesia					
Sulphide	60	23	80	1	0
Iran					
Metal	37	91	99	40	...
Japan					
Metal	3 562	3 351	4 056	2 723	2 945
Korea, Republic of					
Metal	6	5	0	17	2
Singapore					
Metal	7	331	400	867	222
Taiwan					
Oxide	376	387	287	257	248
Sulphide	14	8	0	----	0

Note(s) :-

(a) Years ended 31 March following that stated

**Production of Chromium Ores and Concentrates**

tonnes

Country	1998	1999	2000	2001	2002
Albania	124 000	109 200	120 400	85 890	72 600
Finland	498 075	597 438	628 414	575 126	566 090
Russia	69 500	48 047	79 000	117 700	...
Turkey	1 404 470	1 014 544	545 725	454 549	326 390
Madagascar	166 096	-----	131 293	23 637	11 000
South Africa	6 479 582	6 817 050	6 662 000	5 502 010	6 435 746
Sudan	60 000	23 800	54 500	...	...
Zimbabwe	605 405	653 479	668 043	722 625	725 822
Cuba	46 000	52 000	56 300	*60 000	...
Brazil (a)	352 751	357 141	421 290	*300 000	*200 000
China	205 300	220 540	208 000	181 900	164 200
India (e)	1 418 119	1 737 985	1 971 806	1 548 900	3 066 466
Indonesia	4 700	6 355	-----	-----	-----
Iran (b) (c)	316 597	368 400	145 007	178 120	...
Kazakhstan	1 602 700	2 405 600	2 606 600	2 045 700	2 369 500
Myanmar (e)	2 447	*3 200	*3 000	*3 000	...
Oman	29 756	26 010	15 100	30 100	...
Pakistan (d)	8 885	16 279	24 473	21 535	16 679
Philippines (b)	42 228	17 530	20 920	27 926	23 703
United Arab Emirates	76 886	60 000	30 000	10 000	-----
Vietnam	59 000	58 500	76 300	80 000	...
Australia	72 496	71 886	74 260	15 750	57 142
World Total	13 600 000	14 700 000	14 500 000	12 000 000	14 600 000

## Note(s):

(1) In addition to the countries listed, Bulgaria, 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
- (d) Years ended 30 June of that stated
- (e) Years ended 31 March following that stated

## Exports of Chromium

Country	1998	1999	2000	2001	2002
Albania					
Ores and concentrates	52 058	13 399	30 684	13 165	6 285
Austria					
Ores and concentrates	526	709	729	647	896
Metal	2 956	3 015	3 198	2 858	4 506
Belgium-Luxembourg					
Ores and concentrates	6 046	18 695	16 307	17 051	9 510
Metal	233	227	395	318	262
Czech Republic					
Metal	49	13	1	1	88
Denmark					
Metal	468	257	637	964	57
Estonia					
Metal	6	88	318	200	12
Finland					
Ores and concentrates	255	31	282	354	281
Metal	408	0	0	0	31
France					
Ores and concentrates	2 467	2 823	2 658	2 129	2 835
Metal	4 783	4 697	5 990	6 634	5 056
Germany					
Ores and concentrates	16 478	16 098	14 675	6 771	11 760
Metal	1 037	726	1 108	225	762
Greece					
Ores and concentrates	----	2 162	3 000	5 067	...
Irish Republic					
Metal	7	43	35	1	760
Italy					
Ores and concentrates	2 228	1 234	2 669	5 558	3 014
Metal	260	416	594	815	407
Lithuania					
Metal	3	129	48	26	107
Netherlands					
Ores and concentrates	65 029	51 965	50 515	58 219	46 386
Metal	1 365	1 387	969	812	1 282
Poland					
Ores and concentrates	...	966	3 452	145	1 533
Metal	143	1 970	2	140	73
Russia					
Ores and concentrates	3 019	972	(b) *200	(b) *200	(b) *500
Metal	5 251	6 060	6 123	4 909	7 473
Slovakia					
Metal	1 707	1 983	2 699	2 869	2 511
Spain					
Ores and concentrates	1 268	2 057	1 315	678	1 040
Metal	503	1 569	815	1 569	2 679
Switzerland					
Metal	34	298	27	156	31
Turkey					
Ores and concentrates	537 652	569 083	467 010	321 047	265 296
Metal	36	50	91	279	249
Ukraine					
Metal	----	61	0	(b) *20	(b) *50
United Kingdom					
Ores and concentrates	707	871	503	170	26
Metal	5 803	5 549	8 821	4 609	3 952
Madagascar					
Ores and concentrates	147 700	57 500	118 000	...	...
South Africa					
Ores and concentrates	1 160 094	988 070	1 234 111	1 300 695	1 457 684
Metal (b)	*130	----	*310	*140	*370
Sudan					
Ores and concentrates	10 500	23 868	42 000	...	16 500
Zimbabwe					
Ores and concentrates	11 406	1 037	...	...	9

**Exports of Chromium**

tonnes

Country	1998	1999	2000	2001	2002
Cuba					
Ores and concentrates	3 000	28 416	39 478	...	...
USA					
Ores and concentrates	129 335	115 509	145 085	62 577	25 526
Metal	1 185	2 408	1 356	1 093	789
Brazil					
Ores and concentrates	154 521	194 486	142 605	78 588	22 883
China					
Ores and concentrates	3 990	3 612	2 404	13 182	2 175
Metal	3 418	5 240	6 771	4 781	4 119
India					
Ores and concentrates (a)	492 540	714 448	659 882	1 181 791	1 098 343
Iran					
Ores and concentrates	(b) *125 400	(b) *186 700	(b) *169 800	(b) *79 100	70 488
Japan					
Ores and concentrates	116	95	8 322	65	44
Metal	173	346	218	226	428
Kazakhstan					
Ores and concentrates	388 448	528 272	577 361	503 514	483 280
Metal	----	----	(b) *390	(b) *1 070	(b) *690
Korea, Republic of					
Metal	4	64	20	11	1
Oman					
Ores and concentrates	3 624	4 150	9 783	7 138	4 259
Pakistan					
Ores and concentrates (c)	71 511	33 904	78 310	67 737	84 153
Philippines					
Ores and concentrates	54 111	34 573	30 537	24 540	13 287
Taiwan					
Ores and concentrates	953	803	357	257	63
Metal	398	201	163	104	169
United Arab Emirates					
Ores and concentrates	23 000	*33 600	*700	...	...
Vietnam					
Ores and concentrates	71 000	...	...	...	...
Australia					
Ores and concentrates	71	42 229	81 936	15 785	1 730

## 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) Years ended 30 June of that stated

## Imports of Chromium

Country	1998	1999	2000	2001	2002
Austria					
Ores and concentrates	34 793	34 979	36 490	37 321	28 384
Metal	452	771	2 050	1 713	1 808
Belgium-Luxembourg					
Ores and concentrates	25 877	23 869	9 808	5 789	4 179
Metal	565	540	557	629	604
Croatia					
Ores and concentrates	32 010	2 161	15 705	908	287
Czech Republic					
Ores and concentrates	8 782	10 325	11 821	15 054	11 655
Metal	8	10	35	12	14
Denmark					
Ores and concentrates	904	775	294	512	1 496
Metal	46	27	64	19	63
Estonia					
Ores and concentrates	2 349	983	7	4	20
Metal	1	136	317	204	0
Finland					
Ores and concentrates	5 174	6 647	6 288	7 174	4 294
Metal	110	54	42	174	87
France					
Ores and concentrates	29 023	27 752	27 174	26 693	22 534
Metal	923	711	649	699	782
Germany					
Ores and concentrates	201 728	101 700	119 869	130 485	114 806
Metal	1 888	1 777	2 905	2 257	3 291
Greece					
Ores and concentrates	2 170	2 162	213	231	360
Hungary					
Ores and concentrates	700	700	1 010	549	651
Metal	68	...	104	85	65
Irish Republic					
Metal	42	75	46	26	19
Italy					
Ores and concentrates	83 863	41 184	60 566	82 769	56 835
Metal	617	711	467	549	544
Lithuania					
Metal	----	110	58	3	...
Netherlands					
Ores and concentrates	61 785	38 827	55 178	73 730	62 992
Metal	2 230	2 170	1 488	1 359	562
Norway					
Ores and concentrates (a)	*425 000	*468 000	*282 000	*186 000	*28 000
Metal	102	80	48	89	53
Poland					
Ores and concentrates	30 400	32 658	25 804	26 128	8 461
Portugal					
Ores and concentrates	1 947	1 886	1 916	2 569	2 334
Romania					
Ores and concentrates	13 479	2 966	1 301	2 405	3 869
Metal	47	337	95	22	...
Russia					
Ores and concentrates	466 565	625 538	714 322	600 337	589 584
Metal	40	286	696	547	762
Serbia and Montenegro					
Ores and concentrates	2 441	2 757	629	1 581	1 628
Slovakia					
Ores and concentrates	45 121	31 312	54 500	...	16 766
Metal	1	60	9	58	103
Slovenia					
Ores and concentrates	30 020	647	607	722	451
Metal	16	18	8	18	10
Spain					
Ores and concentrates	3 673	4 750	5 861	9 141	2 585
Metal	335	219	385	1 202	666
Sweden					
Ores and concentrates	319 000	250 000	350 000	200 000	...
Metal	629	1 459	888	1 275	1 265

**Imports of Chromium**

tonnes

Country	1998	1999	2000	2001	2002
Switzerland					
Ores and concentrates	1 233	1 380	1 483	818	525
Metal	127	123	135	112	116
Turkey					
Ores and concentrates	19 497	48 285	69 470	101 278	68 832
Metal	16	15	15	12	19
United Kingdom					
Ores and concentrates	120 967	83 608	163 647	135 369	139 721
Metal	1 787	1 573	1 519	1 601	1 140
Egypt					
Ores and concentrates	93	417	...	...	...
South Africa					
Ores and concentrates	...	8 251	21 301	11 046	11 152
Metal	121	48	172	87	95
Canada					
Ores and concentrates	34 042	42 803	15 084	13 759	21 096
Metal	455	632	700	533	438
Mexico					
Ores and concentrates	5 526	5 657	8 852	5 072	11 713
USA					
Ores and concentrates	380 788	228 958	267 792	189 101	111 903
Metal	9 512	9 171	9 964	8 106	7 239
Argentina					
Ores and concentrates	42 409	53 615	55 031	33 803	54 691
Brazil					
Ores and concentrates	9 777	8 482	48 347	10 295	7 596
Metal	167	239	257	250	336
Chile					
Ores and concentrates	16 028	6 815	13 210	12 385	7 613
Peru					
Ores and concentrates	4 202	1 876	1 612	3 921	1 685
Venezuela					
Ores and concentrates	3 617	790	2 539	2 826	2 877
China					
Ores and concentrates	711 544	816 230	1 112 791	1 090 441	1 142 740
Metal	598	969	751	250	672
India					
Ores and concentrates (b)	686	6 886	54 567	1 153	1 740
Metal (b)	126	156	138	176	220
Japan					
Ores and concentrates	416 665	380 115	501 727	411 120	354 928
Metal	2 365	2 343	3 202	3 480	2 922
Korea, Republic of					
Ores and concentrates	209	35	188	171	85
Metal	948	1 492	1 312	1 372	1 147
Singapore					
Ores and concentrates	294	522	588	656	201
Metal	40	26	23	29	43
Taiwan					
Ores and concentrates	9 809	9 160	8 318	7 470	9 014
Metal	172	195	248	241	470
Thailand					
Ores and concentrates	999	5 016	4 872	4 347	2 750
Australia					
Ores and concentrates	8 661	10 912	10 141	10 978	13 386
Metal	250	206	160	165	212

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



## Production of Coal

Country	1998	1999	2000	2001	2002
Albania					
Lignite	48 706	32 595	20 666	15 700	...
Austria					
Brown coal and lignite	1 140 151	1 137 388	1 254 605	1 193 970	1 298 652
Bosnia and Herzegovina					
Brown coal and lignite	1 800 000	7 260 000	8 900 000	9 130 000	...
Bulgaria					
Anthracite and bituminous	120 406	123 200	118 200	115 000	...
Brown coal and lignite	29 783 000	25 734 000	26 182 769	26 095 516	26 433 500
Croatia					
Bituminous	50 839	15 311	----	----	...
Czech Republic					
Bituminous	19 521 000	17 227 000	17 028 000	14 808 000	14 097 000
Lignite	652 000	512 000	453 000	507 000	501 000
Brown coal	51 283 000	44 858 000	50 610 000	51 036 000	48 834 000
France					
Anthracite and bituminous	4 864 000	4 533 000	3 166 000	1 972 000	1 483 000
Lignite	735 000	558 000	296 000	324 000	147 000
Georgia	14 700	12 000	7 300	5 000	6 000
Germany					
Anthracite and bituminous	41 639 952	40 258 004	34 251 019	27 361 079	26 637 799
Brown coal	166 036 433	161 283 558	167 723 889	175 364 780	181 778 432
Greece					
Lignite	60 910 433	61 861 049	64 026 457	66 730 897	70 340 000
Hungary					
Bituminous	877 000	738 000	744 000	635 200	660 000
Lignite	7 628 000	7 702 000	7 862 000	8 043 062	7 573 971
Brown coal	6 563 000	6 477 000	5 670 000	5 392 000	4 530 000
Italy					
Lignite	83 700	80 000	120 000	130 000	100 000
Macedonia					
Lignite	8 180 000	7 300 000	7 500 000	8 000 000	...
Norway					
Bituminous (d)	328 170	403 940	631 926	1 787 784	2 131 691
Poland					
Anthracite	65 000	----	----	----	----
Bituminous	115 661 000	111 894 136	103 617 556	103 991 700	103 546 000
Lignite	62 820 314	60 838 707	59 505 486	59 557 400	58 209 600
Romania					
Anthracite and bituminous	4 331 000	3 742 000	4 042 000	4 033 000	*3 410 000
Brown coal and lignite	23 774 000	20 793 000	26 882 000	30 699 000	*27 080 000
Russia	231 919 000	249 521 000	258 000 000	269 000 000	253 000 000
Serbia and Montenegro					
Bituminous	104 596	49 481	87 882	69 711	70 312
Lignite	43 577 410	30 037 930	33 638 291	31 789 143	32 936 248
Brown coal	389 996	413 289	398 438	375 620	422 661
Slovakia					
Brown coal	3 893 000	3 732 000	3 646 100	3 421 100	3 406 400
Slovenia					
Brown coal and lignite	4 891 000	4 562 000	4 479 300	4 133 000	4 684 710
Spain					
Anthracite	5 682 568	5 204 917	5 143 977	4 693 831	4 393 395
Bituminous	6 717 821	6 349 061	6 166 586	5 797 496	5 358 406
Sub-bituminous	3 925 498	3 707 095	3 630 805	3 456 000	3 557 047
Lignite	9 749 739	8 831 828	8 523 586	8 787 000	8 726 121
Turkey					
Anthracite	3 336 021	2 738 040	3 330 355	3 369 727	3 312 690
Bituminous	157 334	93 310	110 945	55 860	118 235
Lignite	66 583 499	66 706 450	61 314 974	58 172 982	49 626 612
Ukraine					
Bituminous	75 767 000	80 640 000	79 923 000	(i) 83 900 000	(i) 82 400 000
Lignite	1 409 000	1 184 000	1 067 000	...	...
United Kingdom					
Bituminous (g)	41 177 000	37 077 000	31 197 000	31 930 000	29 989 000
Botswana	928 100	945 316	946 900	930 374	953 081
Congo, Democratic Republic					
Bituminous	100 000	70 000	48 000	40 000	37 000

## Production of Coal

tonnes

Country	1998	1999	2000	2001	2002
Egypt	200 000	*250 000	*39 000	*58 000	...
Malawi	54 238	43 831	34 250	34 410	41 867
Morocco					
Anthracite	269 100	129 200	30 810	1 908	322
Mozambique					
Bituminous	...	8 573	16 115	27 600	43 512
Niger	181 213	168 466	158 200	163 275	182 916
Nigeria					
Sub-bituminous	20 000	20 000	10 000	10 000	10 000
South Africa					
Anthracite	2 064 000	1 919 244	1 617 969	1 607 000	1 304 965
Bituminous	222 200 000	221 594 925	222 500 000	222 105 086	221 213 316
Swaziland					
Bituminous	410 021	426 299	378 043	*450 000	553 000
Tanzania					
Bituminous	45 073	75 044	79 184	77 789	*80 000
Zambia					
Bituminous	185 717	127 854	168 000	*150 000	*150 000
Zimbabwe					
Bituminous	5 046 977	4 977 355	3 986 202	4 511 447	3 938 175
Canada					
Bituminous	38 284 407	36 537 653	33 804 234	34 140 918	29 656 000
Sub-bituminous	25 285 315	24 299 674	24 168 751	24 939 381	(a) 36 952 000
Lignite	11 790 106	11 659 351	11 190 106	11 390 275	...
Mexico					
Bituminous	12 378 788	13 302 345	14 287 138	12 176 884	11 405 034
USA					
Anthracite	4 765 000	4 325 000	4 148 000	1 640 000	1 131 000
Bituminous	580 934 000	545 882 000	520 974 000	553 769 000	518 306 000
Sub-bituminous	350 307 000	368 965 000	371 223 000	394 094 000	397 667 000
Lignite	77 807 000	79 123 000	77 620 000	72 614 000	74 806 000
Argentina					
Bituminous	218 270	353 839	260 000	190 000	...
Brazil					
Bituminous and lignite (e)	5 084 357	6 062 963	6 797 294	5 645 578	5 143 488
Chile					
Bituminous	116 611	82 240	110 039	123 320	129 939
Lignite	113 564	425 110	393 311	444 767	321 687
Colombia					
Bituminous	33 751 000	32 754 000	38 142 000	43 440 700	39 532 000
Peru					
Anthracite	7 385	1 488	16 625	20 093	22 085
Bituminous	*45 000	*45 000	*45 000	*45 000	*45 000
Venezuela					
Bituminous	6 458 324	6 594 611	7 880 516	7 685 476	8 097 016
Afghanistan					
Bituminous	*190 000	*200 000	*200 000	...	...
Bhutan	*69 000	68 000	*67 000	*65 000	...
China					
Anthracite	228 650 000	181 811 500	175 727 200	...	...
Bituminous	953 090 000	816 257 400	780 669 000	(i) 1 106 000 000	(i) 1 393 000 000
Lignite	50 770 000	45 566 300	42 773 600	...	...
India					
Bituminous (h)	292 270 000	304 103 000	313 696 000	327 787 000	341 248 000
Lignite (h)	23 419 000	22 124 000	22 947 000	24 813 000	26 018 000
Indonesia					
Anthracite and bituminous	60 320 949	73 648 000	76 465 000	91 928 000	103 130 000
Iran					
Bituminous (c)	1 830 020	1 775 174	1 991 865	2 017 998	*1 760 000
Japan					
Bituminous	3 660 000	3 689 513	3 147 000	3 208 000	1 369 000
Kazakhstan					
Bituminous	68 057 900	56 617 400	72 429 500	76 454 900	70 735 300
Lignite	1 714 700	1 760 200	2 442 900	2 680 300	2 995 800

## Production of Coal

Country	1998	1999	2000	2001	2002
Korea, Dem. P.R. of					
Anthracite	66 500 000	67 200 000	67 200 000	...	...
Lignite	23 800 000	24 000 000	24 000 000	...	...
Korea, Republic of					
Anthracite	4 361 000	4 197 000	4 150 000	3 817 000	3 318 000
Kyrgyzstan	432 400	417 000	424 900	475 000	497 500
Laos	86 081	78 826	184 177	122 942	233 823
Malaysia	349 849	308 502	382 942	545 845	352 513
Mongolia					
Anthracite and bituminous	...	1 423 500	1 437 300	1 492 400	1 549 800
Brown coal and lignite	(i) 5 057 000	3 528 500	3 562 700	3 707 600	3 850 200
Myanmar (h)	31 025	42 773	52 553	*41 000	*40 000
Pakistan (a) (b)	3 164 226	3 246 270	3 372 871	3 309 244	3 314 712
Philippines					
Bituminous	1 157 304	1 204 979	1 353 453	1 229 822	1 664 762
Taiwan					
Bituminous	79 140	91 674	83 380	----	----
Tajikistan	20 000	16 600	20 700	27 500	40 000
Thailand					
Lignite	20 161 721	18 266 308	17 713 753	19 616 996	19 508 000
Uzbekistan					
Bituminous	68 000	89 100	91 500	91 700	80 000
Lignite	2 855 000	2 864 000	2 410 000	2 619 300	2 660 000
Vietnam					
Anthracite	11 700 000	9 600 000	11 600 000	13 000 000	15 000 000
Australia					
Bituminous (f)	222 040 000	232 860 000	244 840 000	266 710 000	272 980 000
Brown coal (b)	65 600 000	65 820 000	65 780 000	64 960 000	66 660 000
New Zealand					
Bituminous	1 361 080	1 620 866	1 792 784	1 896 771	2 268 900
Sub-bituminous	1 736 005	1 672 947	1 645 382	1 811 681	1 971 850
Lignite	206 795	211 917	147 469	202 944	218 200
World Total	4 602 000 000	4 394 000 000	4 377 000 000	4 610 000 000	4 858 000 000

## 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) Years ended 30 June of that stated
- (c) Years ended 20 March following that stated
- (d) Spitzbergen: not including production from mines controlled by the former Soviet Union
- (e) Including beneficiated and directly shipped material
- (f) Including sub-bituminous
- (g) Including anthracite
- (h) Years ended 31 March following that stated
- (i) Coal; all forms

## Exports of Coal

tonnes

Country	1998	1999	2000	2001	2002
Belgium-Luxembourg					
Anthracite	874 527	781 378	1 121 661	1 029 455	940 201
Other coal	1 372 040	1 700 894	1 556 603	1 309 947	1 783 567
Briquettes	14 350	39 215	18 869	15 955	43 484
Czech Republic					
Hard coal (b)	6 726 000	6 123 838	5 885 403	5 712 522	5 680 003
Lignite	3 687 730	3 216 502	2 732 595	2 977 065	1 770 888
Briquettes	242 501	183 687	155 398	168 874	188 383
Denmark					
Hard coal (b)	139 321	201 571	112 534	100 160	97 865
Estonia					
Hard coal (b)	7 501	941	48 021	33 648	...
France					
Anthracite	3 033	4 074	1 240	15 698	26 834
Other coal	64 546	74 877	87 494	69 544	94 865
Germany					
Hard coal (b)	322 353	200 506	178 430	105 443	49 449
Brown coal	251 869	200 744	220 449	304 061	273 953
Briquettes	232 346	207 775	260 538	218 890	173 867
Irish Republic					
Anthracite	----	42 771	32 942	1 285	2 745
Briquettes	19 073	24 264	23 638	20 787	20 130
Italy (b)	7 650	23 011	32 153	54 884	33 141
Netherlands					
Anthracite	143 879	93 150	99 939	272 320	760 688
Other coal	4 124 961	4 744 469	8 316 654	13 104 257	6 539 589
Briquettes	20 760	9 463	3 612	977	13 472
Poland					
Hard coal	28 078 000	24 103 604	23 244 864	23 031 605	22 615 586
Lignite	23 500	13 400	9 477	14 789	41 287
Russia					
Anthracite	1 751 578	1 585 933	2 469 473	2 214 924	2 843 944
Other coal	21 609 000	25 661 298	41 191 291	39 116 741	40 365 125
Lignite	309 131	126 815	251 990	194 633	75 941
Briquettes	11 838	12 068	539	9 211	3 290
Turkey					
Anthracite	3 888	5 107	13 707	35 713	12 062
Ukraine	1 882 275	2 138 128	2 319 896	...	...
United Kingdom					
Anthracite	282 025	335 907	304 387	272 985	190 857
Other coal	688 621	439 022	616 291	309 560	342 291
Briquettes	57 410	53 759	77 063	77 184	68 563
Mozambique	17 903	20 502	29 010	32 272	35 770
South Africa					
Anthracite	1 376 000	1 080 136	1 125 000	970 493	787 118
Other coal	65 700 000	65 100 000	68 800 000	65 704 419	60 956 037
Zimbabwe (b)	42 810	32 536	23 881	*50 000	99 173
Canada					
Hard coal (b)	32 907 404	33 920 300	32 421 988	29 618 049	25 066 592
Lignite	46 403	30 040	64 407	68 344	78 307
USA					
Anthracite	612 548	438 326	448 424	396 068	339 568
Other coal	69 626 919	53 050 767	52 408 665	44 000 000	36 000 000
Lignite	290 176	44 964	43 240	47 306	41 538
Briquettes	45 116	45 475	60 762	44 248	90 490
Colombia	30 061 000	29 932 000	35 614 000	38 324 500	32 131 869
Venezuela	5 920 000	6 753 276	8 097 000	7 627 000	*8 000 000
China					
Anthracite	2 786 821	3 145 563	3 887 055	7 651 072	6 605 001
Other coal	29 503 933	34 261 511	51 158 963	83 293 372	77 270 619
India (a)	822 968	1 156 289	1 290 313	1 902 520	1 516 730

**Exports of Coal**

Country	1998	1999	2000	2001	2002
Indonesia					
Anthracite	1 318 772	1 107 111	354 874	161 293	143 412
Other coal	46 931 707	54 099 358	56 797 343	66 344 257	72 981 459
Briquettes	94 750	78 775	831 895	252 550	432 421
Kazakhstan					
Hard coal	23 578 438	16 175 232	25 679 253	27 243 015	22 664 101
Lignite	110 474	68 595	33 439	268 252	70 301
Kyrgyzstan					
Hard coal	23 000	10 792	21 597	19 385	100 898
Laos					
Lignite	68 884	95 529	126 289	103 223	...
Malaysia	31 800	2 022	5 000	10 387	...
Vietnam	3 454 000	3 260 000	3 050 000	...	...
Australia					
Anthracite	703 037	711 437	449 725	1 160 293	1 007 973
Other coal	166 339 204	170 695 035	186 434 364	192 770 156	202 842 433
New Zealand	1 092 781	1 101 662	...	...	...

## Note(s):

(1) This table excludes bunker shipments

(a) Years ended 31 March following that stated

(b) Including anthracite

## Imports of Coal

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Hard coal (c)	3 577 943	3 355 572	3 412 703	3 846 806	3 993 504
Brown coal	10 899	20 345	38 117	52 745	61 439
Briquettes	105 177	109 408	117 219	108 786	76 354
Belarus	716 370	642 847	576 460	224 090	286 937
Belgium-Luxembourg					
Anthracite	981 210	953 736	1 040 686	1 138 122	3 412 532
Other coal	11 358 312	9 806 997	9 702 654	9 829 971	8 263 921
Brown coal	213 354	161 605	198 317	232 063	244 300
Briquettes	26 611	38 522	20 372	52 887	53 715
Bulgaria					
Anthracite	2 145 144	1 106 620	1 448 415	...	...
Other coal	1 246 750	952 551	1 818 322	(e) *897 000	(e) *1 414 000
Croatia					
Hard coal	167 867	261 671	806 241	642 574	281 298
Lignite	98 170	82 830	80 303	84 520	34 807
Cyprus	22 083	29 157	57 607	85 931	71 734
Czech Republic	1 578 070	1 029 446	1 094 508	1 202 901	1 216 954
Denmark					
Anthracite	78 571	75 855	89 167	81 874	120 888
Other coal	8 284 775	7 057 146	6 435 687	6 916 611	6 087 316
Estonia					
Hard coal (c)	87 466	87 072	149 092	126 569	59 183
Finland					
Hard coal (c)	4 613 280	3 596 331	5 072 701	6 174 441	5 788 973
France					
Anthracite	1 655 772	1 777 657	1 088 272	1 049 738	1 323 661
Other coal	12 303 542	13 516 239	16 091 962	13 508 122	13 960 659
Lignite	31 437	21 085	51 244	60 810	23 470
Briquettes	112 082	82 872	77 348	98 610	74 423
Germany					
Anthracite	387 288	352 617	440 328	846 310	775 851
Other coal	21 801 982	21 733 088	22 483 547	27 397 137	26 629 962
Brown coal	1 943 544	2 089 587	1 812 000	1 936 950	1 040 979
Briquettes	370 663	232 540	195 611	159 991	154 033
Greece					
Hard coal (c)	1 175 265	1 126 351	1 038 517	1 357 243	...
Hungary					
Hard coal (c)	...	1 567 991	1 663 064	...	874 393
Brown coal	265 559	...	221 555	247 929	259 129
Iceland					
Hard coal	69 685	60 654	100 853	97 682	98 314
Irish Republic					
Anthracite	120 081	156 350	102 388	282 790	163 733
Other coal	2 728 413	1 621 849	1 666 083	1 682 981	1 337 469
Briquettes	43 912	45 771	42 306	42 480	28 105
Italy					
Anthracite	197 665	214 079	231 539	155 092	193 308
Other coal	15 474 813	17 155 041	18 768 117	20 068 964	19 682 422
Latvia	123 669	123 618	79 833	86 754	101 680
Lithuania					
Hard coal (c)	269 298	144 540	129 430	105 625	...
Macedonia					
Hard coal	82 500	79 655	68 649	51 185	...
Brown coal	98 682	32 922	1 448	2 896	...
Briquettes	97 256	4 495	272	...	...
Moldova					
Anthracite	93 354	70 495	83 315	152 002	105 418
Other coal	410 031	115 902	54 879	...	44 271
Netherlands					
Anthracite	952 934	1 187 521	1 890 491	1 293 055	190 633
Other coal	20 352 039	17 140 488	18 794 685	26 951 400	18 685 529
Brown coal	19 477	30 060	30 042	38 959	36 923
Briquettes	45 423	17 205	12 541	16 111	13 474
Norway					
Anthracite (a)	152 694	88 456	86 671	105 585	56 263
Other coal (a)	766 142	734 845	746 117	684 305	598 378
Lignite (a)	48 049	90 777	86 497	35 000	1 308

## Imports of Coal

Country	1998	1999	2000	2001	2002
Poland					
Hard coal (c)	4 198 000	2 374 285	1 503 434	1 902 766	2 767 760
Portugal					
Anthracite	336 726	180 884	375 617	209 725	211 583
Other coal	4 653 374	5 867 892	5 999 032	4 459 459	5 627 373
Romania (c)	3 866 796	2 412 701	2 467 034	3 015 063	3 672 459
Russia					
Anthracite	4 465 260	1 129 790	4 258 806	481 253	21 940
Other coal	10 480 000	14 912 207	21 259 190	27 337 302	20 835 331
Brown coal	21 809	2 996	9 898	241 831	86 841
Serbia and Montenegro					
Hard coal	32 128	111 007	30 975	10 707	50 038
Lignite	66 841	87 793	104 963	127 188	39 933
Slovakia					
Hard coal (c)	4 439 131	4 370 495	4 852 343	...	4 630 110
Lignite	(g) 1 418 000	1 135 575	806 199	763 850	710 943
Slovenia					
Hard coal (c)	231 472	299 022	12 937	28 581	34 607
Lignite	151 918	81 155	296 245	440 419	539 356
Spain					
Anthracite	281 363	1 185 524	1 326 932	1 741 429	1 729 758
Other coal	14 264 919	18 925 349	20 321 647	17 174 707	22 792 868
Sweden					
Anthracite	25 942	12 775	13 939	10 194	11 078
Other coal	3 012 878	2 919 133	2 974 052	2 758 180	2 652 007
Switzerland					
Anthracite	10 199	13 139	14 357	12 492	6 828
Other coal	58 467	48 021	236 123	155 809	115 061
Turkey					
Hard coal (c)	8 447 808	6 515 726	13 173 182	5 974 476	13 515 744
Lignite	22 015	----	10 730	----	10 986
Ukraine					
Anthracite	...	266 042	611 115	...	...
Other coal	(c) 8 390 047	4 687 720	5 994 619	...	...
Lignite	20 789	21 941	...	...	...
United Kingdom					
Anthracite	501 809	602 346	1 057 911	2 757 188	1 550 426
Other coal	20 742 610	20 167 409	22 397 393	32 772 976	27 135 784
Briquettes	13 556	8 298	17 197	11 317	17 227
Algeria	619 932	528 247	431 746	...	...
Botswana					
Hard coal (c)	1 945	26 258	18 789	19 148	...
Egypt					
Hard coal	1 483 924	1 320 394	...	...	...
Kenya					
Hard coal (c)	39 781	7 296	65 222	...	72 637
Mauritius	86 344	128 879	259 503	347 462	312 032
Morocco (c)	2 655 992	2 595 055	3 267 465	4 102 885	...
South Africa	1 532 284	1 024 068	1 250 751	2 187 165	1 797 411
Zambia					
Hard coal (c)	...	931	11 843	18 527	75 713
Canada					
Anthracite	713 282	518 410	570 068	494 708	423 310
Other coal	19 136 149	19 450 505	19 190 383	18 931 643	22 255 610
Cuba	17 850	22 390	21 739	...	...
Guatemala					
Other coal	0	47 115	191 853	402 496	377 711
Mexico					
Hard coal (c)	2 301 340	2 478 839	2 425 417	3 438 727	5 893 605
Lignite	1 816	4 724	3 777	1 876	2 012
Panama	55 734	69 650	69 740	23 578	...
USA					
Anthracite	5 121	33 957	17 468	53 817	719 568
Other coal	7 821 385	8 170 338	11 253 751	17 817 464	14 468 765
Lignite	46 403	31 420	65 266	69 403	80 175
Briquettes	2	10 101	15 171	10 085	42 496

## Imports of Coal

tonnes

Country	1998	1999	2000	2001	2002
Argentina	988 459	926 300	1 104 346	841 572	825 833
Brazil					
Anthracite	604 071	487 980	945 853	999 385	1 323 418
Other coal	10 054 963	12 941 936	13 928 271	13 791 919	11 688 779
Chile	4 605 359	5 320 594	4 416 807	2 629 071	2 885 304
Peru	386 995	379 386	619 357	442 417	725 241
Venezuela	28 557	54 390	74 298	86 575	...
China					
Anthracite	43 736	143 044	213 178	443 617	2 768 763
Other coal	1 538 397	1 528 002	1 903 630	2 049 653	8 042 103
Hong Kong					
Hard coal (c)	7 100 704	6 391 157	6 057 500	8 032 530	8 536 685
India (c) (d)	16 536 179	19 699 968	20 929 858	20 547 978	23 027 270
Indonesia					
Hard coal (c)	59 475	198 067	140 116	30 466	20 026
Iran (b)	299 065	1 102 230	849 989	...	*320 000
Israel	9 637 000	9 598 458	9 589 000	...	...
Japan					
Anthracite	3 261 130	2 781 904	3 678 658	4 673 440	4 891 272
Other coal	128 337 217	134 417 103	141 464 086	150 669 000	153 424 317
Lignite	14 483	13 642	12 370	7 331	18 142
Kazakhstan					
Hard coal	1 211 147	1 121 398	688 798	202 690	195 881
Korea, Dem. P.R. of (e)	*186 000	*596 000	*286 000	*443 000	*420 000
Korea, Republic of					
Anthracite	788 973	1 138 826	2 038 016	3 110 114	3 878 823
Other coal	51 416 850	52 314 965	61 807 033	63 628 794	66 234 528
Kyrgyzstan					
Hard coal	800 979	763 821	725 637	342 250	882 495
Lignite	...	46 752	20 776	1 433	2 969
Lebanon					
Briquettes	119 428	152 671	128 050	149 150	...
Malaysia					
Anthracite	1 222	8 256	16 170	...	...
Other coal	2 297 599	2 632 342	2 660 796	3 575 728	...
Mongolia	39 833	84 580	42 889	9 436	...
Pakistan (f)	1 012 326	912 451	1 005 811	863 216	1 082 811
Philippines (c)	4 244 518	4 023 445	4 223 554	...	...
Saudi Arabia					
Hard coal (c)	30 612	24 338	1 440	3 012	11 582
Taiwan					
Anthracite	50 516	43 405	79 925	104 948	150 688
Other coal	37 292 319	40 923 370	45 262 506	48 640 367	51 064 862
Thailand					
Anthracite	23 095	110 804	164 689	234 887	581 254
Other coal	1 521 416	3 031 334	3 933 738	4 645 056	4 944 071
Australia					
Hard coal	174 748	119 956	24 425	27 976	54 424
New Caledonia	298 736	244 321	253 642	259 479	275 732
New Zealand					
Hard coal	35	18	16 186	30 731	76 575

Note(s) :-

- (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) Including briquettes



**Mine Production of Cobalt**

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Russia	*3 700	*4 000	*4 100	*4 600	*4 800
Botswana	335	332	308	325	269
Congo, Democratic Republic	*5 000	*6 000	*7 000	*8 000	*7 000
Morocco	287	882	1 001	1 337	1 436
South Africa	296	306	397	373	366
Zambia	*7 000	*7 000	*7 000	*7 000	*7 000
Zimbabwe	100	129	79	96	74
Canada	5 861	5 323	5 298	5 326	5 093
Cuba	2 700	2 600	2 900	3 200	*3 000
Brazil	2 500	2 900	4 100	4 400	4 300
China	409	303	411	679	*700
Indonesia	*650	*650	*650	*650	*650
Australia (a)	2 138	1 802	1 726	2 696	2 935
New Caledonia	3 036	2 803	2 620	3 540	2 698
<b>World Total</b>	<b>34 000</b>	<b>35 000</b>	<b>38 000</b>	<b>42 000</b>	<b>40 000</b>

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 Brazil and New Caledonia, the figures for which relate to cobalt in ore raised

(a) Years ended 30 June of that stated

**Production of Cobalt Metal**

tonnes

Country	1998	1999	2000	2001	2002
Belgium	*1 200	*950	*1 110	*1 090	1 135
Finland	5 250	6 200	7 700	8 100	8 200
Norway	3 850	4 000	3 400	3 300	4 000
Russia	3 700	4 000	4 100	4 600	4 800
Congo, Democratic Republic (c)	4 490	5 180	4 320	3 199	2 149
Morocco	242	472	1 207	1 341	1 354
South Africa (b)	296	306	397	373	366
Uganda	----	77	411	512	*450
Zambia	5 011	3 946	3 342	4 665	6 144
Canada (a)	4 415	4 196	4 364	4 378	4 625
Brazil	364	630	792	889	960
China	*1 200	*1 200	*1 200	1 470	1 842
Japan	329	221	311	350	354
Australia	1 395	1 701	2 637	3 473	3 901
<b>World Total</b>	<b>31 700</b>	<b>33 100</b>	<b>35 300</b>	<b>37 700</b>	<b>40 300</b>

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) Including oxides

(b) Includes metal and metal contained in sulphate

(c) Excludes white alloy and matte which are believed to be further processed in Belgium and elsewhere

## Exports of Cobalt

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Metal	126	80	87	50	173
Belgium-Luxembourg					
Ore	630	280	92	104	145
Metal	(a) *2 500	2 640	(a) *3 300	(a) *3 300	(a) *3 000
Oxides	(a) *2 500	4 263	(a) *4 500	(a) *3 200	(a) *4 100
Estonia					
Metal	16	58	58	49	----
Oxides	100	12	4	...	----
Finland					
Metal	1 633	2 733	3 976	...	...
Oxides	2 565	2 812	3 256	...	...
France					
Metal	786	507	...	733	516
Oxides	76	131	209	114	64
Germany					
Metal	1 103	1 396	931	1 027	901
Oxides	121	136	164	126	122
Irish Republic					
Oxides	136	110	68	49	119
Italy					
Metal	75	45	566	86	98
Oxides	77	155	188	126	49
Netherlands					
Metal	989	1 363	2 451	2 737	690
Oxides	148	198	527	459	271
Norway					
Metal	3 666	4 055	3 908	3 322	3 941
Poland					
Metal	32	29	22	57	1
Russia					
Ore	6 215	895	*850	110	...
Metal	3 023	9 136	8 493	8 350	4 934
Oxides	267	1 031	1 265	514	794
Spain					
Metal	1	13	24	49	16
Oxides	34	109	39	2	122
Sweden					
Metal	144	260	234	110	146
Oxides	314	295	257	12	...
Switzerland					
Metal	118	94	85	205	61
United Kingdom					
Metal	2 001	1 793	1 631	1 855	1 079
Oxides	1 323	1 012	1 141	1 256	1 232
Congo, Democratic Republic					
Metal	*4 500	*5 200	*4 300	*3 200	...
Morocco					
Ore	2 500	2 560	2 072	1 024	...
Metal	240	464	1 238	1 264	...
South Africa					
Metal (c)	265	263	330	317	312
Oxide	198	234	1 008	1 768	529
Uganda					
Ore	...	...	416	...	875
Metal	----	67	395	...	...
Zambia					
Ore	...	76 381	13 287	5 312	3 065
Metal	*5 000	4 036	3 025	4 380	7 054
Zimbabwe					
Metal	*300	417	400	...	...

## Exports of Cobalt

Country	1998	1999	2000	2001	2002
Canada					
Metal	6 751	6 318	4 961	5 034	6 360
Oxides	476	278	349	380	287
Cuba					
Oxide, sinter and sulphide (b)	*2 800	*2 700	*2 900	*3 100	*3 000
USA					
Metal	2 024	1 710	2 822	3 073	2 742
Oxides	582	603	1 321	1 274	565
Brazil					
Metal	241	549	627	777	805
China					
Metal	222	123	191	222	353
Oxides	287	238	155	111	70
Hong Kong					
Ore	11	1 262	1 260	1 184	1 314
Metal	704	1 600	3 788	1 246	1 575
Oxides	216	59	68	50	104
India					
Metal (d)	17	220	49	27	19
Indonesia					
Ore	...	18	40	235	400
Oxide	...	13	158	91	60
Japan					
Metal	119	751	1 106	1 342	1 150
Oxides	134	193	234	380	693
Korea, Republic of					
Metal	34	96	240	838	96
Philippines					
Oxide	28	56	100	176	...
Saudi Arabia					
Oxide	305	480	164	...	...
Singapore					
Metal	678	1 113	884	939	944
Oxide	120	239	296	215	282
Taiwan					
Metal	445	112	191	146	98
Oxides	5	31	94	227	280
Australia					
Ore	40	17	1 127	1 265	408
Metal	2 306	3 100	4 410	5 674	3 969
Oxides	32	1	4	11	2

## Note(s):

- (a) Exports of cobalt are not separately recorded. Figures shown are BGS estimates based on known imports into certain  
(b) Co content  
(c) Includes metal and metal contained in sulphate  
(d) Years ended 31 March following that stated

## Imports of Cobalt

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Metal	340	332	537	415	345
Belgium-Luxembourg					
Metal (b)	*2 000	*5 000	*5 700	*4 600	*4 300
Oxides	358	436	476	667	644
Czech Republic					
Metal	81	55	34	41	35
Oxides	27	32	32	37	32
Estonia					
Metal	36	29	42	30	0
Finland					
Ore	12 690	90 323	66 618	61 785	64 274
France					
Ore	1 639	80	65	69	45
Metal	1 768	1 428	1 618	1 723	1 654
Oxides	568	534	566	471	370
Germany					
Metal	2 481	2 094	2 289	2 408	2 349
Oxides	477	488	385	301	346
Greece					
Metal	57	44	108	33	34
Irish Republic					
Metal	265	151	207	527	398
Oxides	21	70	101	45	6
Italy					
Metal	595	564	539	624	649
Oxides	914	874	1 089	1 004	1 256
Netherlands					
Metal	679	1 394	781	1 451	478
Oxides	337	228	624	510	570
Norway					
Metal	1 661	1 371	1 717	2 196	3 131
Oxides	631	645	642	113	41
Poland					
Metal	48	37	46	53	44
Oxide	54	31	38	38	33
Russia					
Metal	72	17	158	179	105
Oxide	27	72	109	86	109
Slovenia					
Metal	83	134	180	214	141
Spain					
Metal	146	204	287	228	131
Oxides	901	1 071	1 223	1 336	1 436
Sweden					
Metal	1 004	680	764	813	599
Switzerland					
Metal	353	316	380	394	342
Turkey					
Metal	60	58	75	62	88
Oxides	53	59	59	60	84
United Kingdom					
Metal	3 950	4 434	3 886	4 187	3 928
Oxides	672	504	496	641	477
South Africa					
Ore	327	2 862	1 993	3 670	6 194
Metal	840	822	729	1 145	791
Oxides	44	67	10	42	262
Canada					
Metal	1 325	862	825	1 561	731
Mexico					
Metal	158	69	92	95	51
Oxides	267	196	318	147	247
USA					
Metal	8 036	7 584	8 324	8 753	7 330
Oxide	1 205	1 264	1 513	1 279	1 300

## Imports of Cobalt

Country	1998	1999	2000	2001	2002
Brazil					
Metal	297	185	325	332	301
Oxide	208	149	135	173	110
Venezuela					
Oxides	13	36	44	23	...
China					
Ore	2 787	7 573	16 038	29 222	41 123
Metal	600	1 348	2 077	3 107	4 380
Oxides	52	98	87	221	888
Dubai					
Metal	434	930	...	...	...
Hong Kong					
Ore	----	...	787	1 144	1 592
Metal	890	1 481	3 608	1 233	1 568
Oxide	161	230	122	80	99
India					
Ore (a)	2 465	2 356	4 030	2 125	4 181
Metal (a)	384	357	352	502	438
Indonesia					
Ore	22	1 554	8 142	624	136
Metal	163	5	154	12	5
Oxides	79	82	239	137	190
Iran					
Metal	39	15	15	14	17
Oxide	29	49	78	78	115
Japan					
Metal	6 789	7 476	9 337	7 973	9 827
Oxide	1 752	2 800	3 354	1 484	2 505
Korea, Republic of					
Metal	561	820	1 020	888	1 678
Oxides	126	218	511	712	657
Malaysia					
Metal	400	700	761	1 004	...
Oxides	72	62	198	...	...
Philippines					
Metal	12	20	99	86	...
Saudi Arabia					
Oxides	74	1 666	287	65	204
Singapore					
Metal	780	852	827	898	795
Oxide	137	279	275	291	340
Taiwan					
Metal	1 010	859	1 035	932	1 225
Oxides	164	182	210	228	392
Thailand					
Metal	109	131	204	100	83
Oxide	32	84	126	146	177
Australia					
Metal	125	78	76	97	59
Oxide	79	113	75	93	105

Note(s) :-

(a) Years ended 31 March following that stated

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

## Mine Production of Copper

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Albania	2 300	869	----	----	----
Armenia	9 158	9 830	12 234	16 460	16 641
Bulgaria	82 500	87 500	93 200	97 100	84 400
Cyprus	4 908	5 006	5 200	4 600	3 700
Finland	9 500	10 500	11 500	11 600	11 200
Georgia	2 500	1 000	9 000	11 500	*13 000
Macedonia	9 100	10 200	10 000	6 800	5 600
Norway	2 699	----	----	----	----
Poland	435 800	463 200	454 100	474 000	502 800
Portugal	114 515	99 472	76 300	82 965	77 227
Romania	19 065	16 455	16 099	19 185	19 600
Russia	*530 000	*535 000	*530 000	*540 000	*620 000
Serbia and Montenegro	70 900	51 700	46 000	31 000	34 600
Spain	39 438	7 862	24 804	9 800	----
Sweden	73 685	71 160	77 765	74 269	71 991
Turkey	73 900	73 051	76 053	56 820	48 217
Botswana	22 124	20 960	18 722	19 209	21 590
Congo, Democratic Republic	38 236	33 000	33 000	34 100	26 381
Morocco	10 700	7 123	6 528	5 357	4 984
Namibia	6 500	----	5 070	15 003	18 040
South Africa	187 800	162 900	147 600	141 900	93 000
Tanzania	----	----	----	*2 600	*3 900
Zambia	378 798	270 995	249 304	306 909	307 834
Zimbabwe	2 941	4 977	558	492	1 356
Canada	705 766	620 085	633 855	633 531	600 313
Cuba	1 351	1 090	1 346	*1 000	----
Mexico	384 641	381 184	364 566	371 123	329 574
USA	1 859 400	1 600 900	1 444 500	1 338 600	1 142 400
Argentina	170 273	210 126	145 197	191 566	204 027
Brazil	34 446	31 371	31 786	30 111	30 642
Chile	3 686 900	4 391 200	4 602 000	4 739 000	4 580 600
Colombia	*1 800	*2 100	2 018	2 000	1 700
Peru	483 338	536 387	553 924	722 035	843 213
China	486 800	520 100	592 600	587 000	556 100
India	48 000	34 100	33 800	35 600	31 500
Indonesia	809 100	766 100	1 012 000	1 048 700	1 167 370
Iran	128 300	130 000	147 200	146 300	140 700
Japan	1 070	1 038	1 211	744	*1 000
Kazakhstan	338 600	373 500	430 200	469 500	473 700
Korea, Dem. P.R. of	*10 000	*10 000	*12 000	*12 000	*12 000
Malaysia	13 907	4 600	----	----	----
Mongolia	127 784	128 210	125 868	134 974	133 200
Myanmar	*6 700	26 736	26 711	26 300	27 500
Philippines	45 381	37 631	31 900	20 300	18 400
Saudi Arabia	782	821	837	800	600
Uzbekistan	74 400	66 000	*70 000	*70 000	*75 000
Vietnam	...	700	2 400	1 600	1 100
Australia	619 000	741 000	832 000	896 000	880 000
Papua New Guinea	151 556	187 921	203 061	203 762	211 315
World Total	12 300 000	12 700 000	13 200 000	13 700 000	13 400 000

**Smelter Production of Copper**

Country	1998	1999	2000	2001	2002
Armenia	5 000	5 000	6 000	7 056	6 502
Bulgaria	109 300	107 200	163 000	134 700	167 000
Finland	156 000	149 600	155 400	169 300	161 000
Germany	264 500	250 200	211 200	317 700	293 900
Norway	31 700	33 300	27 000	26 700	30 500
Poland	422 700	466 225	462 838	485 869	510 725
Romania	16 000	21 000	4 900	3 000	3 000
Russia	530 000	535 000	550 000	608 000	614 000
Serbia and Montenegro	107 700	44 900	33 800	24 000	30 000
Slovakia	*10 000	2 050	----	----	----
Spain	291 382	292 773	289 957	280 015	298 057
Sweden	81 642	76 023	105 033	182 933	186 950
Turkey	22 900	22 900	22 500	23 751	19 375
Congo, Democratic Republic (a)	35 000	31 000	33 000	25 000	----
Namibia	8 739	----	13 488	27 718	26 670
South Africa	153 200	149 300	140 000	132 900	121 000
Zambia (a)	231 000	217 600	180 000	215 000	253 500
Zimbabwe	10 000	10 000	7 000	6 000	5 000
Canada	553 148	550 171	543 593	601 359	513 934
Mexico	334 714	314 429	308 225	319 151	284 220
USA	1 490 000	1 090 000	861 700	834 100	683 300
Brazil	167 205	193 014	184 257	212 243	187 605
Chile	1 403 100	1 473 900	1 460 400	1 503 200	1 438 700
Peru	354 678	350 377	340 447	384 912	380 800
China	838 600	837 000	1 013 900	1 145 100	1 129 400
India	107 600	224 500	256 000	293 000	*300 000
Indonesia	----	126 700	173 800	217 500	211 200
Iran (b)	129 020	131 764	155 856	152 704	150 000
Japan	1 171 657	1 256 276	1 331 352	1 304 717	1 283 173
Kazakhstan	351 336	383 457	413 859	433 561	446 198
Korea, Dem. P.R. of	*10 000	*10 000	*10 000	*10 000	*10 000
Korea, Republic of	284 000	350 000	370 900	386 200	380 000
Oman	35 100	26 100	28 000	25 000	25 000
Philippines	161 600	148 000	150 000	165 000	165 800
Uzbekistan	74 900	61 000	69 000	81 300	57 000
Australia	236 000	344 000	391 000	455 000	458 000
<b>World Total</b>	<b>10 200 000</b>	<b>10 300 000</b>	<b>10 500 000</b>	<b>11 200 000</b>	<b>10 800 000</b>

## Note(s):

(1) This table shows primary metal in the form of blister and anode produced from concentrates, and may include copper produced from scrap but this is excluded when it can be separately identified

(a) Including leach cathodes

(b) Years ended 20 March following that stated

**Production of Refined Copper**

tonnes

Country	1998	1999	2000	2001	2002
Austria	74 786	74 075	73 873	66 154	*65 000
Belgium	368 000	388 000	423 000	424 000	418 000
Bulgaria	32 100	21 000	32 500	34 500	40 700
Cyprus	4 920	5 260	5 088	4 604	3 695
Finland	122 894	114 700	114 000	115 500	115 000
France	22 400	2 000	-----	-----	-----
Germany	695 869	695 626	709 472	693 773	695 791
Italy	29 100	28 500	33 000	30 200	32 400
Norway	31 700	33 300	25 300	26 700	30 600
Poland	446 837	470 494	486 002	498 451	508 674
Romania	21 008	20 983	15 303	17 654	11 453
Russia	655 900	736 600	824 000	887 900	854 500
Serbia and Montenegro	94 396	49 902	45 632	32 365	35 897
Slovakia	19 900	1 988	-----	10 584	6 989
Spain	303 076	304 617	315 734	290 630	312 145
Sweden	125 355	113 960	133 118	216 237	224 402
Turkey	91 900	60 500	64 000	58 000	41 000
United Kingdom	53 774	50 334	-----	-----	-----
Congo, Democratic Republic	35 000	29 000	29 000	-----	-----
South Africa	123 100	116 400	106 400	107 000	92 000
Zambia	302 600	268 400	226 169	307 904	347 235
Zimbabwe	10 000	14 500	14 400	5 300	5 400
Canada	562 261	548 563	551 393	567 720	494 273
Mexico	356 800	344 200	343 200	354 200	319 200
USA	2 489 200	2 118 700	1 802 100	1 800 600	1 511 900
Argentina	*16 000	*16 000	*16 000	*16 000	*16 000
Brazil	167 205	193 014	184 257	212 243	187 605
Chile	2 334 900	2 666 400	2 668 300	2 882 200	2 850 100
Peru	411 429	436 339	451 728	471 875	502 700
China	1 211 300	1 174 200	1 371 100	1 523 300	1 580 000
India	134 000	208 100	259 100	325 100	373 700
Indonesia	-----	90 800	158 400	212 500	192 400
Iran (a)	150 048	154 232	181 238	181 526	*180 000
Japan	1 277 352	1 341 549	1 437 351	1 425 691	1 401 079
Kazakhstan	324 763	361 890	394 723	425 670	452 989
Korea, Dem. P.R. of	*10 000	*10 000	*10 000	*10 000	*30 000
Korea, Republic of	373 211	448 034	470 956	476 094	494 561
Mongolia	...	...	...	1 476	1 500
Myanmar (b)	9 730	27 853	26 546	*25 000	*27 500
Oman	24 360	17 171	24 281	24 200	24 000
Philippines	152 400	148 000	138 700	164 500	144 300
Uzbekistan	89 900	72 000	*75 000	75 500	80 000
Australia	304 000	437 000	509 000	583 000	*570 000
World Total	14 100 000	14 400 000	14 700 000	15 600 000	15 300 000

## 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

(2) In addition to the countries listed, Albania, Egypt and Mongolia produce refined copper

(a) Years ended 20 March following that stated

(b) Years ended 31 March following that stated



## Exports of Copper

Country	1998	1999	2000	2001	2002
Albania					
Scrap	(a) *200	(a) *700	1 989	1 299	2 147
Armenia					
Ore	(a) *138 600	46 463	25 813	...	55 280
Unwrought (a)	...	...	*5 200	*3 800	*3 400
Scrap	(a) *1 200	4 172	4 400	3 192	1 919
Austria					
Unwrought	104 976	90 720	104 410	84 765	74 370
Unwrought alloys	1 746	624	1 509	1 121	916
Scrap	23 901	19 450	19 797	18 439	25 765
Azerbaijan					
Scrap	160	6 487	12 439	3 762	...
Belarus					
Scrap	4 975	6 126	7 400	11 100	26 381
Belgium-Luxembourg					
Matte and cement	4 770	5 518	2 166	631	15 222
Unwrought, unrefined	1 583	12 017	17 675	12 322	3 537
Unwrought, refined	144 764	171 924	199 088	240 995	201 367
Unwrought alloys	12 518	15 914	24 856	20 265	14 815
Scrap	69 907	96 893	152 934	136 612	127 668
Bosnia and Herzegovina					
Scrap (a)	*2 500	*2 200	*4 500	*4 500	*5 300
Bulgaria					
Ore	71 125	134 476	97 589	96 100	83 000
Unwrought	105 234	(a) *119 000	(a) *223 800	145 700	166 900
Scrap (a)	*4 400	*3 300	*10 200	*6 100	*8 600
Croatia					
Scrap	5 622	6 860	7 265	6 506	7 001
Cyprus					
Unwrought	4 938	5 260	5 105	5 015	3 697
Scrap	3 824	43 931	1 895	1 307	2 808
Czech Republic					
Unwrought	3 188	2 051	5 615	1 909	1 712
Scrap	28 055	32 461	37 390	39 516	38 121
Denmark					
Scrap	31 986	35 184	38 978	39 979	37 058
Estonia					
Scrap	4 253	5 647	8 819	7 981	7 285
Finland					
Unwrought, unrefined	32 951	32 347	41 580	51 804	43 523
Unwrought, refined	39 185	30 845	16 735	19 935	37 256
Unwrought alloys	1 004	838	847	1 382	1 002
Scrap	20 932	16 955	16 557	14 032	16 462
France					
Unwrought	38 410	21 981	12 421	27 912	15 723
Unwrought alloys	12 754	13 329	13 776	11 581	9 283
Scrap	122 322	199 970	203 291	190 041	192 020
Georgia					
Ores and concentrates	(a) *1 900	5 531	46 486	60 461	(a) *75 100
Scrap	(a) *2 800	(a) *5 700	7 196	9 376	6 202
Germany					
Ore	11 896	14 898	26 023	19 053	15 630
Unwrought, unrefined	236	118	25	4 989	2 215
Unwrought, refined	109 741	140 165	94 125	108 224	90 919
Unwrought alloys	26 457	27 496	35 588	27 379	26 876
Scrap	306 024	272 055	289 766	261 464	300 340
Greece					
Scrap	4 655	2 902	6 298	6 558	6 520
Hungary					
Scrap	14 183	13 742	20 586	19 952	17 867
Irish Republic					
Scrap	9 715	9 227	11 790	8 835	9 043
Italy					
Matte and cement	1 114	6 219	677	4 377	5 982
Unwrought	3 438	4 888	12 084	28 074	7 528
Unwrought alloys	14 436	18 192	21 555	16 851	12 631
Scrap	50 519	54 144	66 030	55 930	46 184

## Exports of Copper

tonnes

Country	1998	1999	2000	2001	2002
Latvia					
Scrap	8 838	8 200	9 196	8 160	7 775
Lithuania					
Scrap	9 741	8 360	12 134	10 016	...
Macedonia					
Ore	38 170	40 616	40 517	27 329	...
Unwrought (a)	*1 200	*1 800	*1 500	*300	*500
Moldova					
Scrap	2 382	4 938	1 414	...	474
Netherlands					
Matte and cement	2 142	1 456	67	46	3
Unwrought	9 757	9 261	6 702	5 444	10 075
Scrap	74 457	87 502	132 013	100 488	101 624
Norway					
Ore	14 825	----	60	----	...
Unwrought	30 642	33 898	25 968	24 681	32 302
Unwrought alloys	1 589	1 971	1 674	1 665	1 421
Scrap	9 229	12 737	17 248	17 394	15 814
Poland					
Ores and concentrates	23 966	494	0	----	20 423
Unwrought	182 386	220 950	240 290	226 889	279 803
Unwrought alloys	10 778	8 794	6 121	4 680	5 020
Scrap	8 675	10 139	26 153	22 351	22 529
Portugal					
Ore	447 370	441 029	325 725	368 150	196 709
Unwrought	1 035	1 098	269	36	415
Scrap	9 892	12 337	20 006	14 353	18 236
Romania					
Ore	14 362	28 499	19 489	64 002	87 299
Unwrought	8 394	9 990	13 064	14 740	3 826
Scrap	17 856	34 668	41 553	9 417	19 432
Russia					
Ore	39 797	26 182	25 161	8 853	12 191
Unwrought	550 900	640 150	647 978	597 917	518 594
Scrap	356 479	(a) *231 500	(a) *71 900	(a) *42 900	(a) *54 900
Serbia and Montenegro					
Unwrought	97 915	30 579	...	57 150	45 486
Scrap (a)	*300	*200	*1 900	*5 300	*5 800
Slovakia					
Ores and concentrates	----	7 989	25	...	...
Unwrought	1 180	2 071	343	1 280	1 151
Scrap	4 544	8 345	7 854	5 475	7 711
Slovenia					
Scrap	6 257	6 372	7 857	7 999	8 615
Spain					
Ore	59 880	83 383	29 057	79 561	6 756
Unwrought, unrefined	27 464	25 461	27 068	35 090	21 126
Unwrought, refined	103 469	93 098	57 383	23 785	23 999
Unwrought alloys	4 706	7 955	7 502	7 465	7 124
Scrap	31 089	48 860	53 947	52 154	72 157
Sweden					
Ore	15 783	29 437	28 758	14 829	...
Matte and cement	7 053	...	3 853	196	...
Unwrought, refined	19 739	13 290	12 232	70 682	91 869
Unwrought alloys	8 841	7 924	8 712	8 827	6 486
Scrap	14 254	18 448	31 160	29 680	34 747
Switzerland					
Unwrought	6 556	5 791	4 313	128	907
Scrap	42 885	50 650	61 756	58 356	55 491
Turkey					
Ore	154 149	194 300	190 007	136 702	209 656
Matte and cement	4 569	7 179	2 235	...	0
Unwrought	7 630	17 704	5 899	20 176	22 324
Scrap	500	1 064	1 054	6 855	9 897
Ukraine					
Unwrought	11 140	51 156	97 851	97 414	72 360
Scrap	91 794	76 117	53 485	(a) *5 800	(a) *6 200

## Exports of Copper

Country	1998	1999	2000	2001	2002
United Kingdom					
Ore and matte	8 559	9 667	6 741	11 075	10 762
Unwrought	9 776	8 648	10 571	10 315	33 954
Unwrought alloys	28 796	35 612	21 228	23 808	26 185
Scrap	108 407	107 527	217 016	156 121	164 962
Algeria					
Scrap	5 772	5 806	7 800	...	...
Botswana					
Matte and cement (b)	20 400	20 200	23 500	15 700	...
Congo, Democratic Republic					
Unwrought, unrefined (c)	*30 000	*30 000	*25 000	...	...
Egypt					
Scrap	116	1 037	...	5 504	9 897
Ghana					
Scrap	1 528	1 709	1 500	...	...
Morocco					
Ore	35 725	29 480	25 200	20 869	16 300
Matte and cement	2 250	1 752	...	1 843	...
Scrap	5 140	7 732	12 800	9 973	...
Namibia					
Unwrought	7 750	----	5 004	18 385	26 703
South Africa					
Ores and concentrates (b)	5 613	6 454	5 259	5 961	4 694
Unwrought	80 877	70 683	43 251	60 506	49 400
Scrap	47 645	76 085	57 643	81 592	54 176
Tunisia					
Scrap	1 142	3 208	5 800	5 515	...
Uganda					
Scrap	118	216	225	417	497
Zambia					
Ores and concentrates	...	14 365	1 970	3 706	6 757
Unwrought, refined	227 980	232 723	216 615	296 387	317 331
Scrap	...	7 564	7 431	4 880	9 508
Zimbabwe					
Unwrought	11 023	25 361	5 890	*4 000	10 361
Canada					
Ores and concentrates (b)	414 180	334 016	679 591	630 014	282 952
Matte and cement (b)	19 505	20 037	13 137	16 052	18 971
Unwrought	440 497	376 832	345 898	392 681	327 875
Scrap	101 346	65 153	73 133	70 267	71 216
Cuba					
Concentrates	7 426	7 082	7 854	(a) *2 100	(a) *1 100
Scrap (a)	*4 500	*4 100	*4 900	*4 400	*13 400
Mexico					
Concentrates	68 722	73 795	308 620	100 143	137 587
Matte and cement	15 663	5 741	3 378	1 148	767
Unwrought	237 005	131 164	98 054	152 983	73 428
Scrap	58 423	58 603	71 580	70 563	59 718
USA					
Ores and concentrates (b)	36 497	75 698	160 245	46 269	23 266
Matte and cement	10 556	12 717	18 369	14 738	14 370
Unwrought, unrefined	28 812	32 786	24 435	26 958	35 978
Unwrought, refined	85 618	25 602	97 006	23 322	31 713
Unwrought alloys	20 064	19 409	25 788	32 371	28 093
Scrap	310 763	316 777	488 050	558 633	622 710
Argentina					
Ores and concentrates	574 981	718 762	509 658	692 564	724 231
Scrap	2 583	5 882	11 293	10 054	18 515
Brazil					
Unwrought, refined	7 003	21 172	13 453	14 992	51 093
Scrap	2 897	8 268	5 970	5 847	6 083

## Exports of Copper

tonnes

Country	1998	1999	2000	2001	2002
Chile					
Ores and concentrates (b)	1 167 500	1 542 500	1 749 200	1 798 200	1 552 700
Unwrought, unrefined	157 400	168 200	174 600	154 900	182 300
Unwrought, refined	2 248 200	2 553 800	2 549 200	2 696 400	2 767 200
Scrap	2 751	4 463	4 404	7 615	18 000
Colombia					
Ore	16 671	8 699	10 923	9 299	8 296
Scrap	7 278	10 468	8 380	9 217	8 795
Ecuador					
Scrap	2 717	2 317	2 491	1 900	1 819
Peru					
Ore	250 747	192 814	320 657	371 179	1 483 146
Unwrought, unrefined	44 674	30 678	23 588	31 186	24 655
Unwrought, refined	347 575	415 849	376 523	432 772	415 139
Scrap	3 066	2 108	1 960	1 499	1 560
Venezuela					
Scrap	7 173	9 952	10 647	9 201	...
China					
Unwrought, unrefined	12 972	3 495	2 430	2 371	3 411
Unwrought, refined	106 108	94 586	114 525	50 972	76 588
Unwrought alloys	2 336	4 956	1 784	782	1 330
Scrap	9 584	11 162	10 154	9 934	7 775
Dubai					
Scrap	8 138	14 786	...	...	...
Hong Kong					
Unwrought	76 815	44 418	57 962	56 362	51 997
Scrap	211 752	153 146	148 580	130 281	98 779
India					
Unwrought	1 301	1 609	32 899	52 881	105 563
Indonesia					
Ores and concentrates	2 014 754	1 939 989	2 580 180	2 510 981	2 875 696
Unwrought	5 286	101 453	145 303	269 691	149 307
Scrap	9 772	8 498	7 791	10 128	18 934
Iran					
Ores and concentrates	(a) *15 000	27 808	(a) *150 900	141 400	(a) *140 100
Unwrought	(a) *23 200	(a) *37 300	(a) *37 400	(a) *40 500	109 031
Scrap (a)	*400	*4 400	*1 800	*1 000	*1 000
Israel					
Scrap	10 937	9 884	10 436	9 100	(a) *9 400
Japan					
Unwrought, unrefined	34 448	38 542	42 772	45 137	50 449
Unwrought, refined	292 907	318 854	299 377	416 017	377 855
Unwrought alloys	18 215	16 471	18 167	23 140	28 242
Scrap	75 492	83 904	110 327	156 591	237 560
Jordan					
Scrap	2 166	2 071	2 838	2 463	4 133
Kazakhstan					
Ores and concentrates	0	10 326	121 422	150 179	143 415
Unwrought	339 205	355 931	392 482	409 165	400 979
Scrap	24 097	43 256	59 100	15 906	3 414
Korea, Dem. P.R. of					
Unwrought (a)	*500	*8 500	*1 300	*2 000	*3 500
Korea, Republic of					
Matte and cement	945	871	2 073	925	1 672
Unwrought	297 495	148 662	27 115	8 157	14 796
Unwrought alloys	1 423	5 492	9 196	8 164	11 451
Scrap	24 905	16 049	33 869	29 919	34 017
Kyrgyzstan					
Unwrought	(a) *4 300	(a) *500	120	1 480	1 062
Scrap	5 467	16 728	(a) *14 500	(a) *4 400	(a) *5 800
Lebanon					
Scrap	6 078	5 260	6 950	5 333	...
Malaysia					
Ore (b)	15 400	6 800	----	...	...
Scrap	121 357	48 213	30 333	19 772	35 800
Mongolia					
Ores and concentrates	485 700	492 700	496 000	540 886	548 591

## Exports of Copper

Country	1998	1999	2000	2001	2002
Oman					
Unwrought	18 619	20 733	21 505	27 212	6 060
Scrap	39 240	34 420	2 213	...	...
Pakistan					
Scrap (d)	2 028	3 265	3 746	1 942	1 842
Philippines					
Ores and concentrates	116 721	161 786	92 256	63 603	46 021
Unwrought	101 661	157 625	128 811	160 031	142 580
Scrap	26 070	25 700	29 100	22 668	...
Saudi Arabia					
Unwrought	8 504	11 181	2 961	5 765	9 639
Scrap	13 002	12 266	21 817	25 696	24 132
Singapore					
Unwrought	105 611	137 197	78 198	64 013	62 016
Scrap	70 668	57 685	60 191	55 690	66 071
Sri Lanka					
Unwrought	270	...	...	1 385	24 939
Taiwan					
Matte and cement	2 005	3 649	4 056	2 975	3 116
Unwrought	5 073	5 191	6 237	8 968	8 609
Scrap	26 531	41 781	74 469	50 020	44 740
Thailand					
Unwrought	1 098	899	2 164	389	181
Scrap	18 926	15 536	18 446	26 942	22 449
Uzbekistan					
Unwrought (a)	*11 400	*16 200	*29 100	*41 700	...
Australia					
Ores and concentrates	1 234 500	1 072 651	1 021 452	1 248 528	1 158 765
Unwrought, refined	126 804	253 919	323 372	396 993	363 795
Unwrought alloys	1 493	1 057	2 584	5 888	3 222
Scrap	29 157	26 673	33 256	32 804	57 023
New Zealand					
Scrap	1 871	2 192	3 016	2 964	3 959
Papua New Guinea					
Ores and concentrates	590 500	606 775	643 944	658 495	625 565

## Note(s):

- (1) In this table the term 'unwrought' copper corresponds to items 7402, 7403, 7405 of the Harmonised System 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 imports into certain countries
- (b) Cu content
- (c) Including leach cathodes
- (d) Years ended 30 June of that stated

## Imports of Copper

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Unwrought, unrefined	3 710	1 659	5 419	----	----
Unwrought, refined	35 536	26 540	36 391	35 845	24 707
Unwrought alloys	3 873	5 137	4 435	3 164	2 555
Scrap	82 586	88 130	81 509	59 281	80 512
Belarus					
Unwrought	1 978	2 213	1 707	2 265	2 103
Scrap	1 692	2 900	4 859	8 586	31 398
Belgium-Luxembourg					
Unwrought, unrefined	94 045	140 069	215 056	148 800	209 172
Unwrought, refined	100 955	71 186	41 047	44 050	36 907
Unwrought alloys	5 979	3 474	3 683	3 657	1 659
Scrap	233 722	220 103	265 246	245 104	261 567
Bulgaria					
Ores and concentrates	208 698	167 367	244 823	210 000	...
Unwrought	*5 000	5 787	7 879	15 500	7 800
Czech Republic					
Unwrought	14 352	14 510	14 288	18 434	12 110
Scrap	2 828	1 854	3 133	2 759	1 656
Denmark					
Unwrought	2 403	2 173	2 825	2 600	2 560
Scrap	14 707	8 021	10 673	12 798	12 564
Finland					
Ore	544 111	514 879	468 557	503 460	500 798
Unwrought, refined	14 223	15 229	9 631	5 489	347
Unwrought alloys	5 086	4 744	4 474	3 899	3 796
Scrap	15 046	11 317	7 576	3 624	3 190
France					
Matte and cement	1 119	191	151	390	58
Unwrought, unrefined	4 644	670	72	177	253
Unwrought, refined	585 477	550 007	585 829	564 415	576 398
Unwrought alloys	15 416	15 154	21 121	12 858	13 722
Scrap	100 868	93 233	87 946	70 698	65 362
Germany					
Ore	605 691	839 574	708 614	1 034 722	1 037 247
Matte and cement	7 915	2 910	7 515	3 070	2 389
Unwrought, unrefined	45 406	36 613	32 370	26 579	38 455
Unwrought, refined	578 913	565 299	689 673	527 947	459 451
Unwrought alloys	41 963	34 552	44 175	35 661	26 887
Scrap	610 197	515 564	490 828	390 731	438 312
Greece					
Unwrought	103 592	114 876	135 629	129 818	126 027
Unwrought alloys	1 691	678	624	590	699
Scrap	651	2 590	7 841	2 627	2 672
Hungary					
Unwrought	17 000	18 900	29 877	19 937	18 994
Scrap	3 743	4 913	8 310	5 370	3 483
Irish Republic					
Scrap	646	353	1 354	1 080	1 087
Italy					
Unwrought, unrefined	4 749	1 900	2 763	1 455	636
Unwrought, refined	564 851	625 183	603 259	649 687	643 386
Unwrought alloys	22 320	19 961	20 460	21 575	19 779
Scrap	254 408	195 367	179 050	168 541	188 238
Lithuania					
Scrap	2 499	527	1 764	570	...
Macedonia					
Unwrought	156	510	27	15	...
Moldova					
Scrap	1 605	500	...	...	...
Netherlands					
Unwrought	78 016	137 729	155 553	123 138	156 095
Unwrought alloys	3 245	1 216	1 374	1 612	1 725
Scrap	92 486	76 482	78 166	65 053	70 660
Norway					
Matte and cement (a)	*22 000	*20 000	*18 000	...	...
Unwrought	3 713	3 225	3 594	3 500	3 645
Scrap	5 234	6 275	5 890	7 647	7 609

## Imports of Copper

Country	1998	1999	2000	2001	2002
Poland					
Unwrought	600	4 151	8 099	2 135	1 484
Scrap	1 136	2 627	6 249	3 722	5 203
Portugal					
Unwrought	2 532	3 486	3 409	3 637	4 307
Scrap	2 282	1 879	487	1 265	838
Romania					
Ores and concentrates	10 964	51 193	41 206	127	----
Unwrought	1 500	4 165	15 938	25 611	12 248
Russia					
Ore	62 843	57 754	127 001	162 684	143 353
Unwrought	6 165	3 439	8 961	3 410	606
Scrap	2 347	711	221	326	18
Serbia and Montenegro					
Ores and concentrates	138 527	28 679	67 875	50 036	36 981
Unwrought	4 627	387	1 808	1 962	5 382
Slovakia					
Ores and concentrates	24 600	*12 000	*12 000	...	...
Unwrought	8 271	1 773	1 464	...	11 400
Slovenia					
Unwrought	4 819	3 881	3 540	3 226	4 005
Scrap	2 670	2 125	3 755	3 300	3 119
Spain					
Ore	935 942	1 003 472	936 207	902 428	1 057 377
Unwrought, unrefined	1 511	7 441	17 557	16 024	9 150
Unwrought, refined	29 069	29 186	30 885	42 505	28 095
Unwrought alloys	11 596	10 216	9 976	6 461	7 256
Scrap	72 145	66 828	81 310	82 473	83 664
Sweden					
Ore	53 966	67 539	152 426	324 398	349 409
Unwrought, unrefined	9 151	8 356	55	29	36
Unwrought, refined	61 531	76 899	82 430	49 088	36 976
Unwrought alloys	4 471	5 443	3 968	3 815	4 622
Scrap	41 339	35 529	34 120	31 373	43 544
Switzerland					
Unwrought	7 902	7 641	7 604	8 621	5 899
Unwrought alloys	1 482	1 980	3 588	3 777	3 300
Scrap	24 314	19 472	16 675	13 800	8 406
Turkey					
Ore	8 219	18 369	56 968	45 075	61 302
Unwrought	135 874	148 212	196 414	151 636	214 179
Scrap	7 358	14 822	21 744	5 522	7 061
United Kingdom					
Unwrought, unrefined	236	629	1 085	290	79
Unwrought, refined	348 509	303 267	337 969	310 894	316 008
Unwrought alloys	5 423	4 965	7 325	7 249	5 135
Scrap	54 483	35 572	20 597	19 651	19 513
Namibia					
Ores and concentrates (a)	3 199	----	8 028	...	...
South Africa					
Unwrought	2 184	1 531	3 851	4 466	6 811
Scrap	4 796	5 730	5 114	5 311	4 336
Togo					
Unwrought	4 000	3 862	...	...	...
Tunisia					
Unwrought	2 521	3 069	4 190	5 607	...
Scrap	168	1 142	3 367	3 943	...
Zambia					
Ores and concentrates (a)	4 560	4 560	...	...	...
Zimbabwe					
Matte and cement	*3 000	7 607	7 000	...	...
Unwrought	*6 000	6 000	4 200	...	1 480

## Imports of Copper

tonnes

Country	1998	1999	2000	2001	2002
Canada					
Ores and concentrates (a)	123 650	137 662	211 299	219 534	128 043
Matte and cement	10 700	22 178	2 039	147	277
Unwrought	38 214	44 187	23 278	29 061	70 057
Unwrought alloys	7 624	8 276	12 303	8 801	7 745
Scrap	113 032	74 103	92 260	100 611	41 347
Mexico					
Ores and concentrates	100 661	143 352	245 449	43 433	8 845
Matte and cement	4 785	...	14 632	16 730	...
Unwrought	184 581	191 838	229 751	248 592	146 234
Scrap	22 331	28 931	20 976	6 704	10 815
USA					
Ores and concentrates (a)	217 936	93 261	233	121 756	226 095
Matte and cement (a)	1 036	1 060	946	...	1 326
Unwrought, unrefined	180 184	174 758	194 685	217 966	144 937
Unwrought, refined	720 383	930 103	1 036 636	1 198 570	1 061 549
Unwrought alloys	17 510	23 596	9 619	6 977	5 341
Scrap	166 100	135 972	143 210	114 576	99 991
Argentina					
Unwrought, refined	40 682	27 973	33 043	27 547	4 739
Brazil					
Ores and concentrates	421 349	582 104	495 790	635 410	462 934
Unwrought	139 884	115 844	160 772	147 717	103 161
Scrap	1 206	1 129	4 120	3 544	852
Colombia					
Unwrought	1 033	2 054	3 785	4 768	5 707
Venezuela					
Unwrought, refined	16 851	11 522	12 500	...	...
Unwrought alloys	264	166	165	192	...
Abu Dhabi					
Scrap	2 861	6 231	...	...	...
China					
Ores and concentrates	1 182 867	1 250 148	1 813 288	2 255 252	2 065 413
Matte and cement	33	262	423	82	2 874
Unwrought, unrefined	95 858	129 960	124 710	91 237	105 449
Unwrought, refined	162 650	404 764	667 623	834 971	1 181 004
Unwrought alloys	9 892	13 012	19 813	27 959	43 693
Scrap	956 644	1 701 391	2 501 168	3 332 533	3 080 126
Dubai					
Scrap	2 209	7 163	...	...	...
Hong Kong					
Unwrought, unrefined	3 337	389	119	34	707
Unwrought, refined	267 964	47 589	54 044	59 692	48 942
Unwrought alloys	1 573	2 385	4 284	5 732	6 945
Scrap	188 490	112 815	106 409	92 178	73 490
India					
Ore (b)	296 022	400 546	471 399	827 520	697 505
Unwrought (b)	61 235	49 964	15 436	10 467	16 260
Scrap (b)	140 030	205 116	85 067	111 318	92 529
Indonesia					
Unwrought	68 284	44 446	32 917	56 670	50 481
Unwrought alloys	2 744	2 179	2 812	3 561	2 561
Scrap	1 406	2 327	3 966	3 939	2 372
Japan					
Ores and concentrates	3 975 398	4 286 193	4 443 316	4 158 747	4 252 939
Matte and cement	1 736	1 449	1 755	1 957	1 651
Unwrought	275 378	265 517	221 994	163 304	123 745
Unwrought alloys	3 237	2 790	5 561	3 990	3 641
Scrap	162 798	174 463	190 231	142 712	125 711
Kazakhstan					
Ores and concentrates	15 024	...	...	...	...
Scrap	1 467	1 582	1 619	3 633	3 586



## Imports of Copper

Country	1998	1999	2000	2001	2002
Korea, Republic of					
Ore	973 450	1 166 630	1 177 284	1 173 674	1 261 540
Unwrought, unrefined	62 649	59 894	47 931	58 954	68 756
Unwrought, refined	487 358	484 686	418 932	379 950	448 357
Unwrought alloys	811	646	799	1 222	690
Scrap	88 947	184 778	203 607	177 106	196 451
Kuwait					
Unwrought	15 400	10 937	*11 000	...	...
Kyrgyzstan					
Scrap	1 716	56	20	----	2 246
Malaysia					
Unwrought	135 755	159 794	169 955	167 685	...
Oman					
Ores and concentrates	77 013	134 497	276 047	70 464	85 374
Pakistan					
Unwrought	9 600	10 000	10 501	----	----
Scrap (c)	99	3 773	2 189	1 979	3 280
Philippines					
Concentrates	435 065	518 920	435 703	509 390	376 949
Unwrought	10 017	17 124	16 008	11 919	12 936
Scrap	1 697	4 977	1 042	286	...
Saudi Arabia					
Unwrought	77 756	49 198	79 549	66 930	72 331
Singapore					
Unwrought	199 662	116 942	59 988	70 654	46 807
Scrap	26 821	18 701	21 647	17 753	26 558
Syria					
Unwrought, refined	...	...	6 773	2 059	4 488
Taiwan					
Unwrought	585 810	656 359	630 570	542 647	658 757
Unwrought alloys	13 902	17 040	13 256	12 263	11 325
Scrap	41 447	50 179	44 317	60 514	92 204
Thailand					
Unwrought	90 599	123 283	158 997	175 061	195 465
Scrap	1 795	2 949	4 358	4 210	4 245
Australia					
Matte and cement	3 691	5 499	6 386	5 526	6 649
Unwrought	524	2 895	21 302	29 368	11 382
Unwrought alloys	2 606	2 944	4 194	3 964	4 392
Scrap	4 318	6 679	4 136	2 512	3 182
New Zealand					
Unwrought	7 294	7 332	3 168	8 328	1 280
Scrap	...	4 520	3 410	2 834	1 301

## Note(s) :-

(1) In this table the term 'unwrought' copper corresponds to items 7402, 7403, 7405 of the Harmonised System 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) Cu content

(b) Years ended 31 March following that stated

(c) Years ended 30 June of that stated

**Production of Diamond**

carats

Country	1998	1999	2000	2001	2002
Russia	19 800 000	16 200 000	20 500 000	20 500 000	*20 000 000
Angola	2 764 858	3 572 200	4 014 000	5 100 000	*5 700 000
Botswana	19 639 000	21 263 000	24 635 000	26 190 000	28 368 000
Central African Republic	419 967	430 126	461 004	614 000	...
Congo, Democratic Republic	21 362 000	22 000 000	16 500 000	19 637 000	21 985 000
Ghana	823 125	680 964	887 049	1 132 102	963 493
Guinea	392 488	382 743	368 599	*360 000	*370 000
Ivory Coast	*310 000	398 282	320 208	320 000	*250 000
Lesotho	...	43 000	20 000	20 000	...
Liberia	*300 000	*200 000	*170 000	155 000	*200 000
Namibia	1 465 959	1 632 860	1 541 647	1 487 316	1 537 505
Sierra Leone	*250 000	*600 000	*350 000	*375 000	351 860
South Africa	10 704 628	10 014 815	10 789 976	11 162 630	10 882 614
Tanzania	97 830	234 800	354 388	254 271	...
Zimbabwe	28 732	42 578	23 028	----	----
Canada	300 006	2 492 807	2 533 750	3 685 173	4 983 953
Brazil	100 349	*900 000	*1 000 000	*700 000	*500 000
Guyana	34 399	45 441	81 706	179 463	248 437
Venezuela	96 811	95 144	109 597	52 804	141 463
China	112 825	113 065	160 000	150 000	*150 000
India (a)	34 580	40 956	57 407	81 436	84 407
Indonesia	*28 000	*30 000	*30 000	*30 000	...
Australia	40 843 000	29 784 000	26 647 000	26 176 000	33 648 000
<b>World Total</b>	<b>119 900 000</b>	<b>111 200 000</b>	<b>111 600 000</b>	<b>118 400 000</b>	<b>131 300 000</b>

## Note(s):

- (1) This table does not show production of synthetic diamond  
(2) So far as possible the amounts shown include estimates for illegal production

(a) Years ended 31 March following that stated

## Exports of Diamond

Country	1998	1999	2000	2001	2002
Austria					
Dust	746 960	3 976 470	8 500 000	550 000	3 000 000
Belgium-Luxembourg					
Gem, rough	160 778 000	158 000 000	125 000 000	122 500 000	...
Gem, cut	7 762 000	3 500 000	3 500 000	4 500 000	8 000 000
Industrial	19 000 000	7 500 000	11 500 000	8 000 000	8 000 000
Dust	67 300 000	23 000 000	28 500 000	24 500 000	39 500 000
France					
Unsorted	£100 000	£250 000	£990 000	£1 320 000	£283 000
Gem, cut	£45 900 000	£25 700 000	£64 500 000	£80 140 000	£91 166 000
Industrial	£300 000	£400 000	£1 084 000	£3 438 000	£2 554 000
Dust	...	...	1 000 000	50 000	1 000 000
Germany					
Gem, cut	263 058	176 713	175 521	162 390	...
Industrial	70 582	28 164	48 843	30 722	...
Dust	48 145 000	32 725 000	46 500 000	41 500 000	10 000 000
Irish Republic					
Industrial	23 745 000	52 530 000	24 430 000	5 140 000	7 120 000
Italy					
Unsorted	£60 000	£369 000	£744 000	£154 000	£42 000
Gem, cut	£5 600 000	£9 144 000	£12 151 000	£15 342 000	£15 982 000
Industrial	£400 000	£483 000	£309 000	£111 000	£607 000
Netherlands					
Unsorted	£2 191 000	£3 094 000	£2 016 000	£2 026 000	£1 672 000
Gem, rough	£27 000	...	£14 000	£3 000	£64 000
Gem, cut	£6 443 000	£7 536 000	£6 466 000	£7 891 000	£10 491 000
Industrial	£1 777 000	£1 013 000	£2 951 000	£2 887 000	£758 000
Portugal					
Gem, rough	£5 610 000	£430 000	...	...	£1 793 000
Gem, cut	£15 694 000	£29 996 000	£19 186 000	£26 769 000	£23 412 000
Spain					
Gem, cut	£1 032 000	£1 505 000	£2 760 000	£1 890 000	...
Industrial	£777 000	£496 000	£241 000	£1 481 000	£613 000
Dust	...	...	...	235 000	615 000
Sweden					
Gem, cut	£60 000	£125 000	£27 000	£4 000	----
Switzerland					
Unsorted	65 000	80 000	30 000	0	5 000
Gem, rough	1 005 000	1 860 000	1 520 000	1 110 000	55 000
Gem, cut	300 000	400 000	720 000	1 130 000	650 000
Industrial	1 415 000	815 000	320 000	35 000	40 000
Dust	76 720 000	82 420 000	80 145 000	80 615 000	81 580 000
United Kingdom					
Unsorted	5 794 334	2 784 476	8 616 140	4 030 600	...
Gem, rough	65 595 954	63 338 299	61 757 031	69 542 709	86 687 602
Gem, cut	1 729 965	1 706 334	795 268	899 959	387 394
Industrial	35 394 187	29 978 880	27 030 867	11 861 312	8 937 294
Dust	56 682 115	49 034 945	...	88 612 930	...
Angola	2 764 858	2 132 900	2 749 800	...	...
Botswana					
Unsorted	16 411 175	22 338 695	...	...	...
Gem, cut	20 695	...	...	...	...
Industrial	42 160	946 835	...	...	...
Central African Republic					
Gem	278 873	297 332	318 410	...	...
Industrial	141 094	132 794	142 004	...	...
Guinea	337 448	383 620	367 521	...	...
Mauritius					
Unsorted	£800 000	£200 000	...	...	£200
Gem, rough	£2 000	£1 132 000	£150 000	£24 000	£292 000
Gem, cut	£16 400 000	£19 108 000	£22 980 000	£20 161 000	£22 068 000
Industrial	£2 800 000	£261 000	£274 000	£252 000	£78 000
Namibia	1 188 616	1 768 329	1 706 206	1 243 844	1 648 977
Sierra Leone	*250 000	*300 000	*350 000	...	...
South Africa					
Unsorted, gem and industrial	£735 383 000	£967 414 000	£1 071 120 000	£3 611 717 000	£1 028 423 000
Dust	£15 396 000	£12 901 000	£15 055 000	£6 147 000	£11 000

## Exports of Diamond

carats

Country	1998	1999	2000	2001	2002
Tanzania	344 158	130 160	343 945	260 419	...
Tunisia					
Gem, cut	125 000	225 000	...	...	...
Industrial	...	10 000	...	...	...
Canada					
Unsorted	...	2 403 254	2 287 019	3 318 523	...
Gem, rough	23 652	31 281	13 919	123	...
Gem, cut	50 243	51 318	44 417	55 999	...
Industrial	21 262	21 287	2 557	8 921	...
Dust	105 948	117 795	93 019	77 726	...
USA					
Unsorted	235 438	412 683	736 156	937 111	24 967
Gem, rough	904 523	723 083	1 008 538	869 702	1 641 892
Gem, cut	3 174 135	5 028 081	15 446 571	8 076 261	14 274 462
Industrial	5 007 158	4 217 660	3 986 251	2 478 596	2 770 871
Dust	107 973 890	101 218 432	100 573 455	95 181 709	89 833 808
China					
Unsorted	20 140	205	9 790	250	4 865
Gem, rough	181 220	342 900	677 070	669 595	681 524
Gem, cut	741 365	1 252 785	1 445 740	1 512 815	1 815 225
Industrial	8 696 265	6 714 690	9 799 845	11 702 980	7 152 296
Dust	11 590 400	43 798 030	105 481 230	141 123 135	120 001 423
Dubai					
Unsorted	185 000	2 010 000	...	...	...
Hong Kong					
Unsorted	681 469	1 332 656	769 577	2 750 267	713 719
Gem, rough	2 209 337	6 582 249	8 349 438	9 981 402	18 602 962
Gem, cut	2 875 100	3 903 552	4 962 704	4 431 823	5 680 643
Industrial	765 292	1 407 546	63 000	288 914	54 199
India					
Gem, rough (a)	1 096 363	1 741 501	266 952	1 642 555	743 060
Gem, cut (a)	11 146 970	14 478 995	22 383 779	25 957 232	27 320 270
Industrial (a)	430	12 570	201 449	14 645	14 550
Dust (a)	6 046 126	12 449 088	44 862 124	22 946 852	11 311 970
Israel					
Gem, rough	£519 386 000	£820 167 000	£1 135 839 000	£911 026 000	£1 280 661 000
Gem, cut	£3 281 923 000	£3 948 839 000	£5 171 691 000	£5 132 970 000	£5 559 586 000
Industrial	£6 442 000	£31 382 000	£64 106 000	£81 510 000	£7 971 000
Japan					
Industrial	2 519 134	3 095 358	2 925 490	2 220 515	3 298 540
Dust	16 529 190	17 204 192	19 299 341	18 077 726	10 180 141
Korea, Republic of					
Gem, cut	108 902	...	70 000	105 000	15 000
Industrial	28 905	...	555 000	1 735 000	355 000
Kuwait					
Gem	480 000	535 000	150 000	...	...
Malaysia					
Unsorted	£700 000	£515 000	£556 000	£1 207 000	£517 000
Gem, cut	£19 800 000	£15 471 000	£18 864 000	£6 140 000	£3 709 000
Industrial	...	£102 000	£576 000	...	£482 000
Singapore					
Gem	£59 892 000	£69 828 000	£116 349 000	£122 979 000	£122 961 000
Industrial	£2 571 000	£9 899 000	£10 082 000	£14 702 000	£16 222 000
Dust	...	...	£213 000	£276 000	£227 000
Sri Lanka					
Gem, rough	58 928	78 691	129 662	105 502	...
Gem, cut	141 594	183 442	164 052	175 383	...
Taiwan					
Industrial	...	610 000	3 930 000	1 370 000	14 225 000
Dust	33 995 000	36 545 000	44 310 000	8 600 000	6 685 000
Thailand					
Unsorted	...	80 994	866 335	415 926	195 291
Gem, rough	...	2 922 926	1 456 619	113 483	87 176
Gem, cut	...	8 511 310	...	1 441 226	4 974 582
Industrial	...	1 185 480	1 279 034	2 155 537	1 430 341
Dust	...	3 892 850	394 680	648 609	2 208 297

**Exports of Diamond**

Country	1998	1999	2000	2001	2002
Australia					
Unsorted	*52 218 000	*51 704 000	*31 292 000	*27 460 000	*28 683 000
Gem	31 869	22 000	48 000	38 000	43 000
New Zealand					
Gem, cut	£631 000	£373 000	£628 000	£478 000	£1 940 000

## Note(s):

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- (2) See explanatory notes at the front of the volume regarding currency conversion
- (3) In this table the term 'Dust' corresponds to item 7105.10 of the Harmonised System and includes both natural and synthetic diamond dust

(a) Years ended 31 March following that stated

## Imports of Diamond

carats

Country	1998	1999	2000	2001	2002
<b>Austria</b>					
Unsorted	6 554	13 205	13 864	...	...
Gem	23 076	35 716	14 137	...	...
Industrial	53 712	653	3 700	...	...
Dust	23 571 880	24 887 565	33 500 000	33 000 000	20 000 000
<b>Belgium-Luxembourg</b>					
Unsorted	4 000 000	4 000 000	4 000 000	3 000 000	2 500 000
Gem, rough	124 000 000	140 000 000	120 500 000	123 000 000	...
Gem, cut	6 000 000	6 000 000	7 000 000	8 500 000	9 500 000
Industrial	44 500 000	31 500 000	27 000 000	25 000 000	26 500 000
Dust	74 895 000	56 000 000	62 500 000	56 500 000	72 000 000
<b>Czech Republic</b>					
Unsorted	£234 000	£86 000	£245 000	£156 000	£128 000
Gem, rough	£121 000	£90 000	£47 000	£141 000	£158 000
Gem, cut	£168 000	£167 000	£398 000	£226 000	£382 000
Industrial	£214 000	£242 000	£297 000	£430 000	£568 000
Dust	£650 000	£535 000	£702 000	£943 000	£886 000
<b>Finland</b>					
Gem, cut	20 000	115 000	105 000	160 000	...
Industrial	50 000	175 000	125 000	20 000	...
<b>France</b>					
Unsorted	...	...	10 500 000	9 500 000	12 500 000
Gem, cut	...	...	2 000 000	12 000 000	10 000 000
Industrial	...	...	2 000 000	1 500 000	5 500 000
Dust	10 500 000	16 000 000	12 000 000	24 000 000	10 500 000
<b>Germany</b>					
Gem, cut	504 940	516 680	530 657	476 717	...
Industrial	2 434 993	2 645 448	3 418 322	2 278 364	...
Dust	61 055 000	70 825 000	67 140 000	67 250 000	49 500 000
<b>Greece</b>					
Unsorted	£599 000	£180 000	£447 000	£223 000	£367 000
Gem, rough	£155 000	£62 000	£11 000	£6 000	£83 000
Gem, cut	£2 435 000	£1 106 000	£2 062 000	£1 824 000	£1 437 000
Industrial	£1 049 000	£433 000	£801 000	£58 000	£220 000
Dust	...	...	...	6 825 000	9 520 000
<b>Hungary</b>					
Dust	1 010 600	758 770	715 975	1 269 915	...
<b>Irish Republic</b>					
Unsorted	855 000	8 300 000	34 310 000	48 655 000	19 505 000
Gem, rough	250 000	2 170 000	1 910 000	2 140 000	...
Gem, cut	5 220 000	17 350 000	20 375 000	45 300 000	30 805 000
Industrial	3 045 000	5 980 000	8 565 000	46 820 000	95 650 000
<b>Italy</b>					
Unsorted	£270 000	£1 334 000	£1 612 000	£1 087 000	£1 680 000
Gem, rough	£500 000	£341 000	£631 000	£890 000	£1 425 000
Gem, cut	£12 330 000	£215 392 000	£236 883 000	£236 885 000	£176 777 000
Industrial	£4 600 000	£5 041 000	£7 469 000	£6 802 000	£6 699 000
Dust	...	...	12 585 000	101 940 000	147 020 000
<b>Netherlands</b>					
Unsorted	£7 431 000	£7 936 000	£8 713 000	£2 021 000	£2 276 000
Gem, rough	£156 000	£13 000	£184 000	£2 135 000	£2 950 000
Gem, cut	£14 976 000	£19 964 000	£26 503 000	£20 034 000	£17 776 000
Industrial	£385 000	£928 000	£236 000	£850 000	£827 000
<b>Norway</b>					
Unsorted	...	420 000	30 000	45 000	100 000
Gem	...	2 445 000	2 550 000	1 965 000	2 330 000
Industrial	...	50 000	90 000	90 000	80 000
Dust	...	520 000	290 000	220 000	500 000
<b>Poland</b>					
Unsorted	...	40 000	20 000	...	...
Gem	6 350 000	10 000	30 000	...	...
Industrial	415 000	110 000	235 000	...	...
<b>Portugal</b>					
Unsorted	£114 000	£67 000	£43 000	£78 000	£69 000
Gem, rough	£27 441 000	£19 294 000	£17 753 000	£20 914 000	£24 832 000
Gem, cut	£3 890 000	£11 777 000	£12 550 000	£8 758 000	£5 367 000
Industrial	£1 335 000	£684 000	£491 000	£738 000	£874 000
Dust	...	...	...	740 000	750 000

## Imports of Diamond

Country	1998	1999	2000	2001	2002
Romania					
Industrial	£600 000	...	...	...	...
Slovenia					
Gem, cut	10 000	10 000	15 000	25 000	15 000
Industrial	10 000	35 000	110 000	90 000	50 000
Dust	700 000	845 000	1 730 000	1 505 000	2 040 000
Spain					
Unsorted	£1 557 000	£2 502 000	£3 264 000	£2 679 000	£4 900 000
Gem, cut	£21 351 000	£27 521 000	£30 064 000	£27 660 000	£25 162 000
Industrial	£2 049 000	£2 923 000	£2 246 000	£4 508 000	£1 674 000
Sweden					
Unsorted	£546 000	£605 000	£687 000	£84 000	£156 000
Gem, cut	£2 478 000	£2 482 000	£3 002 000	£3 634 000	£2 337 000
Industrial	£77 000	£75 000	£227 000	£116 000	£51 000
Dust	£4 263 000	£4 338 000	£4 797 000	£5 248 000	£2 554 000
Switzerland					
Unsorted	10 000	15 000	30 000	...	...
Gem, rough	4 535 000	3 515 000	4 435 000	3 475 000	75 000
Gem, cut	420 000	485 000	585 000	875 000	850 000
Industrial	365 000	575 000	930 000	735 000	1 160 000
Dust	94 210 000	90 615 000	83 965 000	89 730 000	94 935 000
Turkey					
Unsorted	...	70 970	974 245	25 000	...
Gem	833 102	618 000	4 873 050	2 725 000	...
Industrial	28 783	198 545	463 625	40 000	...
Dust	...	3 878 635	4 908 115	4 725 000	...
United Kingdom					
Unsorted	10 211 264	4 676 550	5 560 568	586 774	1 653 304
Gem, rough	105 803 662	151 651 213	79 691 733	81 302 570	70 363 962
Gem, cut	6 694 184	4 809 531	6 423 082	4 396 223	5 013 626
Industrial	28 797 763	8 406 120	16 208 556	7 344 542	7 364 297
Dust	82 518 395	64 953 625	98 133 490	74 756 325	67 568 055
Botswana					
Unsorted	100 000	...	...	...	...
Gem	204 070	22 030	...	...	...
Industrial	3 857 785	...	...	...	...
Mauritius					
Gem, rough	£5 100 000	£8 514 000	£10 853 000	£10 637 000	£12 518 000
Gem, cut	£7 400 000	£7 412 000	£6 668 000	£3 896 000	£4 603 000
Industrial	£6 400 000	£6 922 000	£4 777 000	£4 650 000	£5 341 000
South Africa					
Unsorted	68 677	63 256	61 130	...	...
Gem, rough	397 265	639 788	826 225	...	...
Gem, cut	70 734	56 764	101 330	...	...
Industrial	1 272 212	1 480 601	1 197 831	...	...
Dust	3 519 364	5 342 778	5 624 013	...	...
Tunisia					
Unsorted	140 000	225 000	...	...	...
Gem, cut	10 000	95 000	...	...	...
Industrial	235 000	----	...	...	...
Dust	120 000	50 000	...	...	...
Canada					
Unsorted	£17 012 000	£22 046 000	£31 940 000	£31 023 000	...
Gem, cut	249 969	307 423	340 275	293 568	...
Industrial	822 194	682 472	...	500 778	...
Dust	2 346 249	2 533 200	3 759 535	4 800 793	5 546 734
Costa Rica					
Industrial	...	...	...	280 000	240 000
Mexico					
Gem, cut	563 140	885 000	769 110	937 635	1 672 360
Industrial	470 530	1 354 900	1 024 675	1 168 465	730 975
Dust	6 723 830	4 787 910	4 894 455	6 010 630	12 945 945
Panama					
Gem	30 000	10 000	50 000	10 000	15 000

## Imports of Diamond

carats

Country	1998	1999	2000	2001	2002
USA					
Unsorted	29 325	27 796	124 529	31 674	64 675
Gem, rough	1 439 349	4 266 330	2 276 708	900 357	1 013 575
Gem, cut	16 401 998	19 120 150	19 507 925	16 226 903	19 945 390
Industrial	6 101 071	4 399 015	5 068 360	4 153 762	3 695 302
Dust	222 232 369	208 530 774	289 134 221	281 162 097	185 466 028
Chile					
Dust	261 230	313 355	195 270	162 660	...
Venezuela					
Industrial	300 000	600 000	500 000	...	...
Abu Dhabi					
Gem	740 000	1 760 000	...	...	...
Dust	100 000	30 000	...	...	...
China					
Unsorted	80 960	167 255	260 565	421 265	946 083
Gem, rough	1 620 820	2 677 240	3 170 885	3 285 620	4 293 691
Gem, cut	860 265	1 907 060	3 607 675	4 138 235	5 542 819
Industrial	91 300	624 500	474 910	988 810	567 739
Dust	2 210 882	3 432 070	1 950 515	2 666 165	5 064 603
Dubai	2 370 000	...	...	...	...
Hong Kong					
Unsorted	701 796	1 042 219	785 071	2 107 984	167 110
Gem, rough	1 794 802	6 712 549	8 948 599	8 414 012	11 264 563
Gem, cut	6 729 602	9 991 900	11 222 357	11 174 600	13 911 776
Industrial	770 004	1 681 310	2 080 459	231 881	166 833
India					
Gem, rough (a)	118 929 243	112 015 856	100 027 307	117 409 814	140 757 340
Gem, cut (a)	1 619 280	3 096 916	2 472 461	2 119 776	3 614 807
Dust (a)	3 709 153	6 509 609	11 610 610	14 177 986	12 538 650
Israel					
Gem, rough	£1 858 253 000	£2 644 679 000	£3 031 605 000	...	£3 161 885 000
Gem, cut	£664 209 000	£933 048 000	£1 418 302 000	...	£1 629 043 000
Industrial	£11 913 000	£26 479 000	£62 375 000	£36 483 000	£23 835 000
Dust	£6 673 000	£3 696 000	£4 929 000	...	£3 220 000
Japan					
Gem, rough	22 289	17 770	21 976	29 056	21 327
Gem, cut	2 479 136	3 077 944	2 710 978	2 542 303	2 619 063
Industrial	2 150 393	1 555 576	523 671	1 534 359	3 343 919
Dust	78 121 591	101 872 554	113 250 487	92 436 373	99 574 655
Jordan					
Unsorted	...	5 000	5 000	25 000	----
Gem, rough	...	...	30 000	----	15 000
Industrial	20 000	15 000	55 000	25 000	----
Dust	...	...	25 000	55 000	25 000
Korea, Republic of					
Gem, cut	59 744	25 000	175 000	195 000	220 000
Industrial	93 837	590 000	1 020 000	1 360 000	400 000
Dust	...	...	90 285 000	82 250 000	94 020 000
Malaysia					
Unsorted	£32 200 000	£14 425 000	£14 000 000	£4 198 000	£3 478 000
Gem, rough	...	£66 000	...	£671 000	£1 805 000
Gem, cut	£10 700 000	£15 308 000	£22 300 000	£19 552 000	£17 084 000
Industrial	£1 600 000	£639 000	£4 900 000	£3 191 000	£10 122 000
Oman	1 775 000	----	9 840 000	...	...
Singapore					
Unsorted	£2 259 000	£163 000	£78 000	£175 000	£190 000
Gem, rough	£3 677 000	£224 000	£2 146 000	£995 000	£3 713 000
Gem, cut	£115 371 000	£198 204 000	£241 561 000	£232 116 000	£259 389 000
Industrial	£5 349 000	£10 663 000	£11 572 000	£14 485 000	£11 732 000
Dust	...	...	£695 000	£640 000	£71 000
Sri Lanka					
Unsorted	31 610	26 831	22 350	39 861	...
Gem, rough	717 606	869 008	984 135	939 896	...
Gem, cut	56 682	32 151	50 617	56 431	...
Industrial	155 282	...	...	...	...
Dust	250 160	...	232 887	210 825	...



**Imports of Diamond**

Country	1998	1999	2000	2001	2002
Taiwan					
Unsorted	60 000	35 000	10 000	10 000	30 000
Gem, rough	10 000	150 000	5 000	...	...
Gem, cut	580 000	1 380 000	2 075 000	1 175 000	2 480 000
Industrial	1 730 000	3 070 000	9 440 000	5 845 000	5 670 000
Dust	31 680 000	24 625 000	33 435 000	30 920 000	44 735 000
Thailand					
Unsorted	...	48 701 533	...	29 702 903	1 636 156
Gem, rough	...	...	210 850 398	33 832 803	6 012 142
Gem, cut	...	...	43 283 548	96 581 834	5 068 671
Industrial	...	713 137	3 939 995	1 737 425	334 386
Dust	...	59 279 323	5 534 594	13 175 998	18 420 989
Australia					
Gem, rough	309 037	(b) 169 000	(b) 258 000	(b) 233 000	(b) 244 000
Gem, cut	133 069	...	...	...	...
Industrial	889 903	824 000	664 000	302 000	139 000
Dust	1 427 285	1 626 000	1 596 000	2 078 000	2 601 000
New Zealand					
Gem, rough	£139 000	£60 000	...	...	...
Gem, cut	£6 939 000	£7 911 000	£9 498 000	£9 606 000	£12 429 000
Industrial	£174 000	£53 000	£42 000	...	£34 000
Dust	23 000	21 000	39 000	400 000	160 000

## Note(s) :-

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- (2) See explanatory notes at the front of the volume regarding currency conversion
- (3) In this table the term 'Dust' corresponds to item 7105.10 of the Harmonised System and includes both natural and synthetic diamond dust

(a) Years ended 31 March following that stated

(b) Gem; total

**Production of Diatomite**

tonnes

Country	1998	1999	2000	2001	2002
Czech Republic	7 000	7 400	6 800	6 000	5 600
Denmark					
Moler (d)	213 000	164 000	189 000	*190 000	*210 000
France	*80 000	*80 000	*75 000	*75 000	*75 000
Hungary	2 368	1 240	1 878	1 323	1 656
Iceland	25 734	28 299	27 614	30 434	26 494
Italy	*25 000	*25 000	*25 000	*25 000	*25 000
Macedonia	*5 000	*5 000	*5 000	*5 000	*5 000
Poland	1 530	1 240	*1 270	*1 000	*1 000
Portugal	2 265	772	686	387	*400
Romania	34 600	11 592	9 890	9 743	20 128
Soviet Union (f)	*80 000	*80 000	*80 000	*80 000	*80 000
Spain (b)	57 105	51 897	66 770	70 000	50 000
Turkey	3 643	5 926	...	...	...
Algeria	2 133	2 563	2 979	2 863	3 185
Kenya	468	507	448	441	1 333
Canada	*1 000	...	...	...	...
Costa Rica	16 255	*18 000	34 704	26 350	*26 000
Mexico	66 812	65 146	96 448	69 474	62 322
USA (c)	725 000	747 000	677 000	644 000	624 000
Argentina	25 430	34 056	*35 000	*35 000	*30 000
Brazil (e)	13 557	9 223	11 242	*10 000	*10 000
Chile	14 868	14 477	13 384	22 705	30 274
Colombia	*4 000	*4 000	*4 000	*4 000	*4 000
Peru	*35 100	*35 000	*35 000	*35 000	*35 000
China	114 600	82 170	83 300	124 100	...
Iran (a)	600	4 350	300	50	...
Japan	136 399	132 090	111 193	129 267	...
Korea, Republic of	37 649	30 222	34 143	27 530	20 666
Saudi Arabia	1 000	1 000	1 000	...	...
Thailand	912	2 332	390	720	...
Australia (g)	14 433	25 330	28 810	28 407	31 122
<b>World Total</b>	<b>1 750 000</b>	<b>1 670 000</b>	<b>1 660 000</b>	<b>1 660 000</b>	<b>1 640 000</b>

## Note(s):

(1) In addition to the countries listed, Egypt is believed to produce diatomite

(a) Years ended 20 March following that stated

(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

(f) Dissolved in December 1991. Diatomite is produced in Armenia, Georgia and Russia but information is not available to provide estimates for individual countries

(g) Years ended 30 June of that stated

## Exports of Diatomite

Country	1998	1999	2000	2001	2002
Austria	7 187	6 197	7 177	5 802	5 071
Belgium-Luxembourg	4 061	14 752	1 850	3 575	3 174
Czech Republic	5 989	5 929	5 976	5 493	5 288
Denmark	*90 000	*85 000	*85 000	*80 000	*90 000
France	31 441	29 973	35 585	28 149	27 647
Germany	10 430	5 540	5 209	5 267	13 061
Iceland	25 410	28 482	11 414	4 301	3 306
Italy	1 129	1 804	1 531	1 776	1 194
Netherlands	229	239	564	1 105	6 583
Russia	181	258	407	228	260
Spain	2 301	2 152	2 243	4 467	6 829
Sweden	1 266	1 339	1 682	1 605	579
Switzerland	432	420	314	485	1 224
Turkey	319	112	496	387	4 653
United Kingdom	705	565	511	1 342	814
Algeria	353	735	880	1 108	960
Kenya	619	534	540	...	188
South Africa	670	5 723	1 063	484	480
Costa Rica	239	1 013	1 135	2 072	1 474
Mexico	10 344	10 928	10 102	11 139	11 401
USA	138 706	123 931	131 770	148 013	128 891
Chile	6 357	8 280	7 082	7 413	6 105
Peru	3 580	4 621	14 596	6 168	13 426
China	125 529	73 003	74 161	83 696	76 829
Hong Kong	2 463	1 363	808	353	209
Indonesia	2 805	4 349	6 725	7 356	6 097
Iran	5 550	5 887	5 908	3 869	1 235
Japan	2 669	2 206	1 139	2 496	2 258
Saudi Arabia	4 807	1 080	945	2 983	2 668
Singapore	549	341	260	189	214
Taiwan	3 693	929	1 158	1 864	1 449
Thailand	...	126	612	1 501	1 483
Australia	141	100	162	492	520

## Imports of Diatomite

tonnes

Country	1998	1999	2000	2001	2002
Austria	16 869	20 392	22 891	21 396	24 364
Belarus	3 476	4 375	2 299	402	309
Belgium-Luxembourg	5 255	6 621	6 776	9 067	8 357
Bulgaria	734	932	1 141	...	...
Croatia	751	981	631	1 232	928
Czech Republic	2 318	2 115	1 895	1 695	1 647
Denmark	7 906	5 519	5 993	5 728	7 175
Finland	2 462	2 652	2 738	2 996	5 871
France	18 092	16 844	14 075	12 725	12 168
Germany	52 079	50 799	45 488	35 286	34 820
Greece	867	585	714	504	529
Hungary	2 989	3 222	2 975	2 845	1 633
Irish Republic	667	385	211	286	450
Italy	9 722	6 847	7 865	7 047	8 990
Netherlands	10 909	18 844	20 654	11 800	12 979
Norway	2 254	1 984	1 974	2 021	1 400
Poland	6 187	6 717	7 150	7 284	6 961
Portugal	1 667	1 493	2 151	1 771	1 537
Romania	2 592	3 209	3 133	2 980	2 909
Russia	4 220	6 195	6 130	7 287	7 865
Serbia and Montenegro	1 240	955	1 104	643	1 121
Slovakia	1 913	1 868	1 599	1 406	1 283
Slovenia	577	357	481	503	446
Spain	5 563	5 706	5 501	5 349	4 442
Sweden	5 138	4 998	5 964	4 684	3 913
Switzerland	3 764	3 757	3 869	4 332	3 534
Turkey	880	880	1 183	1 211	1 185
United Kingdom	42 274	30 885	35 561	33 474	34 501
Cameroon	...	437	461	590	...
Egypt	1 207	596	...	833	...
Morocco	714	474	262	284	...
Nigeria	451	956	1 037	...	...
South Africa	4 175	4 621	4 272	3 772	4 788
Sudan	...	...	...	3 601	5 878
Tunisia	714	1 090	1 212	1 180	...
Canada	23 032	22 148	20 339	19 910	19 966
El Salvador	762	1 120	788	756	595
Guatemala	980	891	337	559	393
Honduras	739	842	569	963	394
Mexico	3 561	1 810	1 795	968	781
Panama	552	620	540	413	461
USA	802	387	531	1 990	523
Argentina	5 793	6 669	5 848	4 938	5 137
Brazil	2 913	2 840	3 182	3 985	4 107
Chile	4 562	5 660	14 748	11 256	14 849
Colombia	2 800	4 222	3 158	4 090	2 820
Ecuador	329	231	392	272	186
Peru	2 177	2 718	2 323	2 972	2 966
Venezuela	1 385	1 310	1 573	2 224	...
China	9 306	3 668	3 053	2 775	1 910
Dubai	...	42 312	...	...	...
Hong Kong	2 903	1 428	1 547	777	478
India (a)	2 996	2 804	3 389	3 195	2 337
Indonesia	2 477	2 610	3 405	3 907	3 187
Iran (b)	369	382	381	...	*650
Japan	7 735	7 927	9 054	7 427	6 889
Kazakhstan	163	294	503	...	...
Korea, Republic of	429	231	188	685	1 754
Malaysia	3 844	...	3 588	...	...
Philippines	714	1 318	1 126	726	...
Saudi Arabia	1 001	1 284	3 169	1 006	2 657
Singapore	1 804	2 599	3 151	2 596	2 858
Taiwan	10 287	9 784	8 316	7 245	6 540
Thailand	660	1 070	1 398	1 252	1 230

**Imports of Diatomite**

Country	1998	1999	2000	2001	2002
Australia	9 181	9 454	9 440	9 411	9 506
New Zealand	1 352	2 026	1 479	1 599	1 389

Note(s) :-

- (a) Years ended 31 March following that stated
- (b) Years ended 20 March following that stated

**Production of Feldspar**

tonnes

Country	1998	1999	2000	2001	2002
Bulgaria	36 000	28 000	22 000	23 000	*25 000
Czech Republic	266 000	244 000	337 000	373 000	401 000
Finland	42 740	43 827	38 609	36 145	39 552
France	620 000	640 000	642 000	720 000	659 000
Germany	333 893	278 953	322 116	302 650	243 368
Greece	71 000	78 500	94 700	126 400	*125 000
Italy	2 503 541	2 493 846	2 851 289	3 092 437	*3 000 000
Macedonia	8 137	11 275	10 057	20 449	*21 000
Norway	82 036	72 777	72 000	79 510	75 184
Poland	116 700	105 300	95 588	145 980	209 226
Portugal	96 854	114 685	136 730	112 923	124 117
Romania	37 010	36 627	37 157	43 037	50 864
Russia	*40 000	*45 000	*45 000	*45 000	*45 000
Serbia and Montenegro	4 280	3 452	4 254	4 451	4 319
Spain	429 614	439 204	478 260	*520 000	550 000
Sweden	34 363	34 000	35 000	40 000	37 000
Turkey	1 089 483	1 369 655	1 150 706	1 510 293	1 766 387
United Kingdom (c)	3 278	2 448	3 645	2 995	1 896
Algeria	8 026	2 820	707	-----	-----
Egypt (d)	325 654	*330 000	*330 000	*300 000	*350 000
Morocco	18 332	1 112	16 052	12 015	19 402
Nigeria	1 682	...	...	...	...
South Africa	56 761	59 336	66 774	66 062	66 616
Zimbabwe	2 241	1 915	2 059	1 055	824
Cuba	14 400	4 800	6 700	*7 000	*7 000
Guatemala	17 249	17 072	17 804	6 809	13 044
Mexico	197 866	262 241	334 439	329 591	332 101
USA	*820 000	*875 000	*790 000	*800 000	*790 000
Argentina	42 468	62 926	*61 000	*60 000	*60 000
Brazil (e)	145 783	150 492	148 515	*130 000	*130 000
Chile	1 460	1 346	2 311	2 867	3 069
Colombia	*55 000	*55 000	*55 000	*55 000	*55 000
Ecuador	69 319	33 142	47 041	60 688	39 068
Peru	3 983	1 594	5 642	4 253	6 018
Uruguay	2 240	1 556	2 493	3 522	1 550
Venezuela	148 000	125 000	129 529	142 425	146 619
China	*2 000 000	*2 000 000	*2 000 000	*2 000 000	*2 000 000
India (a)	116 351	194 158	179 046	228 735	237 993
Indonesia	40 434	23 236	*24 000	*24 000	...
Iran (b)	141 862	150 050	223 229	163 343	...
Japan (f)	867 064	982 820	1 021 644	*1 000 000	*1 000 000
Jordan	4 008	1 000	11 112	611	530
Korea, Republic of	248 493	409 334	330 417	389 361	415 580
Malaysia	31 369	26 940	29 895	40 509	30 819
Myanmar (a)	*12 000	*12 000	*12 000	*12 000	*12 000
Pakistan (d)	26 360	29 235	34 252	45 145	35 071
Philippines	2 938	16 909	6 500	33 122	*30 000
Saudi Arabia	10 000	*21 000	21 100	...	...
Sri Lanka	25 274	26 012	28 638	27 438	28 866
Taiwan	-----	171	409	147	-----
Thailand	440 288	626 415	542 991	710 543	...
Uzbekistan	...	300	4 300	*4 300	*4 300
Australia (d)	65 459	74 892	94 096	113 917	100 882
World Total	12 000 000	12 500 000	13 000 000	14 000 000	14 000 000

## Note(s):

(1) In addition to the countries listed, Ethiopia, Kenya, Namibia and Slovakia are believed to produce feldspar

(a) Years ended 31 March following that stated

(b) Years ended 20 March following that stated

(c) China stone

(d) Years ended 30 June of that stated

(e) Including beneficiated and directly shipped material

(f) Including weathered granite feldspar

## Exports of Feldspar

Country	1998	1999	2000	2001	2002
Austria	22 547	14 943	6 295	10 174	12 279
Czech Republic	57 546	62 273	85 931	131 699	122 206
Finland	25 953	27 876	28 985	32 570	30 444
France	126 350	242 379	296 491	385 161	290 340
Germany	35 317	70 699	60 691	63 736	134 033
Greece	10 576	17 703	68	67	16 764
Italy	89 042	136 362	122 154	128 544	159 403
Macedonia	8 587	10 300	13 401	20 450	...
Netherlands	3 680	821	810	693	808
Norway	83 943	69 297	71 154	82 030	74 549
Poland	100	556	831	562	649
Portugal	2 060	1 861	2 616	147	603
Russia	9 627	8 463	12 136	16 690	19 428
Spain	29 512	40 915	57 316	52 161	79 520
Sweden	14 531	23 574	20 164	27 662	25 400
Turkey	1 283 211	1 799 854	2 114 432	1 208 808	2 162 841
United Kingdom	148	131	101	93	228
South Africa	1 439	1 381	726	1 249	1 214
Guatemala	4 760	4 596	5 957	6 282	4 357
Mexico	8 809	9 937	8 746	8 434	5 933
USA	13 193	9 882	11 449	5 457	9 588
Argentina	4 442	3 482	4 529	3 015	3 477
Brazil	49	3 081	61	2 865	2 308
China	608 501	539 040	607 067	557 243	637 664
Hong Kong (a)	134 751	128 586	60 144	15 712	40 916
India (b)	52 631	56 981	164 119	157 029	200 920
Iran	995	2 918	22 327	115 609	135 171
Japan	8 533	6 422	7 166	3 242	4 204
Korea, Republic of	14 080	5 481	3 970	2 636	2 448
Singapore	67	321	15	55	230
Taiwan	2 996	4 278	6 054	2 582	5 417
Thailand	241 387	282 680	294 292	333 015	347 995
Australia	27 095	33 731	54 569	15 322	55 407

Note(s):

(a) May include some leucite, nepheline and nepheline syenite

(b) Years ended 31 March following that stated

## Imports of Feldspar

tonnes

Country	1998	1999	2000	2001	2002
Austria	3 238	3 124	3 844	4 213	1 608
Belarus	15 806	22 511	30 186	44 065	71 806
Belgium-Luxembourg	24 363	24 396	25 329	25 250	24 632
Croatia	2 610	6 202	6 578	10 491	10 609
Czech Republic	5 474	6 317	7 658	7 226	7 975
Denmark	4 576	5 774	3 740	5 753	4 698
Finland	267	452	734	742	352
France	47 367	45 029	37 596	29 741	40 941
Germany	48 165	45 405	51 494	51 965	43 033
Greece	492	944	2 545	7 466	4 599
Irish Republic	130	103	50	98	677
Italy	1 023 919	1 433 174	1 566 525	1 865 170	1 871 798
Latvia	176	164	146	148	155
Lithuania	4 155	4 178	5 563	5 065	...
Netherlands	12 732	9 469	9 213	7 531	11 603
Norway	466	833	8 870	14 040	13 589
Poland	40 000	57 382	81 995	144 145	168 167
Portugal	31 026	48 594	50 280	72 198	87 177
Romania	9 838	15 523	19 694	34 378	35 924
Russia	1 204	166	530	279	1 005
Slovakia	...	17 959	26 213	29 202	27 596
Slovenia	3 833	4 550	3 923	5 232	4 870
Spain	315 236	411 192	552 152	501 395	593 452
Sweden	7 643	6 392	7 194	6 430	6 765
Switzerland	5 696	5 281	4 550	7 408	7 541
Turkey	18 100	633	18 840	19 803	5 269
Ukraine	4 231	2 558	4 012	...	...
United Kingdom	18 208	25 707	25 743	18 361	33 070
Algeria	4 411	3 996	3 391	...	...
Egypt	50 003	24 443	...	83	...
Ghana	21	-----	164	63	...
Morocco	8 227	16 548	24 350	17 970	...
Tunisia	4 092	10 525	16 981	19 985	...
Canada	2 297	1 872	1 704	1 426	1 498
Costa Rica	6 287	5 053	6 398	5 919	6 533
Mexico	1 195	1 095	1 818	1 916	1 711
Nicaragua	955	1 245	1 342	1 321	1 169
USA	6 556	6 837	7 216	6 144	5 446
Chile	2 694	...	2 430	3 355	...
Ecuador	2 325	8 831	2 264	4 611	2 217
Venezuela	645	595	567	909	...
China	20 256	11 253	6 205	3 446	3 360
Hong Kong	21 217	5 369	410	84	-----
Indonesia	92 374	53 984	105 271	120 525	118 819
Japan	6 613	1 805	1 781	1 366	2 049
Jordan	209	547	940	979	1 261
Korea, Republic of	854	1 933	1 629	1 316	1 882
Lebanon	18 250	17 409	15 849	24 708	...
Malaysia	236 281	139 455	280 968	382 850	...
Philippines	3 525	20 179	5 902	22 586	...
Saudi Arabia	-----	370	528	2 640	2 216
Singapore	5 925	7 749	7 598	6 547	7 604
Syria	...	16 382	...	3 029	13 725
Taiwan	762 588	694 246	563 078	473 198	475 900
Thailand	9 111	13 592	13 423	14 263	19 167
New Zealand	479	405	781	584	655



**Production of Fluorspar**

Country	1998	1999	2000	2001	2002
Bulgaria	...	...	200	300	----
France	105 600	105 800	114 400	123 000	122 000
Germany	30 641	28 260	31 124	30 381	34 429
Italy	104 187	46 916	67 768	26 160	...
Romania	*15 000	*15 000	*15 000	*15 000	*15 000
Russia	*100 000	153 800	187 600	*190 000	*190 000
Spain	135 568	148 238	140 466	134 039	141 434
Turkey	5 034	4 812	4 113	3 752	5 344
United Kingdom	*65 000	*40 000	*36 000	*50 000	*53 000
Egypt	140	*500	*500	*500	*500
Kenya (d)	60 854	93 602	100 102	118 850	85 015
Morocco	105 000	83 100	76 991	96 500	94 911
Namibia	40 685	57 599	66 129	81 245	81 084
South Africa	236 640	217 540	212 709	286 387	227 000
Tunisia	1 188	520	----	----	----
Mexico	598 043	557 106	635 230	619 468	622 477
Argentina	11 517	12 704	*11 200	9 075	7 715
Brazil (a)	72 085	44 926	44 046	43 734	47 899
China	*2 350 000	*2 230 000	*2 240 000	*2 200 000	*2 150 000
India (e)	48	220	3 253	6 900	4 198
Iran (b)	26 275	18 387	34 672	34 688	...
Korea, Dem. P.R. of	*30 000	*25 000	*25 000	*25 000	*25 000
Kyrgyzstan	3 200	2 997	3 000	1 175	2 656
Mongolia	168 218	153 693	198 541	199 105	185 100
Pakistan (c)	2 647	220	997	1 091	1 288
Thailand	3 743	13 005	4 745	3 020	2 271
Vietnam	*3 000	*3 000	*3 000	*3 000	...
<b>World Total</b>	<b>4 300 000</b>	<b>4 100 000</b>	<b>4 300 000</b>	<b>4 300 000</b>	<b>4 200 000</b>

## Note(s):

- (1) In addition to the countries listed, Bulgaria is believed to produce fluorspar  
(2) In addition, the USA produced the following amounts of fluorspar equivalent in fluorosilicic acid derived from processing phosphate rock ('000 t): 1998: 118; 1999: 122; 2000: 119; 2001: 104; 2002: 92

- (a) Including beneficiated and directly shipped material  
(b) Years ended 20 March following that stated  
(c) Years ended 30 June of that stated  
(d) Exports  
(e) Years ended 31 March following that stated

**Exports of Fluorspar**

tonnes

Country	1998	1999	2000	2001	2002
Austria	117	90	233	72	12
Belarus	2 077	924	...	----	18
Belgium-Luxembourg	1 131	1 972	1 569	298	219
Czech Republic	24 827	12 519	13 658	9 442	8 131
France	24 342	29 194	35 342	38 023	47 439
Germany	15 892	20 197	18 875	16 634	22 274
Italy	1 471	7 595	13 443	20 709	31 142
Netherlands	187	5 377	2 825	7 399	12 752
Russia	2 056	2 967	4 740	3 329	753
Spain	986	1 152	8 920	1 132	1 106
Sweden	4 400	5 967	6 451	5 603	5 998
United Kingdom	4 202	4 829	4 879	2 373	635
Kenya	60 854	93 602	100 102	118 850	85 015
Morocco	135 302	83 446	78 151	93 963	...
Namibia	42 135	71 011	67 393	63 175	77 642
South Africa	153 031	196 160	147 464	259 199	210 000
Mexico	335 236	359 930	398 343	360 437	360 324
USA	46 150	58 769	43 212	34 137	24 323
China	1 315 972	1 221 491	1 198 478	1 109 384	1 007 026
Hong Kong	1 965	26 954	79 077	88 495	59 945
Iran	5 460	11 044	10 900	15 507	33 946
Japan	867	407	227	129	578
Jordan	...	400	5 046	----	25
Kyrgyzstan	...	1 977	3 064	2 023	2 838
Mongolia	121 800	164 100	197 100	219 685	192 546
Singapore	266	3	300	270	24
Thailand	7 740	5 515	4 290	4 901	7 622
Uzbekistan	*15 000	*15 000	*15 000	...	...

## Imports of Fluorspar

Country	1998	1999	2000	2001	2002
Austria	5 704	3 959	1 923	3 514	3 448
Belarus	2 393	1 589	588	1 095	824
Belgium-Luxembourg	10 690	11 095	10 246	13 662	11 565
Croatia	275	206	161	155	164
Czech Republic	41 943	30 989	31 903	27 785	18 182
Denmark	7 152	1 011	2 144	1 238	6 971
Finland	11 246	7 503	11 969	10 892	10 089
France	5 902	4 218	3 999	3 355	3 510
Germany	290 687	300 656	270 412	266 764	272 913
Greece	15 298	14 029	8 733	11 210	12 582
Hungary	2 500	900	545	6 006	3 626
Irish Republic	158	33	45	19	28
Italy	106 304	184 145	209 326	209 672	162 510
Netherlands	4 883	7 055	50 999	65 422	55 212
Norway	42 804	*48 000	47 415	38 862	13 589
Poland	7 800	8 411	5 387	4 789	5 609
Portugal	1 380	1 457	1 693	1 243	1 196
Romania	11 831	24 684	4 739	7 314	...
Russia	227 373	173 544	178 217	199 523	143 723
Serbia and Montenegro	4 786	3 591	25	----	----
Slovakia	8 600	6 584	7 955	2 393	1 797
Slovenia	1 691	1 144	1 141	939	1 148
Spain	16 394	28 859	14 153	18 819	17 878
Sweden	15 972	12 381	9 386	16 103	16 978
Switzerland	554	775	664	497	916
Turkey	8 141	9 472	19 263	16 100	13 790
Ukraine	40 092	27 883	59 977	...	...
United Kingdom	41 610	*43 000	*40 000	34 999	26 670
Egypt	297	129	...	408	...
South Africa	...	...	4 608	6 258	2 960
Tunisia	53 672	65 378	56 950	62 019	...
Canada	186 351	169 974	180 085	164 164	153 724
Guatemala	...	...	8 215	4 962	9 770
Mexico	37 168	55 159	50 974	28 520	22 748
USA	498 204	457 152	509 895	527 955	494 312
Brazil	34 482	7 215	31 872	18 315	32 645
Chile	525	579	432	345	...
Peru	480	422	654	541	712
Venezuela	1 643	672	1 005	988	...
Hong Kong	2 400	10 950	22 310	22 005	22 100
India (a)	72 352	76 295	59 677	91 460	76 001
Indonesia	493	854	2 002	1 638	1 796
Japan	545 726	535 413	562 021	519 221	397 007
Jordan	120	5	121	24	354
Kazakhstan	3 391	3 500	548	...	...
Korea, Republic of	77 928	84 022	92 257	74 456	82 010
Malaysia	1 400	13 600	3 822	2 109	...
Philippines	439	226	280	280	...
Singapore	826	406	660	616	1 117
Taiwan	54 574	55 294	54 263	51 656	61 003
Thailand	3 863	5 763	5 995	2 226	533
Australia	3 620	6 848	4 966	7 300	6 444

Note(s) :-

(a) Years ended 31 March following that stated

## Mine Production of Gold

kilograms (metal content)

Country	1998	1999	2000	2001	2002
Armenia	294	405	*400	450	3 200
Bulgaria	1 660	1 524	2 100	2 200	2 300
Finland	2 370	2 770	1 600	1 700	1 300
France	3 793	3 567	2 643	2 512	1 724
Georgia	800	1 587	*1 600	*1 600	*1 600
Italy	1 117	894	820	522	631
Poland (d)	409	489	367	349	296
Romania	2 000	1 800	1 200	1 600	1 700
Russia	113 807	125 870	142 500	152 500	170 872
Serbia and Montenegro (d)	2 684	1 260	1 121	-----	858
Slovakia	340	363	306	157	77
Spain	5 791	12 086	*5 500	*4 300	5 922
Sweden	5 944	4 202	3 570	4 986	5 757
Turkey	*1 000	*1 200	*500	*1 100	*400
Ukraine	...	24	135	69	*70
Algeria	...	...	...	-----	369
Burkina Faso	1 091	886	589	209	390
Burundi	-----	-----	-----	415	483
Cameroon	*1 000	*1 000	*1 000	930	*1 000
Congo, Democratic Republic	152	207	52	*50	*50
Eritrea	573	534	264	107	*100
Ethiopia (b)	...	2 928	3 206	3 862	1 051
Ghana	72 003	78 660	78 399	70 049	69 575
Guinea	7 835	11 999	15 031	16 264	16 666
Ivory Coast	3 400	2 967	3 444	*3 400	*2 000
Kenya (e)	388	990	1 243	1 545	1 477
Liberia	*800	*1 000	*1 000	*1 000	*800
Mali	20 562	23 688	28 717	42 288	57 964
Morocco (d)	*450	*450	505	1 191	2 746
Namibia	1 882	2 005	2 455	2 852	2 947
Senegal	*550	*550	*550	*550	600
South Africa	465 100	451 200	428 200	394 757	398 258
Sudan	5 671	5 565	5 773	5 438	*6 000
Tanzania	427	4 890	15 060	30 088	*36 600
Uganda (e)	5 029	5 558	9 860	6 090	*6 000
Zambia (c)	210	79	*100	*130	*150
Zimbabwe	25 175	27 114	22 007	18 478	15 669
Canada	165 599	157 755	155 538	160 200	151 218
Costa Rica	636	165	51	*100	*100
Dominican Republic	1 421	651	...	...	...
Guatemala	...	4 449	4 500	*4 500	*4 500
Honduras	*150	879	878	3 553	4 026
Mexico	25 426	23 755	26 375	23 543	21 324
Nicaragua	3 834	4 448	3 672	3 840	3 904
Panama	1 517	*1 500	*1 500	*1 500	1 400
USA	366 411	341 481	353 437	335 000	298 000
Argentina	20 400	38 515	25 954	30 630	32 486
Bolivia	14 444	11 786	12 000	12 374	11 269
Brazil	46 031	51 422	50 393	51 867	37 886
Chile	44 980	48 069	54 143	42 673	38 688
Colombia	18 813	34 599	37 018	21 813	20 799
Ecuador	1 474	2 026	2 871	3 005	10 650
French Guiana	2 735	2 972	3 376	3 971	2 971
Guyana	14 146	13 159	13 525	14 179	13 580
Peru	94 214	128 486	132 585	138 022	157 013
Uruguay	2 303	2 392	2 240	2 083	2 079
Venezuela	6 740	5 946	7 332	9 076	9 465
China (d)	177 620	165 680	176 910	181 870	189 810
India (a)	2 683	2 442	2 615	2 810	3 049
Indonesia	124 019	129 032	127 192	166 090	139 650
Iran (d)	822	760	765	770	*800
Japan	8 601	9 405	8 400	7 815	8 615
Kazakhstan (d)	8 929	9 655	11 529	15 226	10 959
Korea, Dem. P.R. of	*500	-----	-----	-----	-----

**Mine Production of Gold**

kilograms (metal content)

Country	1998	1999	2000	2001	2002
Kyrgyzstan	21 311	20 200	22 000	24 670	*18 000
Malaysia	3 394	3 449	4 026	3 970	4 289
Mongolia	9 990	10 038	11 485	12 092	10 884
Myanmar (a) (d)	172	116	100	*100	*100
Oman	579	597	604	603	*600
Philippines	34 049	31 050	36 541	33 840	*40 000
Saudi Arabia	5 153	4 579	3 637	*4 300	*4 600
Tajikistan	3 200	2 700	*2 700	*2 700	*2 700
Uzbekistan	81 000	88 100	87 500	85 400	87 800
Vietnam	1 800	1 900	*2 000	*3 000	*3 000
Australia	310 320	299 750	296 420	280 080	266 140
Fiji	3 758	3 881	3 842	4 907	3 829
New Zealand	7 731	8 577	9 880	9 850	9 770
Papua New Guinea	61 641	65 747	74 540	67 043	61 379
Solomon Islands	1 415	3 426	1 555	----	----
<b>World Total</b>	<b>2 460 000</b>	<b>2 520 000</b>	<b>2 550 000</b>	<b>2 540 000</b>	<b>2 500 000</b>

## 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, Botswana, Central African Republic, Gabon, Republic of Korea, Laos, Madagascar, Mozambique, Niger, Nigeria, Rwanda, Sierra Leone and Taiwan produce less than 100 kg gold per year
  - (3) Greece, Norway and Thailand are believed to produce gold
- (a) Years ended 31 March following that stated
  - (b) Years ended 7 July of that stated
  - (c) Contained in blister copper, refinery muds and electrolytic copper
  - (d) Metal production
  - (e) Exports

## Exports of Gold

kilograms

Country	1998	1999	2000	2001	2002
Armenia					
Metal	1 123	3 435	2 806	5 475	8 830
Waste and scrap	201	(c) *600	(c) *300	(c) *1 000	(c) *300
Austria					
Metal	2 700	3 200	54 400	16 800	18 000
Waste and scrap	600	200	1 600	44 900	5 600
Belgium-Luxembourg					
Metal	32 100	3 800	5 100	3 200	2 000
Waste and scrap	£1 019 000	...	£770 000	£1 365 000	...
Cyprus					
Metal	53	1 892	10	28	28
Czech Republic					
Metal	2 806	3 486	3 573	4 431	5 468
Waste and scrap	8 680	1 255	811	1 373	2 453
Denmark					
Metal	982	1 212	1 297	854	4 979
Waste and scrap	2 602	5 764	7 028	7 789	807
Estonia					
Waste and scrap	(c) *13 100	(c) *1 000	4 389	8 044	1
Finland					
Waste and scrap	636	329	1 302	912	762
France					
Metal	24 600	24 200	17 300	31 900	29 700
Waste and scrap	56 300	39 400	47 100	77 800	40 800
Georgia					
Metal	(c) *1 000	----	----	2 258	...
Germany					
Metal	67 400	68 800	80 000	78 100	45 400
Waste and scrap	160 500	313 100	646 300	1 517 300	1 734 400
Greece					
Metal	117	1 467	352	219	509
Hungary					
Metal	805	1 181	1 092	1 110	928
Irish Republic					
Metal	----	£7 000	£5 000	£35 000	£389 000
Waste and scrap	£984 000	£951 000	£2 900 000	£3 850 000	£1 623 000
Italy					
Metal	23 276	32 614	138 479	31 299	32 091
Waste and scrap	568	357	8	78	145
Latvia					
Waste and scrap	172	55	133	137	1
Lithuania					
Waste and scrap	1	4 738	9 148	10 140	...
Netherlands					
Metal	7 759	8 066	3 592	28 356	9 601
Waste and scrap	104 500	35 900	37 100	31 500	108 000
Norway					
Metal	1 823	1 854	1 621	2 647	2 554
Waste and scrap	938	899	1 215	5 007	1 102
Poland					
Metal	201	419	389	113	1 210
Waste and scrap	...	...	1 942	2 767	3 239
Portugal					
Metal	851	16	...	...	...
Waste and scrap	127	16	...	...	...
Russia					
Metal	51 619	(c) *29 200	(c) *24 800	(c) *22 900	(c) *22 500
Serbia and Montenegro					
Metal	2 254	617	...	430	397
Slovakia					
Ore	825 000	1 207 000	968 000	...	...
Metal	(c) *100	148	147	133	255
Waste and scrap	...	...	155	494	1 600
Slovenia					
Metal	91	58	128	160	1 287
Waste and scrap	525	589	0	5 973	----

## Exports of Gold

Country	1998	1999	2000	2001	2002
Spain					
Metal	103 927	3 472	4 053	2 046	3 867
Waste and scrap	1	2 983	36 797	14 030	1 126
Sweden					
Metal	1 000	16 907	4 000	6 000	12 000
Waste and scrap	...	14 000	6 000	79 000	24 000
Switzerland					
Metal	1 541 530	1 225 858	1 266 758	1 266 166	922 468
Waste and scrap	63 818	60 162	43 817	27 274	16 868
Ukraine					
Metal (c)	...	*500	*1 200	*1 100	*500
Waste and scrap (c)	*27 600	*37 100	*60 000	*40 300	...
United Kingdom					
Metal	623 971	589 540	438 116	405 319	198 839
Waste and scrap	104 568	377 931	356 243	493 588	498 497
Benin					
Metal	3 083	2 372	4 154	7 506	...
Burkina Faso					
Metal	1 341	914	674	246	...
Burundi					
Metal	----	40 356	282	415	...
Central African Republic					
Metal	24	35	10	...	...
Ethiopia					
Metal (a)	*850	2 928	3 206	3 862	1 051
Ghana					
Metal	90 917	71 091	79 747	...	...
Waste and scrap	15 000	8 020	...	...	...
Guinea					
Metal	7 834	12 001	13 105	...	...
Kenya					
Metal	388	990	1 243	1 545	1 477
Mauritius					
Metal	96	45	43	340	388
Waste and scrap	59	388	135	489	290
Mozambique					
Metal	----	8	17	13	21
Namibia					
Metal	1 918	2 005	2 422	2 789	2 871
South Africa					
Metal	460 822	452 621	403 945	383 140	393 038
Sudan					
Metal	5 388	*5 500	8 472	33 940	12 368
Tanzania					
Metal	418	4 875	14 303	29 766	...
Togo					
Metal	13 798	12 816	...	...	...
Uganda					
Metal	5 029	5 558	7 303	4 271	6 776
Zambia					
Metal	...	...	...	4 546	6 490
Zimbabwe					
Metal	£95 159 000	£130 611 000	£3 227 000	...	...
Canada					
Ores and concentrates (d)	5 656	4 450	4 429	3 968	3 243
Metal	225 273	186 430	202 590	162 885	171 738
Cuba					
Metal (c)	*800	*1 800	*50	...	...
Waste and scrap (c)	*1 600	*2 400	*3 400	*700	...
Dominican Republic					
Metal	1 421	651	...	...	...
Mexico					
Metal	37 309	45 547	31 773	44 368	46 298
Waste and scrap	...	3 192	12 342	930	3 834
Nicaragua					
Metal	3 400	4 400	3 300	3 300	3 500

## Exports of Gold

kilograms

Country	1998	1999	2000	2001	2002
USA					
Metal, unrefined	91 598	86 748	105 483	93 905	71 720
Metal, refined	436 376	437 706	457 303	395 634	194 888
Metal, other	18 705	22 513	20 095	30 677	30 280
Waste and scrap	58 555	40 751	65 069	40 885	88 891
Bolivia					
Metal	11 998	9 953	9 759	10 302	9 075
Brazil					
Metal	44 234	39 026	41 543	37 329	35 356
Chile					
Metal	30 050	27 616	34 650	35 447	...
Colombia					
Ore	397 788	...	...	...	...
Guyana					
Metal	12 970	12 183	13 313	13 977	14 036
Peru					
Metal	97 982	131 511	126 989	133 574	147 754
Uruguay					
Metal	3 600	3 400	3 900	3 400	3 200
China					
Metal (c)	*5 100	*1 300	*4 400	*2 900	...
Hong Kong					
Metal	50 038	39 976	54 747	90 200	153 815
Waste and scrap	44 504	18 464	38 024	43 035	65 348
Indonesia					
Metal	49 834	42 608	67 604	65 144	39 432
Waste and scrap	...	920	308	4 581	10 003
Israel					
Metal (c)	*5 400	*6 900	...	*19 500	*6 600
Waste and scrap (c)	...	*100	*2 400	*1 800	*1 000
Japan					
Metal	71 605	62 391	96 048	70 385	70 686
Waste and scrap	4 442	25	529	48	883
Kazakhstan					
Metal	16 200	24 300	20 132	15 900	17 449
Waste and scrap (c)	...	*300	*6 900	*3 100	...
Korea, Dem. P.R. of					
Metal (c)	*1 300	*1 400	*700	*800	*900
Korea, Republic of					
Metal	695 861	317 763	161 025	120 877	106 570
Waste and scrap	59 197	334	1 778	21 053	135 069
Kuwait					
Metal	...	459	42 000	...	...
Kyrgyzstan					
Metal	(c) *20 400	(c) *14 400	(c) *12 000	(c) *10 600	17 360
Lebanon					
Metal	2 651	5 535	6 704	8 126	...
Malaysia					
Metal	£31 000 000	£28 600 000	£25 500 000	£32 400 000	£69 707 000
Waste and scrap	101 464	60 408	75 865	340 348	705 791
Oman					
Metal	475	910	918	867	784
Philippines					
Ores and concentrates (b)	4 499	...	...	...	...
Metal	73 190	56 368	48 177	161 423	...
Qatar					
Metal	...	982 671	...	...	...
Waste and scrap	...	6 000	...	...	...
Saudi Arabia					
Metal	9 348	417 059	425 527	...	967 302
Waste and scrap	208	5 206	...	13	...
Singapore					
Metal	140 989	41 254	35 884	60 875	85 704
Waste and scrap	6 103	4 128	8 867	2 733	10 443



## Exports of Gold

kilograms

Country	1998	1999	2000	2001	2002
Taiwan					
Metal	2 678	4 200	4 912	4 312	1 039
Waste and scrap	12 592	58	4	20	4
Thailand					
Metal	44 409	18 777	7 382	4 901	...
Waste and scrap	78 983	38 515	3 350	5 360	5 289
Uzbekistan					
Metal (c)	*6 700	*12 400	*18 100	*15 500	...
Australia					
Metal	504 508	348 033	296 377	303 704	269 113
Waste and scrap	492 779	3 003	212	1 692	595 925
Fiji					
Metal	3 885	3 881	3 842	4 907	3 829
New Zealand					
Metal	30 224	28 680	54 904	36 426	38 735
Papua New Guinea					
Metal (e)	64 106	64 694	74 540	68 146	57 369

## Note(s):

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

- (a) Years ended 7 July of that stated
- (b) Au content
- (c) BGS estimates, based on known imports into certain countries
- (d) Au content of all ores and concentrates
- (e) Au content of concentrates and unrefined metal

## Imports of Gold

kilograms

Country	1998	1999	2000	2001	2002
Albania					
Metal	...	89 627	...	...	30 000
Armenia					
Metal	100	557	1 339	2 164	2 548
Austria					
Metal	53 200	40 700	25 700	21 300	17 300
Waste and scrap	600	1 600	1 400	400	1 200
Belarus					
Metal	(d) *100	(d) *300	1 489	----	...
Belgium-Luxembourg					
Metal	13 000	3 900	800	2 300	3 200
Waste and scrap	£14 616 000	...	£32 277 000	...	...
Croatia					
Metal	£598 000	£136 000	£58 000	£73 000	£5 590 000
Cyprus					
Metal	2 031	1 672	2 037	1 223	938
Czech Republic					
Metal	2 415	2 244	1 845	1 402	1 288
Waste and scrap	190	257	360	392	175
Denmark					
Metal	4 429	1 237	2 729	911	796
Waste and scrap	1 017	1 951	1 578	842	62
Estonia					
Metal	953	105	110	...	58
Finland					
Metal	1 577	1 408	1 294	1 677	1 132
France					
Metal	49 700	55 000	44 200	42 500	35 100
Waste and scrap	2 800	1 900	31 100	335 000	4 600
Germany					
Metal	141 200	83 700	60 400	71 600	44 400
Waste and scrap	449 300	465 400	1 309 872	1 583 000	2 021 200
Greece					
Metal	14 827	5 740	...	757	1 497
Waste and scrap	3 698	1 633	21 400	5 149	...
Hungary					
Metal	243	395	283	194	127
Iceland					
Metal	356	200	400	300	1 000
Irish Republic					
Metal	£7 921 000	£7 250 000	£9 094 000	£8 002 196	£6 057 000
Waste and scrap	311	46 090	12 435	6 158	120
Italy					
Metal	440 713	405 952	415 753	398 542	358 654
Waste and scrap	424	368	9 571	15 694	7 584
Lithuania					
Metal	£187 000	£116 000	£20 000	£36 000	...
Macedonia					
Metal	323	82	144	38	...
Malta					
Metal	£12 600 000	£1 868 000	£14 882 000	£16 016 000	...
Netherlands					
Metal	15 542	14 549	6 574	19 215	11 825
Waste and scrap	1 600	6 800	62 000	1 000	500
Norway					
Metal	2 183	2 111	2 197	3 501	2 927
Waste and scrap	301	67	322	1 115	1 613
Poland					
Metal	55	33	413	985	774
Portugal					
Metal	6 442	174	2 551	4 791	3 303
Slovakia					
Metal	3 376	722	495	545	654
Slovenia					
Metal	1 076	1 322	1 399	1 539	2 696
Spain					
Metal	84 963	1 399	22 968	30 100	26 690
Waste and scrap	262	528	742	3 182	818

## Imports of Gold

kilograms

Country	1998	1999	2000	2001	2002
Sweden					
Metal	£4 407 000	£3 632 000	£10 355 000	£7 671 705	£7 655 000
Waste and scrap	£1 000	...	£76 000	£149 000	£1 126 000
Switzerland					
Metal	1 551 295	1 402 778	1 280 545	1 360 081	1 217 189
Waste and scrap	182 026	28 426	42 648	45 122	48 626
Turkey					
Metal	...	...	...	111 958	142 013
Ukraine					
Metal (d)	*600	*1 300	*1 100	*1 100	*1 800
United Kingdom					
Metal	1 190 371	828 382	971 705	972 188	1 281 376
Waste and scrap	217 272	161 199	318 705	167 513	93 976
Egypt					
Metal	6 765	...	...	...	...
Mauritius					
Metal	3 514	964	410	557	521
South Africa					
Metal	361	231	402	121	214
Tanzania					
Metal	175	142	...	20	...
Tunisia					
Metal	1 835	2 642	2 000	2 678	...
Canada					
Ores and concentrates (a)	4 436	6 744	6 042	7 664	4 104
Metal	113 913	120 772	43 965	39 072	38 180
USA					
Ore (c)	3 441	689	647	1 264	1 995
Metal, unrefined	17 260	23 649	38 920	31 100	42 200
Metal, refined	256 490	195 612	183 898	161 000	172 000
Metal, other	107 460	107 386	67 233	45 209	30 870
Waste and scrap	16 727	30 379	30 210	26 388	11 887
Bolivia					
Metal	7 144	3 643	2 173	959	1 083
Brazil					
Metal	174	...	1 980	...	440
Abu Dhabi					
Metal	1 464	57 828	...	...	...
China					
Metal (d)	*8 500	*16 700	*22 400	*41 600	*51 900
Dubai					
Metal	10	63	...	...	...
Hong Kong					
Metal	231 139	119 460	128 127	88 960	21 153
Waste and scrap	11 808	30 075	40 275	54 002	58 800
India					
Metal (b)	455 406	471 573	471 207	471 407	606 670
Indonesia					
Metal	226	13 139	3 556	...	1 362
Waste and scrap	...	3 218	----	183	57
Israel					
Metal	£75 195 000	£55 853 000	£33 251 000	£48 871 000	£56 118 000
Waste and scrap	£1 143 000	£415 000	£549 000	£415 000	£699 000
Japan					
Metal	86 017	108 393	72 951	43 231	84 706
Waste and scrap	150 992	145 671	197 837	238 394	356 972
Jordan					
Metal	3 574	2 845	2 640	4 281	5 705
Kazakhstan					
Metal	900	1 800	700	1 000	124
Korea, Republic of					
Metal	459 244	363 757	242 757	184 821	173 412
Waste and scrap	7	46	39 140	54 124	1 150

**Imports of Gold**

kilograms

Country	1998	1999	2000	2001	2002
Kuwait					
Metal	...	12 284	9 921	...	...
Lebanon					
Metal	43 379	45 209	41 791	28 862	...
Malaysia					
Metal	50 812	...	101 157	112 422	...
Oman					
Metal	8 858	6 518	5 321	8 091	6 078
Pakistan					
Metal	£122 900 000	£206 500 000	£151 700 000	£147 720 000	...
Philippines					
Metal	10 129	18 229	27 108	13 745	...
Saudi Arabia					
Metal	167 410	148 796	180 854	115 449	41 544
Singapore					
Metal	28 201	32 572	45 261	51 889	44 959
Waste and scrap	6 509	7 651	2 243	4 668	13 295
Sri Lanka					
Metal	29 329	3 539	9 368	14 556	...
Waste and scrap	22	1 537	...	...	7 694
Taiwan					
Metal	64 929	83 049	83 253	51 903	39 841
Thailand					
Metal	135 480	559 357	1 216 233	282 708	139 594
Australia					
Metal	£1 200 405 000	£797 620 000	£631 000 000	£771 000 000	£627 000 000
Waste and scrap	£5 569 000	£2 076 000	£600 000	£976 000	£2 434 000
New Zealand					
Metal	178	1 303	13 620	971	1 356

Note(s) :-

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

- (a) Au content of all ores and concentrates
- (b) Years ended 31 March following that stated
- (c) Au content
- (d) BGS estimates, based on known exports from certain countries

**Production of Graphite**

Country	1998	1999	2000	2001	2002
Austria (a)	10 738	2 635	669	116	-----
Czech Republic	28 000	22 000	23 000	17 000	16 000
Germany	270	3 891	3 414	3 190	3 312
Norway	8 271	7 339	8 392	9 070	*9 000
Romania	1 951	1 041	1 251	1 176	1 001
Russia	...	15 670	20 125	16 563	...
Sweden	3 277	4 504	5 602	1 035	-----
Turkey	*15 000	*15 000	*15 000	*15 000	*15 000
Ukraine	5 104	7 461	7 431	*7 500	*7 500
Madagascar	18 690	14 516	40 328	2 013	*1 000
Mozambique	5 889	4 007	-----	-----	-----
Zimbabwe	13 806	12 321	11 838	12 117	9 700
Canada	21 928	20 590	22 610	20 984	15 039
Mexico	43 461	27 781	30 330	21 442	14 065
Brazil (b)	61 369	53 503	71 208	70 091	60 922
China (d)	1 621 000	1 500 000	1 650 000	1 700 000	1 400 000
India (a) (c)	135 668	108 826	124 790	105 814	107 359
Korea, Dem. P.R. of	*35 000	*33 000	*30 000	*25 000	*25 000
Korea, Republic of	62	62	65	238	94
Sri Lanka	5 910	4 592	5 902	6 585	3 619
World Total	2 050 000	1 860 000	2 070 000	2 030 000	1 710 000

## 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  
(c) Years ended 31 March following that stated  
(d) Including 350000 tonnes of flake graphite in 2002

## Exports of Graphite

tonnes

Country	1998	1999	2000	2001	2002
Austria	3 902	3 463	3 655	3 631	3 384
Belgium-Luxembourg	1 494	1 678	4 848	4 878	5 653
Czech Republic	2 670	2 501	2 712	2 621	3 487
France	349	652	614	178	...
Germany	8 843	8 549	12 120	10 334	12 103
Italy	234	91	373	199	313
Netherlands	889	937	1 798	4 877	2 851
Norway	*7 000	*7 000	9 002	9 032	8 129
Russia	613	997	1 570	1 048	1 383
Spain	36	4 289	13 134	14 299	8 521
Sweden	2 311	3 262	4 042	2 164	600
Ukraine	1 905	2 259	3 986	...	...
United Kingdom	2 206	1 973	2 429	2 635	2 686
Madagascar	13 087	9 781	13 669	...	...
Mozambique	5 558	4 083	----	----	----
South Africa (a)	*1 200	*2 400	...	...	...
Zimbabwe	12 125	8 974	11 381	----	1
Canada	20 617	18 763	20 634	12 977	10 216
Mexico	16 974	13 774	15 889	16 973	11 595
USA	28 769	30 966	26 060	27 375	22 628
Brazil	13 521	11 308	17 993	12 788	12 778
China	180 752	205 891	333 440	374 116	321 795
Hong Kong	151	69	97	99	149
India (b)	556	1 107	3 937	413	906
Japan	1 949	1 894	1 707	1 762	1 422
Korea, Dem. P.R. of (a)	*4 400	*3 800	*3 500	*3 700	...
Korea, Republic of	1 255	1 430	1 380	1 263	936
Saudi Arabia	160	362	169	229	8 401
Singapore	113	131	123	54	69
Sri Lanka	5 136	5 344	*5 000	...	7 134

## 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

## Imports of Graphite

Country	1998	1999	2000	2001	2002
Austria	9 223	7 670	7 611	5 521	6 004
Azerbaijan	...	...	...	531	790
Belarus	211	337	830	1 221	2 234
Belgium-Luxembourg	5 167	5 836	9 847	9 948	10 638
Czech Republic	839	735	975	1 518	1 476
Denmark	381	422	613	707	355
Finland	543	549	649	411	281
France	1 702	25 371	53 643	24 440	13 016
Germany	39 190	38 228	45 517	49 720	42 706
Greece	564	119	60	54	75
Hungary	612	431	571	474	528
Irish Republic	221	430	342	108	541
Italy	11 407	9 462	12 241	11 319	11 302
Netherlands	4 296	2 611	3 622	5 636	8 232
Norway	77	3	318	347	615
Poland	3 021	2 586	3 727	2 856	2 700
Portugal	378	608	678	1 297	1 436
Russia	948	1 418	6 316	7 562	10 333
Serbia and Montenegro	477	210	711	206	377
Slovakia	2 580	2 549	5 199	1 992	2 633
Spain	8 016	6 321	8 296	7 675	8 119
Sweden	489	707	1 062	1 026	1 022
Switzerland	523	748	445	538	918
Turkey	4 206	5 067	6 250	6 431	7 010
United Kingdom	27 885	21 204	26 088	22 482	22 384
Egypt	551	1 906	...	378	...
South Africa	2 055	1 928	1 818	1 940	1 533
Tunisia	150	262	196	153	...
Canada	13 496	7 634	5 775	8 819	6 514
Mexico	4 031	3 182	3 449	1 691	2 564
USA	61 578	55 790	60 804	52 148	45 138
Argentina	829	607	968	1 139	905
Venezuela	547	699	1 356	1 767	...
China	1 557	1 239	740	2 844	741
Hong Kong	43	57	107	92	170
India (a)	694	979	987	1 662	2 800
Indonesia	1 875	1 950	7 699	2 416	1 962
Iran	1 304	1 731	784	955	2 047
Japan	76 205	111 615	143 906	143 540	106 574
Korea, Republic of	30 722	37 222	53 801	49 478	34 210
Malaysia	6 700	2 500	445	13 488	...
Pakistan (b)	2 030	2 302	2 761	3 037	2 669
Philippines	188	242	128	207	...
Saudi Arabia	843	5 529	12 671	16 240	18 816
Singapore	765	840	1 294	486	608
Taiwan	9 225	9 816	9 398	8 886	8 375
Thailand	747	615	1 034	779	748
Australia	1 792	1 803	4 741	7 894	8 736
New Zealand	227	168	203	102	301

Note(s) :-

(1) This table excludes synthetic graphite

(a) Years ended 31 March following that stated

(b) Years ended 30 June of that stated

## Production of Gypsum

tonnes

Country	1998	1999	2000	2001	2002
Armenia	...	11 652	9 630	12 811	44 943
Austria					
Gypsum	872 468	898 830	825 077	790 478	847 117
Anhydrite	88 932	100 374	120 967	138 745	122 085
Azerbaijan	3 300	...	...	1 750	1 039
Bosnia and Herzegovina	*30 000	*30 000	49 492	59 728	...
Bulgaria	183 929	148 748	169 571	166 838	156 400
Croatia	107 800	137 991	150 765	130 861	145 000
Cyprus	270 000	197 000	147 000	137 000	182 000
Czech Republic	222 000	136 000	82 000	24 000	108 000
France	*4 500 000	*4 500 000	*4 500 000	*4 500 000	*4 500 000
Georgia	5 700	6 414	4 082	15 408	8 127
Germany (a)	2 459 000	2 259 000	2 344 000	1 966 000	1 825 000
Greece	554 998	686 416	801 025	808 890	*800 000
Hungary (a)	185 000	203 000	251 000	231 000	108 000
Irish Republic	*500 000	*500 000	*500 000	*500 000	*500 000
Italy	1 237 522	1 382 709	1 523 879	1 545 285	...
Latvia	119 096	*100 000	*100 000	*100 000	*100 000
Macedonia	*25 000	*25 000	*25 000	*20 000	...
Moldova	19 100	18 500	31 400	55 200	...
Poland					
Gypsum	862 820	925 707	998 628	793 684	866 674
Anhydrite	166 100	237 000	284 683	300 356	280 031
Portugal	562 380	569 519	698 673	787 646	...
Romania	75 000	*75 000	*75 000	*75 000	*75 000
Russia	609 400	867 200	1 013 000	1 189 000	...
Serbia and Montenegro	27 778	33 962	46 651	58 045	54 937
Slovakia (a)	128 000	117 000	108 000	168 800	121 680
Spain	9 058 212	9 213 589	9 929 478	*10 920 000	13 000 000
Switzerland	*300 000	*300 000	*300 000	*300 000	*300 000
Turkey	351 557	242 960	302 552	328 656	264 038
Ukraine	68 400	96 500	119 000	...	...
United Kingdom	*2 000 000	*1 800 000	*1 500 000	*1 700 000	*1 700 000
Algeria	...	...	...	646 000	741 000
Ethiopia (d)	37 325	35 983	46 798	50 500	...
Kenya	*11 000	*10 000	8 416	8 200	...
Libya	*150 000	*150 000	*175 000	*150 000	...
Mauritania	*100 000	*100 000	*100 000	*100 000	*100 000
Morocco	*450 000	*450 000	*450 000	*450 000	*450 000
Niger	2 559	1 502	1 474	3 205	17 652
Somalia	*1 500	*1 500	*1 500	*1 500	*1 500
South Africa	485 749	505 404	413 105	382 830	421 861
Sudan	...	11 144	13 808	2 422	...
Tanzania	59 066	21 195	60 000	72 000	...
Tunisia	*100 000	*100 000	*100 000	*100 000	*100 000
Canada					
Gypsum	8 827 000	9 723 000	9 054 000	8 295 000	(a) 9 343 000
Anhydrite	139 800	163 325	178 145	111 617	...
Cuba	134 300	110 400	*110 000	*110 000	...
Dominican Republic	80 016	81 249	110 044	175 553	178 941
El Salvador	*6 000	*6 000	*6 000	*6 000	...
Guatemala	52 216	110 173	212 109	96 817	94 411
Honduras	*30 000	55 848	59 211	*60 000	...
Jamaica	154 451	235 990	330 441	320 323	164 880
Mexico	5 370 701	5 188 969	5 653 901	6 237 057	6 739 834
Nicaragua	22 660	26 880	28 170	34 369	28 153
USA	19 000 000	22 400 000	19 500 000	16 300 000	*16 100 000
Argentina	650 356	571 344	*514 000	*500 000	...
Brazil (e)	1 283 955	1 496 936	1 541 109	*1 500 000	*1 600 000
Chile	780 676	886 294	375 847	516 876	609 550
Colombia	*560 000	*560 000	*560 000	*560 000	...
Ecuador	1 672	1 456	1 043	834	5 913
Paraguay	*5 000	*4 000	4 400	4 300	*4 300
Peru	78 656	75 636	52 346	20 966	75 306
Venezuela	72 000	42 000	25 000	*50 000	...



**Production of Gypsum**

Country	1998	1999	2000	2001	2002
Afghanistan	*3 000	*3 000	*3 000	*3 000	*3 000
Bhutan	*53 000	*54 000	*54 000	*55 000	...
China	*6 800 000	*6 700 000	*6 800 000	*6 800 000	...
India (f) (g)	2 267 240	3 247 009	2 644 415	2 879 344	2 861 067
Indonesia	405	5 707	5 000	6 000	...
Iran (c)	8 604 744	8 356 792	8 968 425	8 355 516	...
Israel	56 000	140 000	130 000	133 000	...
Jordan	178 364	244 920	157 869	86 012	11 252
Laos	104 250	130 000	137 500	121 220	110 272
Lebanon	*2 000	*2 000	*2 000	*16 000	...
Mongolia	*25 000	*25 000	*25 000	*25 000	*25 000
Myanmar (f)	40 234	43 102	52 573	*76 000	...
Oman	165 000	180 129	131 909	30 600	...
Pakistan (b)	243 978	244 538	334 441	391 728	402 600
Saudi Arabia	372 132	400 761	407 047	*400 000	...
Syria	325 000	394 000	333 000	*345 000	...
Taiwan	2 221	1 747	1 884	1 006	----
Thailand					
Gypsum	4 333 804	5 005 173	5 830 326	6 190 814	6 331 000
Anhydrite	162 057	203 850	255 472	310 720	...
Turkmenistan	3 200	1 600	2 100	2 500	...
Uzbekistan	*80 000	*80 000	*80 000	*80 000	*80 000
Yemen, Republic of	102 000	103 000	*100 000	*100 000	*100 000
Australia (b)	3 052 300	3 465 600	3 796 500	3 191 300	*4 300 000
World Total	91 800 000	98 600 000	97 600 000	94 400 000	99 000 000

## Note(s):

(1) Some countries produce large quantities of synthetic gypsum. Where possible, this output is excluded from the table.

- (a) Including anhydrite
- (b) Years ended 30 June of that stated
- (c) Years ended 20 March following that stated
- (d) Years ended 7 July of that stated
- (e) Including beneficiated and directly shipped material
- (f) Years ended 31 March following that stated
- (g) Including selenite

## Exports of Gypsum

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Crude	55 761	61 727	51 999	54 034	46 524
Calcined	88 194	102 614	87 510	72 827	82 493
Azerbaijan	...	2 738	1 310	...	0
Belarus					
Crude and calcined	895	11 900	2 274	9 784	3 417
Belgium-Luxembourg					
Crude	73 097	67 089	76 246	104 842	59 688
Calcined	3 567	4 846	4 859	3 998	3 628
Croatia					
Crude and calcined	5 542	8 830	23 301	20 032	28 318
Cyprus					
Crude and calcined	270 271	201 695	143 474	209 179	169 213
Czech Republic					
Crude	68 351	107 478	68 115	39 414	87 247
Calcined	5 570	8 426	11 083	6 674	3 967
Denmark					
Crude	58 092	15 624	23 909	86 764	110 317
Calcined	75 410	36 476	353 548	141 866	155 843
Finland					
Crude and calcined	3 721	3 485	4 177	4 710	5 026
France					
Crude	453 699	532 232	463 092	478 877	427 138
Calcined	405 544	291 434	276 847	282 629	286 568
Germany					
Crude	169 238	134 270	128 317	123 299	176 734
Calcined	828 936	636 192	693 861	705 776	695 565
Greece					
Crude	24 414	41 094	111 045	56 967	44 953
Calcined	4 500	4 568	470	291	293
Irish Republic					
Crude	510	566	896	820	817
Calcined	30 307	30 676	35 199	37 919	22 181
Italy					
Crude	73 382	59 426	51 791	47 185	24 560
Calcined	49 598	107 833	113 041	74 209	54 393
Latvia	79 505	59 416	37 150	35 302	55 225
Macedonia					
Crude and calcined	7 771	6 020	8 967	9 221	...
Moldova					
Crude and calcined	78 802	130 403	...	248 117	324 850
Netherlands					
Crude	20 580	6 725	537	22 169	24 263
Calcined	3 339	3 971	2 885	2 350	26 463
Norway					
Crude and calcined	105	7 254	17 358	22 305	20 691
Poland					
Crude and calcined	91 100	78 600	79 661	21 449	21 259
Romania	5 638	4 252	5 191	6 115	6 473
Russia					
Crude and calcined	1 325	4 674	7 312	13 641	22 999
Slovakia					
Crude and calcined	29 100	10 900	3 666	69	154
Spain					
Crude	3 515 903	2 939 001	3 080 386	2 590 879	2 818 090
Calcined	295 504	415 179	500 097	460 778	517 466
Sweden					
Crude and calcined	885	3 039	5 239	5 692	6 350
Switzerland					
Crude	14 930	25 593	24 560	25 122	1 709
Calcined	4 301	5 328	2 830	1 738	1 667
Turkey					
Crude and calcined	36 608	45 319	92 533	156 907	200 633
United Kingdom					
Crude	9 322	6 746	9 709	3 049	13 717
Calcined	24 352	73 865	31 474	29 474	39 229

## Exports of Gypsum

Country	1998	1999	2000	2001	2002
Egypt					
Crude and calcined	32 003	14 508	...	4 380	...
Kenya	38 174	28 469	41 403	...	57 797
Morocco					
Crude	192 017	157 044	214 901	212 246	...
Calcined	2 933	4 715	5 487	7 212	...
Tanzania	1 267	1 189	2 103	1 752	...
Togo	7 835	...	867	12 241	268
Tunisia					
Crude and calcined	17 566	17 328	24 242	36 905	...
Canada					
Crude	5 660 091	6 363 488	6 374 386	5 655 457	5 307 372
Calcined	1 530	1 835	1 009	2 265	4 747
Guatemala	33 001	28 104	44 078	59 152	50 542
Jamaica	166 038	156 947	286 672	285 032	125 717
Mexico	3 463 116	3 117 669	1 185 126	659 688	967 996
USA					
Crude	176 471	146 311	168 121	294 351	376 400
Calcined	211 499	588 606	243 751	261 953	190 770
Argentina	29 189	35 432	28 857	24 274	23 177
Colombia	...	...	6 236	...	...
Venezuela	5 722	14 689	4 306	2 028	...
China					
Crude	114 068	110 362	90 767	102 632	124 534
Calcined	10 850	10 830	10 757	11 578	14 417
Hong Kong	18 051	140 178	156 163	20 380	3 654
India					
Crude and calcined (a)	38 734	31 765	37 553	63 098	47 078
Indonesia					
Crude	373	3 541	1 012	36	52
Calcined	...	13 208	50 107	10 020	3 838
Iran	108 255	185 721	330 740	484 594	656 624
Japan					
Crude	1 212	1 279	848	836	669
Calcined	3 432	2 785	3 276	3 712	3 265
Kazakhstan	31 609	15 413	16 893	24 690	30 173
Korea, Republic of					
Crude and calcined	7 096	2 110	4 393	2 014	5 256
Kyrgyzstan					
Crude and calcined	105	1 088	75 022	25 010	10 219
Laos	89 298	93 039	131 517	107 714	...
Oman					
Crude	6 018	8 124	3 477	3 007	15 028
Philippines					
Calcined	5 506	5 487	133	...	...
Qatar	8 480	46 970	...	54 686	55 801
Saudi Arabia					
Crude and calcined	56 141	53 825	40 272	29 572	30 179
Singapore					
Crude and calcined	17 727	6 138	12 503	7 488	1 404
Syria	11 893	26 371	36 848	33 959	11 728
Taiwan					
Crude	4 829	4 004	3 927	2 538	2 585
Calcined	2 242	1 718	900	821	609
Thailand					
Crude	3 973 203	4 260 735	4 165 646	4 980 730	4 736 301
Calcined	70 173	72 698	93 111	80 488	135 040
Australia					
Crude	764 832	1 133 723	827 358	883 328	1 065 179
Calcined	11 315	7 296	4 129	830	5 385

Note(s):

(1) In this table the term 'crude' may include some anhydrite

(a) Years ended 31 March following that stated

## Imports of Gypsum

tonnes

Country	1998	1999	2000	2001	2002
Albania					
Crude and calcined	314	494	3 974	10 702	10 910
Austria					
Crude	20 698	21 638	29 926	16 701	17 429
Calcined	43 945	47 614	31 735	41 988	48 808
Azerbaijan					
Crude and calcined	27 206	16 147	14 881	10 822	13 876
Belarus					
Crude and calcined	93 572	151 694	122 874	72 714	96 372
Belgium-Luxembourg					
Crude	575 917	767 694	800 514	701 760	719 403
Calcined	381 601	338 404	350 278	329 502	322 930
Croatia					
Crude and calcined	37 026	24 018	20 322	45 679	57 473
Czech Republic					
Crude	34 531	25 760	8 628	9 523	14 790
Calcined	29 939	23 407	22 307	23 410	23 899
Denmark					
Crude	269 006	163 438	283 266	256 834	223 666
Calcined	10 061	12 558	7 080	8 952	34 509
Estonia					
Crude and calcined	9 484	15 763	15 852	13 236	20 355
Finland					
Crude	263 557	277 541	281 183	292 833	286 347
Calcined	6 344	19 871	31 374	7 725	7 682
France					
Crude	245 432	264 504	200 529	205 820	168 598
Calcined	35 933	41 167	47 813	44 697	48 920
Georgia	...	3 731	3 819	5 209	...
Germany					
Crude	180 628	273 764	208 536	225 631	186 338
Calcined	71 634	50 807	46 851	34 767	59 707
Greece					
Crude	1 229	229	1 408	504	350
Calcined	1 963	2 753	23 025	26 386	1 501
Hungary					
Crude and calcined	66 295	50 147	51 481	48 842	53 147
Iceland	8 042	8 974	9 273	8 146	3 918
Irish Republic					
Crude	6 814	7 266	8 639	8 615	10 931
Calcined	1 678	571	561	444	914
Italy					
Crude	715	3 765	2 304	2 479	2 391
Calcined	18 731	20 436	25 943	23 487	22 706
Latvia					
Crude and calcined	7 540	2 991	2 852	3 459	3 138
Lithuania	30 365	28 667	30 701	38 999	...
Macedonia					
Crude and calcined	776	1 622	532	642	...
Moldova					
Crude and calcined	744	556	1 100	5 667	7 612
Netherlands					
Crude	182 423	196 156	175 167	222 337	208 013
Calcined	335 844	419 469	407 007	274 769	381 920
Norway					
Crude	28 015	25 521	23 851	36 175	59 945
Calcined	375 899	354 670	332 034	308 328	315 517
Poland					
Crude	55 000	65 988	78 372	22 813	46 123
Calcined	119 500	180 149	127 071	125 354	124 727
Portugal					
Crude	42 798	44 279	35 966	40 509	33 696
Calcined	233 205	310 987	374 538	374 719	371 705
Romania	4 982	10 109	36 947	109 719	102 708
Russia	33 317	17 676	32 712	62 500	118 557
Slovakia					
Crude and calcined	88 800	94 824	102 728	40 702	125 948
Slovenia	73 684	75 474	77 110	70 509	74 660

## Imports of Gypsum

Country	1998	1999	2000	2001	2002
Spain					
Crude	6 021	121	43 375	47 567	51 797
Calcined	48 781	54 677	22 248	8 143	38 659
Sweden					
Crude	321 316	214 236	296 067	177 264	211 432
Calcined	57 108	137 657	59 347	87 144	82 831
Switzerland					
Crude	65 623	60 400	67 960	65 203	64 517
Calcined	71 705	69 844	71 517	66 156	72 876
Turkey	30 198	73 521	83 549	66 472	84 215
United Kingdom					
Crude	328 175	391 447	492 422	755 112	235 523
Calcined	33 227	33 818	62 728	31 481	...
Burkina Faso	9 876	11 682	5 343	...	...
Cameroon	27 613	53 856	46 803	44 602	...
Egypt					
Crude and calcined	6 660	8 111	...	1 876	...
Ghana					
Crude and calcined	25 470	6 726	43 649	46 916	...
Kenya	24 515	22 332	8 334	...	9 569
Morocco					
Crude and calcined	1 008	1 183	1 015	1 130	...
Nigeria					
Crude and calcined	3 815	4 592	8 439	...	...
Senegal					
Crude and calcined	44 799	59 227	55 405	130 582	88 604
South Africa					
Crude and calcined	9 056	7 712	8 235	7 163	6 733
Tanzania	1 267	1 188	3 252	770	...
Togo					
Crude and calcined	40 056	58 933	28 886	62 896	50 671
Tunisia					
Crude and calcined	1 442	2 026	1 864	2 890	...
Uganda	28 448	17 024	5 714	11 584	6 734
Canada					
Crude	96 590	121 047	154 604	243 158	332 460
Calcined	38 463	28 876	22 245	37 570	2 258
Costa Rica					
Crude and calcined	77 994	57 990	59 631	106 723	68 979
El Salvador					
Crude and calcined	33 439	26 182	68 243	39 644	49 187
Guadeloupe	12 622	18 962	10 757	17 381	...
Martinique	7 450	18 398	10 171	17 775	...
Mexico					
Crude	4 694	5 623	5 679	5 248	14 380
Calcined	23 695	28 975	21 468	17 315	15 972
Panama	11 301	20 640	13 391	33 802	1 396
Trinidad and Tobago					
Crude and calcined	6 250	...	459	6 156	...
USA					
Crude	8 678 644	9 379 401	9 170 778	8 266 655	7 973 549
Ground and calcined	11 384	14 184	15 560	9 366	11 052
Colombia	217 046	104 396	165 651	161 100	149 499
Ecuador	116 229	37 041	64 698	125 578	101 788
French Guiana					
Crude and calcined	2 660	2 130	2 150	3 121	...
Paraguay					
Crude and calcined	17 523	25 402	17 746	15 576	...
Uruguay					
Crude and ground	51 768	54 255	25 904	49 353	26 345
Venezuela	230 862	231 217	159 627	231 681	...

**Imports of Gypsum**

tonnes

Country	1998	1999	2000	2001	2002
Abu Dhabi	51 254	58 893	...	...	...
Bahrain	5 710	8 512	9 340	7 625	10 209
China					
Crude	4 398	21 243	35 153	6 041	16 852
Calcined	15 085	20 404	27 335	18 064	7 011
Dubai					
Crude and calcined	3 198	4 031	...	...	...
Hong Kong					
Crude	10 969	26 752	26 062	10 026	23 204
Calcined	16 116	12 292	16 960	16 144	8 716
India					
Crude and calcined (a)	14 629	10 126	20 136	25 327	11 531
Indonesia					
Crude	582 127	507 791	546 721	1 036 124	772 131
Calcined	20 454	16 892	31 999	38 400	32 656
Iran	588	745	827	1 222	950
Japan					
Crude	2 928 552	2 539 371	2 487 726	1 973 409	1 910 464
Calcined	6 151	6 741	7 673	9 816	11 832
Jordan	7 085	4 858	3 654	1 644	1 245
Kazakhstan					
Crude and calcined	3 446	4 156	10 552	...	...
Korea, Republic of					
Crude	515 582	531 892	676 503	682 821	759 424
Calcined	2 644	2 165	12 187	10 106	10 187
Kuwait					
Crude	...	...	125 686	...	...
Kyrgyzstan					
Crude and calcined	28 762	15 814	13 875	14 734	19 393
Lebanon					
Crude and calcined	100 965	110 175	116 823	103 053	...
Macao	12 476	25 629	9 764	10 704	3 597
Malaysia					
Crude and calcined	863 087	423 559	567 465	...	...
Mongolia	125	1 193	332	2 083	...
Oman	2 581	7 131	5 611	9 179	33 176
Philippines					
Crude	91 735	260 530	229 046	129 766	...
Calcined	10 726	13 843	12 547	11 714	...
Qatar	3 963	3 712	...	5 444	9 446
Saudi Arabia					
Crude and calcined	32 133	33 904	151 123	52 721	57 785
Singapore					
Crude and calcined	128 390	83 880	61 378	31 929	14 635
Sri Lanka	63 670	48 584	46 431	50 895	4 919
Taiwan					
Crude	600 068	498 394	471 174	332 209	451 482
Calcined	4 029	5 172	4 820	4 861	5 223
Thailand					
Crude	319	243	141	141	185
Calcined	1 607	1 584	2 564	2 248	3 012
Australia					
Crude	2 877	15 640	7 372	50 142	4 407
Calcined	2 471	4 353	3 180	4 553	6 549
New Caledonia					
Crude and calcined	5 267	5 805	5 280	5 364	6 753
New Zealand					
Crude and calcined	365 361	211 153	163 451	221 299	294 033

Note(s) :-

(1) In this table the term 'crude' may include some anhydrite

(a) Years ended 31 March following that stated

**Production of Iodine**

Country	1998	1999	2000	2001	2002
Azerbaijan (a)	...	5 000	2 000	...	...
Russia	168 000	25 000	24 000	46 000	...
USA	1 490 000	1 620 000	1 470 000	1 290 000	*1 700 000
Chile	9 722 000	9 317 000	10 474 000	11 355 000	11 648 000
China	*500 000	*500 000	*500 000	*500 000	*500 000
Indonesia	65 000	74 000	*75 000	*75 000	...
Japan	6 142 000	6 152 000	6 157 000	*6 100 000	...
Turkmenistan	137 000	153 000	291 000	333 000	...
Uzbekistan	*1 000	*2 000	*2 000	*2 000	...
World Total	18 200 000	17 800 000	19 000 000	19 700 000	20 400 000

Note(s):

(a) Exports

**Exports of Iodine**

kilograms

Country	1998	1999	2000	2001	2002
Azerbaijan	...	5 000	2 000	...	...
Belgium-Luxembourg	1 632 000	1 707 500	1 570 900	1 908 400	2 351 000
Czech Republic	8 000	2 000	1 000	...	267
France	43 700	30 200	27 100	74 900	107 000
Germany	539 600	568 300	855 900	570 400	2 637 000
Irish Republic	13 613	80	27 742	2 500	2 000
Italy	17 201	4 335	4 694	2 892	3 000
Lithuania	2 000	-----	2 000	13 000	...
Norway	1 217	17 607	19 244	64	3 000
Russia	69 000	85 000	101 000	47 417	14 733
Spain	41 526	6 938	74 721	300 485	115 000
Sweden	-----	1 000	5 000	1 000	2 000
Turkey	...	41 833	5 540	2 307	2 570
United Kingdom	138 391	148 093	385 000	507 363	194 283
Canada	54 940	6 359	6 726	5 126	56 736
Mexico	...	36 000	66 470	54 000	...
USA	3 196 101	3 026 934	1 766 884	1 593 000	1 738 609
Brazil	24 870	4 301	43 026	24 061	27 152
Chile	9 851 673	8 636 545	9 839 348	9 393 481	10 160 000
China	26 070	1 323	8 020	12 120	12 000
India (a)	150	319 350	214 195	83 740	26 240
Indonesia	19 000	37 092	940 285	1 427 501	76 000
Japan	4 994 110	4 653 202	4 788 264	5 440 460	5 350 000
Saudi Arabia	1 137 000	299 000	44 000	...	40 000
Singapore	4 378	6 373	4 504	10 137	18 462
Australia	250	2 000	3 534	1 975	1 000

Note(s):

(a) Years ended 31 March following that stated



## Imports of Iodine

Country	1998	1999	2000	2001	2002
Austria	97 900	73 100	69 300	101 600	81 000
Belgium-Luxembourg	1 745 600	1 736 700	1 501 800	2 006 900	2 357 000
Cyprus	16 073	13 521	11 529	17 000	29 894
Czech Republic	8 000	15 000	21 000	24 000	18 819
Denmark	26 008	8 975	11 451	24 614	19 000
Finland	3 610	7 105	4 928	4 491	9 000
France	1 838 900	1 580 200	2 139 700	1 469 800	1 553 000
Germany	1 282 900	1 328 900	1 346 700	1 752 800	1 208 000
Greece	13 000	1 318	1 158	1 766	1 000
Irish Republic	90 707	7 136	17 582	44 664	5 000
Italy	841 025	834 259	749 474	1 049 291	1 218 000
Lithuania	3 000	900	4 000	7 000	...
Netherlands	1 845 000	2 051 200	2 380 900	2 156 800	1 269 000
Norway	351 791	124 711	228 029	118 903	684 000
Poland	25 000	29 000	17 773	20 000	13 312
Portugal	24 990	22 543	22 443	76 686	25 000
Romania	6 000	...	...	...	...
Russia	62 000	109 000	135 000	87 199	87 887
Serbia and Montenegro	8 000	3 000	1 000	7 000	2 000
Slovenia	4 000	7 000	1 263	2 200	150
Spain	608 324	722 532	1 019 447	1 247 590	796 000
Sweden	10 000	2 000	3 000	1 000	5 000
Switzerland	8 784	3 585	18 949	28 203	14 000
Turkey	...	62 480	139 043	39 422	30 450
Ukraine	6 960	1 211	8 213	...	...
United Kingdom	1 693 418	956 976	1 304 692	1 015 061	744 097
Botswana	4 808	674	11 000	31 000	...
Egypt	99 000	330 000	...	12 000	...
Kenya	524	829	1 619	...	2 937
South Africa	13 346	14 210	23 667	19 454	16 000
Tunisia	1 495	2 506	5 000	5 468	...
Canada	529 337	430 085	528 000	531 705	566 980
Mexico	...	1 777 000	1 162 838	941 000	...
USA	5 727 186	5 086 301	4 790 961	5 023 963	6 187 519
Argentina	35 000	37 984	37 435	27 045	39 000
Brazil	418 000	527 000	883 072	1 108 799	1 340 171
Colombia	26 000	22 000	24 000	...	25 919
Uruguay	2 000	2 200	2 200	5 000	...
Venezuela	18 000	10 000	10 000	18 000	...
China	575 456	748 671	793 731	630 163	1 134 000
Hong Kong	184 009	59 132	59 784	19 937	6 000
India (a)	606 917	700 823	801 057	794 911	123 762
Indonesia	18 193	25 159	34 128	24 798	57 000
Iran	23 000	30 000	8 000	5 000	85
Japan	349 110	290 195	363 364	273 200	375 000
Korea, Republic of	49 193	68 920	92 803	100 680	185 000
Pakistan (b)	27 976	19 000	31 085	6 784	5 405
Philippines	2 575	...	10 000	14 000	...
Singapore	8 856	20 699	1 971	5 599	29 604
Sri Lanka	25	943	1 160	1 165	1 916
Taiwan	28 227	21 852	27 287	31 949	31 000
Thailand	13 000	12 000	20 487	34 453	16 822
Australia	56 538	56 000	59 996	86 550	76 000
New Zealand	7 000	31 000	29 000	45 005	34 000

Note(s) :-

(a) Years ended 31 March following that stated

(b) Years ended 30 June of that stated

**Production of Iron Ore**

tonnes

Country	1998	1999	2000	2001	2002
Austria	1 792 000	1 747 000	1 855 000	1 839 141	1 935 500
Bosnia and Herzegovina	*150 000	*150 000	*150 000	*150 000	*150 000
Bulgaria	895 300	699 400	588 800	324 800	373 000
France	21 490	23 509	31 319	36 587	21 367
Germany (f) (i)	604 912	615 165	461 525	407 002	419 371
Macedonia	*15 000	*15 000	*15 000	*15 000	*15 000
Norway	588 700	520 000	470 000	395 000	490 000
Portugal (f)	20 200	11 733	11 800	-----	...
Romania	459 000	131 000	116 000	292 000	296 000
Russia	72 600 000	82 200 000	87 100 000	82 800 000	84 200 000
Serbia and Montenegro	5 125	2 088	1 115	-----	-----
Slovakia	479 212	458 035	447 055	435 492	326 300
Spain	52 161	60 232	75 054	55 058	25 177
Sweden	20 930 000	18 853 000	20 557 000	19 486 000	20 281 000
Turkey	5 885 429	4 869 032	4 076 257	4 434 621	3 432 775
Ukraine	51 070 200	47 769 100	55 883 200	54 700 000	58 900 000
United Kingdom	1 188	*1 000	1 033	510	464
Algeria	1 783 000	1 338 000	1 645 000	1 291 000	1 202 000
Egypt (d)	2 941 798	*2 700 000	*2 500 000	*2 500 000	...
Mauritania	11 411 000	11 042 000	11 069 000	10 300 000	9 600 000
Morocco	9 285	6 625	6 462	7 976	1 628
Nigeria	18 796	-----	-----	-----	-----
South Africa (c)	32 965 235	29 507 000	33 707 364	34 757 159	36 484 015
Tunisia	221 800	222 200	183 300	206 500	179 200
Zimbabwe	371 589	598 650	438 495	361 362	271 812
Canada (g)	37 808 000	31 594 000	36 740 000	29 152 000	28 949 000
Cuba (b)	42 100	69 500	101 500	...	...
Mexico	11 101 000	10 814 000	11 300 000	8 660 000	9 966 000
USA	62 931 000	57 749 000	63 089 000	46 192 000	51 500 000
Brazil (a)	199 233 506	194 485 974	212 559 898	210 000 000	212 000 000
Chile	9 112 055	8 345 035	8 728 927	8 834 152	7 268 803
Colombia	525 825	576 414	660 109	636 837	688 105
Peru	4 905 632	4 078 186	4 143 299	4 563 551	4 566 000
Venezuela	16 784 217	14 050 827	17 352 963	16 902 437	16 595 634
China	246 890 900	237 230 100	223 947 600	217 014 700	*230 000 000
India (h)	72 230 000	74 946 000	80 762 000	86 226 000	96 962 000
Indonesia	564 424	584 428	489 126	469 400	378 500
Iran (e)	8 174 657	11 488 785	12 208 437	14 835 692	...
Kazakhstan	9 335 800	9 616 700	16 156 800	15 886 300	17 675 100
Korea, Dem. P.R. of	*1 000 000	*1 000 000	*1 000 000	...	...
Korea, Republic of	238 252	187 987	163 192	22 693	156 774
Malaysia (g)	376 009	337 462	258 573	376 476	404 350
Thailand	90 700	122 633	100	50	570 110
Vietnam	374 000	...	...	...	...
Australia	160 731 000	151 558 000	171 508 000	181 435 000	187 219 000
New Zealand	2 224 325	2 303 376	2 691 780	1 636 400	1 739 950
World Total	1 050 000 000	1 015 000 000	1 085 000 000	1 059 000 000	1 104 000 000

## Note(s):

- (a) Including beneficiated and direct shipping ore
- (b) From nickel plant waste
- (c) Including by-product magnetite
- (d) Years ended 30 June of that stated
- (e) Years ended 20 March following that stated
- (f) Including manganiferous iron ore
- (g) Including by-product iron ore
- (h) Years ended 31 March following that stated
- (i) Used as aggregate in the construction industry

## Exports of Iron Ore

Country	1998	1999	2000	2001	2002
Belgium-Luxembourg					
Iron ore	13 880	67 657	32 755	43 578	70 035
Burnt pyrites	18 190	98 522	3	...	14
France	37 351	20 178	21 148	38 116	16 649
Germany					
Iron ore	4 461	12 222	20 659	16 280	15 521
Burnt pyrites	13 678	1 318	4 587	6 112	6 907
Italy					
Burnt pyrites	48 802	65 162	96 060	57 643	46 294
Netherlands					
Iron ore	29 344	151 475	157 229	29 697	41 104
Burnt pyrites	44 352	20 576	4	27	1 140
Norway					
Iron ore	50 829	19 127	17 598	33 727	620 478
Burnt pyrites	64 053	38 232	45 081	46 323	62 214
Russia	13 828 300	10 841 114	19 224 008	13 954 952	13 039 085
Serbia and Montenegro					
Burnt pyrites	16 157	21 367	6	12 818	27 843
Slovakia	75 000	95 900	115 628	112 227	127 174
Spain					
Iron ore	55 173	36 742	26 227	1 702	53
Burnt pyrites	55 052	33 256	108 384	168 181	189 404
Sweden	14 631 068	13 819 605	16 323 925	13 619 293	14 233 450
Ukraine	17 703 014	13 343 939	18 737 248	23 700 000	...
Liberia	100 000	----	100 000	...	...
Mauritania	11 402 000	11 042 000	11 100 000	10 100 000	*9 600 000
South Africa	22 093 000	21 092 000	21 397 329	23 519 404	24 303 975
Tunisia	15 801	9 581	16 570	10 108	...
Canada	30 691 746	26 885 514	26 571 394	22 315 371	26 351 145
Mexico	185 984	...	78 720	514 967	371 710
USA (b)	6 065 078	6 125 063	6 148 513	5 605 645	6 754 936
Brazil	150 210 269	139 801 476	156 892 908	155 746 254	166 527 499
Chile	7 071 147	5 887 614	6 488 297	6 181 506	6 088 927
Peru	4 504 523	3 694 124	3 526 990	4 199 827	4 500 000
Venezuela	8 603 412	6 616 973	6 883 328	6 857 000	6 682 000
Bahrain	1 900 000	2 700 000	3 852 065	2 920 765	3 538 600
India (c)	22 273 379	15 716 166	20 161 360	23 084 567	23 102 651
Iran	...	167 034	(a) *637 500	663 051	680 707
Japan	103	29 042	78 832	60 442	70 206
Kazakhstan	7 353 001	3 394 300	5 327 941	...	...
Korea, Dem. P.R. of (a)	*83 000	*26 000	*48 800	*86 200	*204 000
Malaysia	160 049	147 184	103 805	79 136	...
Philippines	3 663 000	3 852 000	3 870 665	3 451 737	...
Australia	136 396 291	146 200 021	157 857 461	156 800 513	165 747 994
New Zealand	678 790	1 329 660	760 879	748 274	865 059

## Note(s):

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

(b) Including burnt pyrites

(c) Years ended 31 March following that stated

## Imports of Iron Ore

tonnes

Country	1998	1999	2000	2001	2002
Austria	5 237 875	4 349 862	5 425 923	...	...
Belgium-Luxembourg	13 493 548	12 112 181	11 830 358	11 223 322	12 204 732
Bulgaria	2 208 000	715 254	1 289 623	...	...
Croatia	80	9 564	14 243	15 728	...
Czech Republic	7 395 000	5 356 868	6 932 742	6 891 369	6 811 707
Denmark					
Burnt pyrites	66 946	45 165	59 326	47 038	60 659
Finland	3 922 531	3 818 567	3 917 135	3 916 207	3 791 710
France					
Iron ore	19 746 303	19 999 656	19 688 773	16 707 431	19 069 088
Burnt pyrites	8 337	5 894	4 228	24 758	...
Germany					
Iron ore	53 595 582	38 801 838	47 502 511	40 094 653	44 297 518
Burnt pyrites	86 364	89 957	76 415	55 380	44 838
Greece					
Burnt pyrites	39 557	22 886	156 876	125 242	58 666
Hungary	2 063 600	1 744 312	2 098 145	1 702 510	1 718 394
Iceland	22 768	22 774	33 104	41 499	35 962
Italy (a)	15 717 985	15 614 537	17 619 370	15 813 643	14 898 058
Lithuania	5 541	2 868	5 150	2 180	...
Netherlands					
Iron ore	8 827 125	7 949 025	7 560 788	6 310 886	7 369 802
Burnt pyrites	27 794	111 119	47 175	106 277	23 596
Norway	529 789	488 582	187 630	224 442	206 650
Poland (a)	9 981 900	7 418 423	9 736 781	7 709 132	6 956 999
Portugal	590 086	538 354	580 178	141 064	829
Romania	6 569 462	4 171 545	5 049 180	3 874 940	6 198 085
Russia	6 562 256	3 313 496	9 188 913	8 799 202	9 330 839
Serbia and Montenegro	52 515	1 254 517	302 312	78 808	252 884
Slovakia	3 975 500	4 270 146	4 741 501	3 269 165	4 990 546
Spain	6 583 581	6 283 186	6 265 454	6 641 053	6 158 325
Sweden					
Iron ore	69 083	68 929	94 483	108 597	115 528
Burnt pyrites	22 613	48 357	17 442	15 763	41 970
Switzerland (a)	14 373	13 222	15 001	16 388	13 760
Turkey	3 857 835	2 973 052	4 140 103	2 620 485	5 392 580
Ukraine	3 369 816	4 683 179	7 413 440	5 000 000	...
United Kingdom					
Iron ore	20 764 785	17 030 212	16 778 947	15 351 877	13 309 247
Burnt pyrites	25 787	21 649	29 446	17 130	...
Egypt	2 193 934	2 200 000	3 400 000	3 300 000	...
Libya	1 700 000	1 600 000	2 100 000	1 600 000	...
Tunisia	187 132	226 073	167 469	257 189	...
Canada	7 200 963	7 311 445	6 566 054	5 905 931	6 844 672
Mexico	3 954 913	3 555 891	3 065 077	2 291 505	2 708 641
Trinidad and Tobago	1 364 268	2 300 000	2 500 000	3 400 000	...
USA (a)	16 973 180	14 254 523	15 658 001	10 652 289	12 464 346
Argentina	5 558 631	4 142 666	5 323 026	4 639 345	5 225 500
Paraguay	40 000	21 000	101 460	157 931	...
Abu Dhabi	21 040	38 183	...	...	...
Bahrain	1 600 000	2 600 000	3 077 934	1 835 903	3 501 042
China					
Iron ore	51 594 678	55 272 881	69 970 779	92 392 677	111 423 424
Burnt pyrites	176 040	1 123	63	84	70 371
India (d)	149 248	132 569	486 106	395 825	520 950
Indonesia					
Iron ore	1 310 494	2 430 408	2 156 360	1 292 369	1 319 329
Burnt pyrites	98	11 754	308	238	286
Iran (b)	1 479 194	1 735 675	2 403 899	2 400 000	*1 900 000
Japan	120 618 050	120 107 002	131 732 578	126 297 011	129 096 968
Kazakhstan	242 586	250 000	135 000	...	...
Korea, Republic of	33 611 499	35 400 291	38 980 349	45 875 365	43 311 003
Lebanon	11 523	35 300	18 878	9 163	...
Malaysia	1 071 937	1 356 056	1 736 221	1 568 261	...

**Imports of Iron Ore**

Country	1998	1999	2000	2001	2002
Oman	18 237	2 756	160 070	177 270	481 817
Pakistan (c)	1 928 368	1 265 693	1 566 032	1 630 569	1 487 745
Philippines	2 828 000	4 000 000	4 026 071	3 222 911	2 965 375
Qatar	...	...	...	519 886	335 635
Saudi Arabia	2 800 886	3 046 235	2 919 767	3 461 097	682 125
Taiwan					
Iron ore	14 042 341	13 236 522	14 859 677	15 571 077	15 242 142
Burnt pyrites	126 281	73 474	74 190	...	...
Australia	4 926 790	4 282 000	4 426 997	3 997 806	4 607 347

Note(s) :-

- (a) Including burnt pyrites
- (b) Years ended 20 March following that stated
- (c) Years ended 30 June of that stated
- (d) Years ended 31 March following that stated

## Production of Pig Iron

tonnes

Country	1998	1999	2000	2001	2002
Austria	4 034 229	3 926 094	4 332 786	4 392 878	4 607 000
Belgium	8 618 117	8 430 392	8 471 214	7 732 111	7 988 396
Bosnia and Herzegovina	*100 000	*100 000	*100 000	*100 000	*100 000
Bulgaria	1 390 000	1 152 000	1 220 000	1 160 000	1 100 000
Czech Republic	4 981 800	4 022 700	4 621 500	4 670 700	4 839 880
Finland	2 919 692	2 954 127	2 982 787	2 851 821	2 828 275
France	13 458 358	13 432 778	13 506 955	11 884 224	13 093 042
Germany	30 162 000	27 934 000	30 845 000	29 184 000	29 446 000
Hungary	1 258 851	1 309 584	1 340 353	1 225 714	1 334 000
Italy	10 770 000	10 603 000	11 194 000	10 620 000	9 745 000
Netherlands	5 562 000	5 307 000	4 970 000	5 305 000	5 367 000
Norway	70 000	70 000	70 000	70 000	70 000
Poland	6 128 484	5 233 124	6 491 867	5 440 047	5 296 410
Portugal	365 000	389 000	382 000	82 000	----
Romania	4 541 151	2 969 467	3 065 788	3 242 994	3 976 334
Russia	36 462 000	41 910 000	46 456 000	47 457 000	49 100 000
Serbia and Montenegro	825 916	134 882	562 808	460 884	485 391
Slovakia	2 756 000	2 987 000	3 166 400	3 254 600	3 533 150
Spain	4 236 000	4 058 000	4 059 000	4 094 000	3 973 000
Sweden	3 149 000	3 212 200	3 145 700	3 614 200	3 702 900
Switzerland	*80 000	*80 000	*80 000	*80 000	*80 000
Turkey	5 286 000	5 181 000	5 333 000	5 289 000	5 000 000
Ukraine	20 936 000	23 009 800	25 698 700	26 364 000	27 100 000
United Kingdom	12 746 100	12 139 300	10 890 500	9 870 400	8 560 600
Algeria	740 968	782 895	750 384	794 715	...
Egypt	2 956 000	2 970 000	3 500 000	3 800 000	4 200 000
Libya	1 004 000	1 302 000	1 490 000	1 060 000	1 160 000
Morocco	*15 000	*15 000	*15 000	*15 000	...
South Africa	7 960 000	7 592 000	7 818 000	7 376 000	7 500 000
Tunisia	122 900	180 200	195 400	191 600	151 900
Canada	8 936 802	8 856 569	8 904 044	8 302 141	8 670 330
Mexico	10 115 563	10 878 132	10 444 728	8 037 183	8 570 500
Trinidad and Tobago	1 023 100	1 293 000	1 524 800	2 187 400	2 316 300
USA	49 830 000	47 940 000	49 450 000	42 250 000	40 700 000
Argentina	3 659 744	2 974 208	3 602 566	3 189 835	3 649 500
Brazil	25 446 800	24 948 500	28 135 000	27 731 000	30 055 000
Chile	992 568	1 029 522	1 023 695	897 000	936 900
Colombia	255 896	264 362	272 254	318 953	309 300
Paraguay	65 545	61 281	82 018	71 763	87 400
Peru	343 341	242 952	409 185	382 285	267 200
Venezuela	5 423 881	5 071 050	6 401 348	5 903 298	6 844 370
China	118 521 000	125 329 900	131 034 200	155 542 500	170 900 000
India	25 317 000	25 359 000	26 761 000	27 595 000	30 000 000
Indonesia	1 571 000	1 736 000	1 736 000	1 480 000	1 500 000
Iran (a)	5 592 736	6 397 584	6 679 088	7 142 340	*7 500 000
Japan	74 981 020	74 519 916	81 070 748	78 835 836	80 979 161
Kazakhstan	2 594 200	3 438 100	4 010 300	3 906 500	4 008 900
Korea, Dem. P.R. of	*250 000	*250 000	*250 000	*250 000	...
Korea, Republic of	23 299 189	23 329 000	24 937 000	25 898 000	26 570 000
Malaysia	878 000	950 000	1 240 000	1 020 000	1 080 000
Myanmar	*40 000	*30 000	*40 000	*40 000	*40 000
Pakistan	*1 000 000	1 140 000	1 132 000	1 384 000	...
Qatar	706 000	666 000	620 962	733 549	750 000
Saudi Arabia	2 268 000	2 343 000	3 060 000	2 877 000	3 280 000
Taiwan	9 374 000	8 890 000	9 618 000	10 001 000	10 200 000
Vietnam	48 000	66 000	47 000	50 000	...
Australia	7 724 000	7 468 000	*6 660 000	*7 300 000	7 100 000
New Zealand	609 000	620 000	603 000	600 000	600 000
World Total	574 500 000	579 500 000	616 500 000	625 600 000	653 700 000

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

## Production of Crude Steel

Country	1998	1999	2000	2001	2002
Albania	22 000	15 600	64 700	94 100	...
Austria	5 282 000	5 202 000	5 722 000	5 870 000	6 189 000
Belarus	1 412 000	1 449 000	1 623 000	1 611 000	1 607 000
Belgium	11 403 848	10 910 168	11 614 731	10 741 493	11 322 008
Bosnia and Herzegovina	75 000	60 000	77 000	84 000	70 000
Bulgaria	2 240 000	1 889 000	2 017 000	2 035 000	1 880 000
Croatia	104 854	77 213	70 999	57 993	33 851
Czech Republic	6 497 800	5 615 500	6 215 800	6 315 900	6 511 970
Denmark	800 000	727 000	803 000	746 000	392 000
Finland	3 951 589	3 955 658	4 096 389	3 938 122	4 002 914
France	20 126 200	20 199 977	20 953 667	19 394 693	20 258 473
Georgia	56 353	7 036	50	----	----
Germany	44 046 000	42 062 000	46 376 000	44 803 000	45 004 000
Greece	1 109 000	951 000	1 088 000	1 281 000	1 835 000
Hungary	1 940 110	1 919 739	1 969 821	2 064 507	2 138 146
Irish Republic	354 780	335 000	360 000	150 000	----
Italy	25 678 000	24 738 000	26 759 000	26 544 000	26 302 000
Latvia	470 835	484 000	500 292	500 000	500 000
Luxembourg	2 476 909	2 600 324	2 571 243	2 724 679	2 736 000
Macedonia	49 000	49 000	50 000	*50 000	*50 000
Moldova	735 000	796 300	908 000	967 000	514 000
Netherlands	6 225 000	5 947 000	5 492 000	5 902 000	6 000 000
Norway	637 000	610 000	679 000	635 000	694 000
Poland	9 915 125	8 853 211	10 498 262	8 809 211	8 367 434
Portugal	906 000	1 038 000	1 089 000	727 000	799 000
Romania	6 335 896	4 391 746	4 671 967	4 935 623	5 490 925
Russia	43 673 000	51 518 000	59 136 000	58 970 000	58 567 000
Serbia and Montenegro	949 314	226 240	682 362	510 675	595 547
Slovakia	3 428 000	3 533 600	3 733 200	3 988 600	4 275 470
Slovenia	405 210	405 000	465 000	462 000	481 000
Spain	14 827 000	14 882 000	15 874 000	16 504 000	16 408 000
Sweden	5 153 100	5 067 200	5 228 700	5 518 100	5 753 300
Switzerland	1 018 000	1 037 000	1 140 000	1 100 000	*1 100 000
Turkey	13 165 724	13 806 898	13 571 563	14 382 257	16 045 522
Ukraine	24 105 255	27 393 000	31 782 000	33 108 000	34 049 000
United Kingdom	17 315 000	16 283 700	15 154 600	13 542 700	11 667 100
Algeria	646 621	773 696	771 614	947 040	...
Egypt	2 870 000	2 627 000	2 838 000	3 799 000	4 358 000
Libya	874 000	966 000	1 055 000	846 000	886 000
South Africa	7 956 000	7 857 000	8 821 000	8 821 000	9 095 000
Tunisia	171 000	231 000	229 000	239 000	200 500
Zimbabwe	212 000	255 000	258 000	149 000	106 000
Canada	15 832 839	16 136 095	16 496 339	15 178 896	15 906 747
Cuba	283 200	302 700	327 300	269 600	264 100
Dominican Republic	35 874	42 893	35 801	32 521	60 956
El Salvador	43 162	33 501	40 506	38 502	48 832
Mexico	14 218 050	15 274 187	15 631 312	13 300 007	14 050 557
Trinidad and Tobago	776 900	723 900	743 700	668 300	816 900
USA	98 658 000	97 427 000	101 824 000	90 103 000	91 588 000
Argentina	4 215 890	3 805 205	4 479 204	4 112 501	4 363 367
Brazil	25 759 900	24 996 200	27 865 000	26 717 000	29 604 000
Chile	1 171 409	1 290 512	1 351 986	1 246 863	1 279 549
Colombia	635 814	534 038	659 882	638 259	662 859
Ecuador	45 784	53 000	58 483	59 732	67 233
Paraguay	56 243	55 689	76 784	70 664	79 984
Peru	630 687	558 697	750 682	689 790	611 363
Uruguay	52 012	45 404	38 102	30 890	34 226
Venezuela	3 553 315	3 261 365	3 834 575	3 812 664	4 163 855
Bangladesh (b)	35 000	36 000	35 000	30 000	30 000
China	114 588 400	123 954 100	127 236 100	151 634 400	181 552 000
Hong Kong	*100 000	*100 000	*100 000	*100 000	*100 000
India	23 480 000	24 296 000	26 924 000	27 291 000	28 814 000
Indonesia	2 698 814	2 890 749	2 848 099	2 780 607	2 800 000
Iran (c)	5 608 000	6 304 366	6 614 519	6 937 108	*7 300 000

**Production of Crude Steel**

tonnes

Country	1998	1999	2000	2001	2002
Israel	*280 000	*280 000	*280 000	*280 000	*280 000
Japan	93 547 990	94 192 400	106 444 468	102 865 950	107 745 000
Kazakhstan	3 116 500	4 086 882	4 778 800	4 691 028	4 866 045
Korea, Dem. P.R. of	*300 000	*300 000	*300 000	*300 000	*300 000
Korea, Republic of	39 895 839	41 042 412	43 107 123	43 852 192	45 390 000
Malaysia	1 902 709	2 770 000	3 650 000	4 100 000	4 100 000
Mongolia	16 300	13 100	13 000	...	...
Pakistan	494 000	*500 000	*500 000	*500 000	*500 000
Philippines	884 000	530 000	426 000	426 000	...
Qatar	637 000	629 000	729 000	891 000	1 027 000
Saudi Arabia	2 356 000	2 610 000	2 981 000	3 413 000	3 556 000
Singapore	499 000	590 000	603 000	456 000	...
Syria	*70 000	*70 000	*70 000	*70 000	*70 000
Taiwan	16 965 134	15 437 755	16 895 545	17 261 119	18 255 020
Thailand	1 814 146	1 532 160	2 099 633	2 127 000	2 538 000
United Arab Emirates	*90 000	*90 000	*90 000	*90 000	*90 000
Uzbekistan	351 000	344 000	407 000	433 000	450 000
Vietnam	306 256	308 305	305 881	318 780	...
Australia (a)	8 886 000	8 162 000	7 297 000	7 076 000	7 454 000
New Zealand	756 000	775 000	702 000	826 000	780 000
World Total	775 000 000	788 000 000	847 000 000	850 000 000	900 000 000

## Note(s):

- (1) Unless otherwise indicated, these figures include production from scrap  
(2) Small amounts of steel are believed to be produced in Angola, Azerbaijan, DR Congo, Estonia, Ghana, Jordan, Kenya, Lithuania, Macedonia, Mauritania, Morocco, Myanmar, Nigeria, Sri Lanka, Syria, Uganda

- (a) Including recovery from scrap  
(b) Years ended 30 June of that stated  
(c) Years ended 20 March following that stated



## Production of Ferro-Alloys

Country	1998	1999	2000	2001	2002
Albania					
Ferro-chrome	40 760	42 150	53 084	19 500	22 800
Austria					
Ferro-molybdenum	4 900	4 900	4 700	4 900	4 700
Ferro-nickel	3 300	2 600	3 300	2 600	2 400
Ferro-vanadium	5 900	6 400	5 900	5 800	5 600
Belgium					
Ferro-manganese	13 843	----	----	----	----
Ferro-silico-manganese	5 035	----	----	----	----
Ferro-molybdenum	9 600	5 300	...	...	...
Ferro-vanadium	1 756	1 359	2 194	926	1 492
Bulgaria					
Ferro-silicon	*8 000	*8 000	*8 000	*8 000	...
Croatia					
Ferro-chrome	11 861	----	15 753	361	----
Czech Republic					
Ferro-vanadium	*2 000	*2 000	*2 000	*2 000	*2 000
Finland					
Ferro-chrome and ferro-silico-chrome	230 906	256 290	260 605	236 000	248 000
France					
Ferro-manganese and spiegeleisen	438 212	419 672	409 169	414 200	416 569
Ferro-silico-manganese	57 000	55 000	32 773	65 248	66 215
Ferro-silicon	106 000	*110 000	*110 000	*110 000	...
Other ferro-alloys	55 000	...	...	...	...
Silicon metal	70 082	80 000	94 127	89 896	84 768
Georgia					
Ferro-manganese	10 312	6 441	6 088	7 820	4 211
Ferro-silico-manganese	31 775	26 249	20 458	32 779	30 432
Other ferro-alloys	3 446	4 856	582	105	----
Germany					
Ferro-chrome	20 879	16 960	21 600	19 308	20 018
Other ferro-alloys	*30 000	*30 000	*30 000	*30 000	*30 000
Silicon metal	19 200	21 400	26 417	27 739	25 257
Greece					
Ferro-nickel	62 673	59 545	81 662	88 755	*95 000
Iceland					
Ferro-silicon	67 784	70 100	108 288	112 935	118 810
Italy					
Ferro-chrome	11 487	----	----	----	----
Ferro-manganese	49 000	19 000	*40 000	*40 000	...
Ferro-silico-manganese	119 675	112 358	*100 000	*100 000	...
Ferro-silicon	19 909	...	...	...	...
Silicon metal	8 094	6 257	9 590	----	----
Macedonia					
Ferro-alloys	106 661	78 009	57 842	27 287	...
Norway					
Ferro-chrome	174 678	159 714	153 500	82 600	61 100
Ferro-manganese	153 089	124 000	150 585	111 823	126 960
Ferro-silico-manganese	206 749	235 000	198 671	277 938	252 723
Ferro-silicon	357 293	354 281	450 364	427 590	359 944
Other ferro-alloys	38 130	49 000	54 639	47 600	48 500
Silicon metal	132 309	153 120	138 139	134 958	152 981
Poland					
Ferro-chrome	4 212	----	----	----	106
Ferro-manganese	50 152	57	0	497	602
Ferro-silico-manganese	15 100	10 000	18 997	20 007	7 338
Ferro-silicon	74 991	62 481	55 969	48 608	41 759
Other ferro-alloys	13 300	2 700	4 174	4 039	4 200
Romania					
Ferro-chrome	873	----	----	----	----
Ferro-manganese	4 170	25	1 989	384	----
Ferro-silico-manganese	83 617	550	62 320	71 921	88 665
Ferro-silicon	5 553	----	8 309	5 823	----
Silicon metal	*150	----	----	...	...

## Production of Ferro-Alloys

tonnes

Country	1998	1999	2000	2001	2002
<b>Russia</b>					
Spiegeleisen	*7 000	*7 000	*7 000	*7 000	...
Ferro-chrome	218 100	266 904	274 000	211 000	*200 000
Ferro-silico-chrome	106 000	109 413	91 013	79 115	...
Ferro-manganese	78 800	*90 000	70 700	*70 000	...
Ferro-nickel	*30 000	*33 000	*35 000	*30 000	...
Ferro-phosphorus	-----	...	100	...	...
Ferro-silicon	496 000	601 413	652 000	707 000	...
Other ferro-alloys	*40 000	*40 000	*40 000	*35 000	...
Silicon metal	*40 000	*40 000	*40 000	*40 000	...
<b>Serbia and Montenegro</b>					
Ferro-nickel	1 215	-----	-----	-----	-----
<b>Slovakia</b>					
Ferro-chrome	11 715	6 986	17 658	5 968	5 695
Ferro-silico-manganese	46 627	37 000	52 141	46 288	62 084
Ferro-silicon	49 963	70 000	59 443	55 577	35 920
Other ferro-alloys	54 672	...	50 508	46 357	24 657
<b>Slovenia</b>					
Ferro-chrome	10 621	560	-----	-----	-----
Ferro-silicon	*10 000	*8 000	*9 000	*9 000	...
<b>Spain</b>					
Ferro-chrome	1 145	935	905	-----	-----
Ferro-manganese	18 360	10 000	26 815	24 804	33 218
Ferro-silico-manganese	107 952	95 000	128 197	102 110	103 494
Ferro-silicon	39 115	42 000	50 071	53 427	56 994
Silicon metal	18 424	28 000	28 215	29 114	26 071
<b>Sweden</b>					
Ferro-chrome	115 534	128 269	106 399	107 036	118 792
Ferro-silicon	20 356	21 440	18 948	21 197	21 513
<b>Turkey</b>					
Ferro-chrome	110 175	123 905	97 240	50 735	11 200
Ferro-silico-chrome	6 530	6 340	7 170	5 895	7 245
Ferro-silicon	4 810	620	-----	-----	-----
<b>Ukraine</b>					
Spiegeleisen	-----	-----	5 400	*5 000	...
Ferro-manganese	291 500	257 300	338 100	*335 000	...
Ferro-silico-manganese	485 560	498 905	684 040	*685 000	...
Ferro-nickel	...	...	10 800	41 000	...
Ferro-silicon	222 511	243 600	323 417	*325 000	...
<b>Egypt</b>					
Ferro-silicon (g)	56 703	*55 000	*55 000	*55 000	...
Other ferro-alloys (g)	17 800	*30 000	*30 000	*30 000	...
<b>South Africa</b>					
Ferro-chrome (d)	2 025 260	2 155 202	2 574 264	2 141 008	2 398 327
Ferro-manganese	542 120	527 106	(f) 907 272	(f) 783 021	...
Ferro-silico-manganese	308 845	307 545	...	...	...
Ferro-silicon	108 410	105 998	108 513	107 557	...
Ferro-vanadium	*5 000	*9 000	*11 000	*11 000	*11 000
Silicon metal	32 611	35 797	40 264	39 440	...
<b>Zimbabwe</b>					
Ferro-chrome	246 782	248 395	246 324	249 841	*250 000
Ferro-silico-chrome	21 385	24 760	19 631	16 848	-----
<b>Canada</b>					
Ferro-niobium	3 400	3 500	3 300	4 600	5 200
Ferro-silicon	*70 000	*70 000	*70 000	*70 000	...
Silicon metal	*30 000	*30 000	*30 000	*30 000	...
<b>Dominican Republic</b>					
Ferro-nickel	65 892	63 760	72 488	54 784	59 365
<b>Mexico</b>					
Ferro-manganese	86 701	79 567	90 501	60 014	38 532
Ferro-silico-manganese	104 650	113 916	107 922	74 290	73 263
<b>USA</b>					
Ferro-chrome (d) (e)	30 000	...	...	...	...
Ferro-nickel	8 590	-----	-----	-----	...
Ferro-silicon	334 000	325 000	250 000	191 000	...
Silicon metal	188 000	186 000	175 000	131 000	...

## Production of Ferro-Alloys

Country	1998	1999	2000	2001	2002
<b>Argentina</b>					
Ferro-manganese	5 000	*2 000	----	----	...
Ferro-silico-manganese	25 000	*10 000	4 900	*5 000	...
Ferro-silicon	11 000	2 600	2 500	*2 500	...
Other ferro-alloys	23 000	13 900	16 900	...	...
Silicon metal	7 000	*8 000	*8 000	*8 000	...
<b>Brazil</b>					
Ferro-chrome	65 683	78 874	134 562	84 428	123 175
Ferro-silico-chrome	6 824	11 910	7 790	5 899	10 522
Ferro-silico-magnesium	7 717	9 882	9 658	11 032	14 552
Ferro-manganese	137 549	85 260	121 277	96 016	156 435
Ferro-silico-manganese	124 458	148 384	171 304	180 235	182 731
Ferro-nickel	26 389	19 807	19 315	17 966	18 874
Ferro-niobium	30 973	28 557	27 359	37 411	36 450
Ferro-silicon	166 278	200 833	189 935	159 345	145 910
Other ferro-alloys	1 170	----	----	----	...
Silicon metal	126 744	136 572	166 344	112 123	133 390
<b>Chile</b>					
Ferro-chrome	*2 000	*2 000	*2 000	*2 000	...
Ferro-manganese	5 122	2 833	4 011	1 975	...
Ferro-silico-manganese	3 921	2 048	1 802	153	...
Ferro-molybdenum	1 978	2 079	1 454	*1 400	...
Ferro-silicon	1 159	1 000	*1 000	*1 000	...
<b>Colombia</b>					
Ferro-nickel	65 400	65 900	64 500	89 400	102 300
<b>Venezuela</b>					
Ferro-manganese	7 671	10 694	15 655	12 715	...
Ferro-silico-manganese	48 504	47 635	69 735	56 640	...
Ferro-nickel	----	----	3 200	27 033	...
Ferro-silicon	35 571	55 505	86 188	...	...
<b>Bhutan</b>					
Ferro-silicon	*18 000	*18 000	*15 000	*16 000	...
<b>China</b>					
Ferro-chrome	423 825	301 300	207 523	226 037	191 185
Ferro-silico-chrome	69 050	50 400	47 947	35 591	32 767
Ferro-manganese	1 016 300	940 900	940 000	947 300	...
Ferro-silico-manganese	(c) ...	...	...	(c) ...	...
Ferro-molybdenum	2 199	2 141	167	(c) ...	...
Ferro-rare earth	7 928	8 980	2 951	(c) ...	...
Ferro-silicon	1 276 600	1 118 900	1 390 000	1 384 900	...
Ferro-titanium	1 238	3 642	34	(c) ...	...
Ferro-tungsten	6 359	9 430	8 253	(c) ...	...
Ferro-vanadium	9 130	18 767	9 940	(c) ...	...
Other ferro-alloys	*735 000	1 354 000	1 430 700	1 937 800	...
<b>India</b>					
Ferro-aluminium (b)	...	...	1 510	1 743	...
Ferro-chrome (b)	307 000	299 000	382 000	302 000	381 000
Ferro-silico-magnesium (b)	1 717	2 310	2 460	2 385	2 768
Ferro-manganese (b)	165 000	136 000	170 000	207 000	237 000
Ferro-silico-manganese (b)	193 000	233 000	276 000	236 000	304 000
Ferro-molybdenum (b)	662	1 693	1 881	2 152	...
Ferro-silicon (b)	57 000	56 000	67 000	76 000	82 000
Ferro-vanadium (b)	345	735	674	644	*750
<b>Indonesia</b>					
Ferro-manganese	*13 000	*12 000	*12 000	*12 000	...
Ferro-silico-manganese	*7 000	*7 000	*7 000	*7 000	...
Ferro-nickel	42 260	46 030	50 500	51 510	...
<b>Iran</b>					
Ferro-chrome (a)	14 590	12 485	10 900	9 400	*15 000
Ferro-silicon (a)	47 224	34 680	49 529	37 000	...

**Production of Ferro-Alloys**

tonnes

Country	1998	1999	2000	2001	2002
Japan					
Ferro-chrome	142 931	119 777	130 074	111 167	91 937
Ferro-manganese	334 081	315 152	337 694	368 293	356 717
Ferro-silico-manganese	70 886	65 744	72 092	66 257	74 171
Ferro-molybdenum	3 443	3 391	3 699	3 485	2 375
Ferro-nickel	345 772	332 293	367 181	367 739	370 973
Ferro-silicon	951	1 452	----	----	----
Ferro-tungsten	61	43	42	109	9
Ferro-vanadium	4 073	3 349	4 108	3 613	3 592
Other ferro-alloys	1 101	6 077	7 171	5 733	6 376
Kazakhstan					
Ferro-chrome	542 050	731 563	799 762	761 901	835 743
Ferro-silico-chrome	33 553	49 282	55 634	79 746	108 028
Ferro-silico-manganese	57 376	78 495	102 719	141 776	163 725
Ferro-silicon	92 125	140 263	133 269	145 780	126 968
Other ferro-alloys	...	...	630	1 730	986
Korea, Dem. P.R. of					
Ferro-alloys	*10 000	*10 000	*10 000	*10 000	...
Korea, Republic of					
Ferro-manganese	158 418	140 000	146 000	144 000	137 000
Ferro-silico-manganese	106 997	(c) ...	(c) ...	102 000	94 000
Other ferro-alloys	2 785	120 000	108 000	4 000	...
Taiwan					
Ferro-manganese	12 532	----	----	----	...
Ferro-silicon	3 775	3 212	2 975	1 181	...
Australia					
Ferro-manganese (g)	95 658	106 006	98 421	124 586	73 523
Ferro-silico-manganese (g)	89 537	101 455	115 585	120 758	138 938
Silicon metal	*30 000	*30 000	*30 000	*30 000	*30 000
New Caledonia					
Ferro-nickel	157 959	157 592	151 049	153 012	162 973

## Note(s):

- (a) Years ended 20 March following that stated
- (b) Years ended 31 March following that stated
- (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) Years ended 30 June of that stated

## Exports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
Albania					
Ferro-chrome	(a) *26 700	(a) *33 400	21 609	16 990	20 035
Scrap (a)	*3 900	*3 800	*13 100	*29 600	*10 000
Armenia					
Scrap	186 000	55 322	37 822	11 614	17 452
Austria					
Ferro-alloys	7 595	5 518	3 310	6 154	16 390
Ingots, blooms, billets	219 382	227 262	248 303	177 057	217 580
Scrap	573 400	558 267	789 435	754 489	777 267
Azerbaijan					
Scrap	6 937	13 021	149 496	18 652	...
Belarus					
Ferro-alloys	3 417	3 246	...	38	226
Ingots, blooms, billets	592 800	708 504	774 700	400 800	432 470
Scrap	145 444	129 426	150 400	153 400	104 298
Belgium-Luxembourg					
Pig iron	130 812	124 891	180 780	116 359	172 175
Sponge and powder	2 262	2 673	3 797	4 395	13 263
Ferro-chrome	42 781	47 169	39 754	39 937	41 565
Ferro-silico-magnesium	1 625	2 633	3 271	1 171	38
Ferro-manganese	19 238	13 324	21 737	24 367	23 985
Ferro-silico-manganese	17 715	33 190	31 690	31 139	29 953
Ferro-silicon	37 804	30 411	24 591	30 427	30 962
Ferro-titanium and Fe-Si-Ti	450	456	244	29	7
Other ferro-alloys	8 626	2 002	1 296	9 106	4 335
Silicon metal	9 251	6 668	7 741	12 440	5 873
Ingots, blooms, billets	804 377	491 486	615 783	498 122	548 174
Scrap	1 408 715	1 561 184	1 974 795	1 799 938	1 821 636
Bosnia and Herzegovina					
Ferro-silicon (a)	*10 800	*15 200	*21 300	*31 200	*8 500
Scrap (a)	*60 900	*6 700	*43 500	*14 800	*27 200
Bulgaria					
Ferro-alloys	8 052	3 657	2 779	(a) *3 900	(a) *1 400
Ingots, blooms, billets	37 271	106 492	102 033	(a) *210 900	...
Scrap	58 488	101 919	386 591	(a) *218 500	...
Croatia					
Ferro-chrome	12 173	2	15 468	----	434
Scrap	102 443	101 868	106 021	133 451	197 532
Cyprus					
Scrap	15 944	16 744	17 341	26 839	38 154
Czech Republic					
Pig iron	161 308	42 092	32 820	25 352	28 844
Ferro-chrome	1 247	1 455	1 190	2 300	287
Ferro-vanadium	2 030	1 531	2 940	2 195	2 949
Other ferro-alloys	4 134	7 911	3 165	2 412	4 445
Silicon metal	1 113	433	915	816	859
Ingots, blooms, billets	245 511	257 604	262 130	250 740	287 557
Scrap	873 412	852 585	987 452	1 000 515	1 057 822
Denmark					
Ingots, blooms, billets	58 023	25 693	143 030	59 258	21 432
Scrap	479 924	511 129	658 353	770 311	1 058 048
Estonia					
Pig iron (a)	*239 600	*81 800	*65 500	*700	*500
Ferro-chrome	(a) *700	42 515	18 804	2 283	----
Other ferro-alloys	...	7 483	3 639	4 269	10 270
Silicon metal	...	14 585	20 052	21	1
Ingots, blooms, billets	3 770	22 687	263	2 728	...
Scrap	644 816	546 117	502 495	380 328	326 407
Finland					
Ferro-chrome and ferro-silico-chrome	64 251	89 974	43 887	82 590	80 026
Ingots, blooms, billets	230 115	208 787	144 538	130 066	186 989
Scrap	269 999	212 045	394 218	362 373	359 153

## Exports of Iron, Steel and Ferro-Alloys

tonnes

Country	1998	1999	2000	2001	2002
France					
Pig iron	7 830	18 006	520	4 426	3 378
Sponge and powder	5 026	5 769	7 864	6 895	5 983
Ferro-chrome	455	426	5 965	2 478	3 747
Ferro-silico-magnesium	8 377	4 824	5 929	5 714	6 521
Ferro-manganese	46 927	35 019	19 275	26 049	26 302
Ferro-silico-manganese	56 855	44 218	15 750	62 877	73 647
Ferro-molybdenum	92	240	530	410	348
Ferro-nickel	14 256	1 563	872	712	104
Ferro-niobium	704	440	735	784	361
Ferro-silicon	41 049	48 316	50 247	43 956	53 682
Ferro-titanium and Fe-Si-Ti	1 535	1 443	1 123	1 842	1 434
Ferro-vanadium	18	22	70	21	25
Other ferro-alloys	40 983	30 331	36 008	45 650	35 746
Ingots, blooms, billets	1 804 004	2 416 133	2 447 574	2 621 568	3 419 270
Scrap	3 484 599	3 731 225	4 537 161	4 161 312	4 656 513
Georgia					
Ferro-manganese	10 430	15 069	8 409	8 038	5 136
Ferro-silico-manganese	31 587	28 837	18 453	31 652	32 802
Ingots, blooms, billets	27 274	6 708	4 527	1 539	1 829
Scrap	(a) *65 800	385 955	782 582	723 451	822 572
Germany					
Pig iron	65 445	81 300	116 513	75 137	67 365
Sponge and powder	21 011	16 304	27 258	30 585	83 354
Ferro-chrome	59 663	38 575	47 714	34 379	33 992
Ferro-silico-chrome	1 019	525	251	3 115	608
Ferro-silico-magnesium	6 875	6 896	4 894	6 912	6 825
Ferro-manganese	17 755	11 286	19 071	19 346	13 036
Ferro-silico-manganese	11 255	9 367	11 082	13 743	11 520
Ferro-molybdenum	681	1 153	765	903	1 283
Ferro-nickel	909	582	42	...	57
Ferro-niobium	312	853	1 066	816	828
Ferro-phosphorus	1 532	1 506	1 704	1 149	1 163
Ferro-silicon	44 943	47 426	50 904	66 920	64 000
Ferro-titanium and Fe-Si-Ti	2 304	2 500	2 585	2 877	3 607
Ferro-tungsten and Fe-Si-W	120	92	310	112	106
Ferro-vanadium	332	262	299	373	634
Other ferro-alloys	24 078	12 690	11 272	20 321	22 860
Silicon metal	7 943	8 957	10 736	10 632	10 060
Ingots, blooms, billets	1 734 789	1 842 123	2 451 015	2 032 350	2 011 458
Scrap	7 027 029	6 999 310	6 878 310	6 598 673	6 880 778
Greece					
Ferro-alloys	...	11 101	12 794	10 175	7 976
Ingots, blooms, billets	92	999	2 363	5 083	1 157
Scrap	72 376	55 010	35 747	47 721	39 806
Hungary					
Ferro-alloys	2 217	1 689	1 573	651	694
Ingots, blooms, billets	42 902	17 277	23 843	47 954	87 994
Scrap	552 051	468 613	631 088	462 209	553 847
Iceland					
Ferro-silicon	67 237	69 956	99 884	111 898	113 719
Scrap	20 834	21 206	28 727	47 261	38 295
Irish Republic					
Scrap	25 356	19 956	61 401	133 287	228 807
Italy					
Pig iron	31 739	20 514	26 986	47 031	58 982
Sponge and powder	20 647	20 905	...	2 095	651
Ferro-chrome	1 781	1 456	2 693	1 843	9 576
Ferro-silico-magnesium	107	29	57	10	-----
Ferro-manganese	13 465	13 077	20 413	17 472	5 382
Ferro-silico-manganese	5 361	3 832	6 876	3 371	2 055
Ferro-molybdenum	303	137	186	525	351
Ferro-silicon	2 427	3 336	2 248	3 143	2 697
Ferro-vanadium	269	301	1 669	1 023	2 873
Other ferro-alloys	536	340	340	1 107	975
Silicon metal	2 918	2 046	1 197	743	1 092
Ingots, blooms, billets	184 330	306 045	841 283	770 001	786 800
Scrap	36 590	105 191	166 125	151 196	153 190

## Exports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
Latvia					
Pig iron (a)	*203 300	...	*51 100	...	...
Ferro-chrome	(a) *30 100	53 000	8 800	24 000	...
Other ferro-alloys (a)	*8 900	...	*500	...	...
Ingots, blooms, billets (a)	*26 200	...	...	...	...
Scrap	94 051	55 152	96 674	37 885	6 328
Lithuania					
Scrap	414 586	270 282	396 627	563 394	...
Macedonia					
Ferro-silicon	67 472	56 530	42 584	29 099	...
Other ferro-alloys	52 849	24 827	16 720	9 433	...
Silicon metal	1 096	15	...	...	...
Scrap	3 225	*3 000	42 615	4 558	...
Malta					
Scrap	14 000	13 930	11 197	...	...
Netherlands					
Pig iron	51 881	86 489	62 714	62 667	5 131
Sponge and powder	446	21 821	87 650	76 545	107 474
Ferro-chrome	53 185	35 413	24 952	27 898	9 122
Ferro-silico-chrome	2 379	134	25	32	5
Ferro-manganese	4 729	1 259	28 383	26 335	23 131
Ferro-silico-manganese	14 678	13 027	9 105	25 958	7 037
Ferro-molybdenum	4 268	4 800	4 282	3 401	1 242
Ferro-nickel	5 871	7 464	12 525	10 796	4 159
Ferro-niobium	3 881	5 336	10 281	7 512	130
Ferro-silicon	3 501	3 111	1 351	4 937	9 899
Ferro-titanium and Fe-Si-Ti	214	...	...	780	225
Ferro-tungsten and Fe-Si-W	170	140	215	380	217
Ferro-vanadium	3 440	2 033	1 083	2 194	910
Other ferro-alloys	749	3 018	2 162	9 767	9 379
Silicon metal	5 892	8 093	2 098	14 014	8 819
Ingots, blooms, billets	454 945	965 500	511 537	312 200	538 825
Scrap	2 655 404	2 434 145	3 101 130	3 072 052	3 064 283
Norway					
Pig iron	65 000	...	(a) *27 900	(a) *46 600	(a) *38 800
Ferro-chrome (a)	*161 000	*158 100	*172 700	*76 100	*82 200
Ferro-manganese (a)	*203 900	*203 200	*205 400	*193 000	*153 400
Ferro-silico-manganese	223 406	246 923	232 125	275 291	240 477
Ferro-silicon	423 154	425 761	407 164	324 858	251 252
Other ferro-alloys	40 026	48 308	54 776	48 994	49 366
Silicon metal	119 560	142 247	154 807	153 017	150 681
Ingots, blooms, billets	143 442	140 600	177 302	110 888	126 094
Scrap	134 216	140 354	139 044	150 020	227 592
Poland					
Pig iron	135 200	74 456	137 667	40 670	3 003
Ferro-chrome	2 014	762	26	...	...
Ferro-manganese and Fe-Si-Mn	4 434	487	...	20	3 637
Ferro-silicon	43 852	37 655	50 497	50 649	43 021
Other ferro-alloys	1 325	835	9 272	10 522	96
Ingots, blooms, billets	...	825 288	1 256 739	948 473	1 034 776
Scrap	446 200	730 592	987 895	1 269 594	1 535 305
Portugal					
Ingots, blooms, billets	88 366	140 231	107 702	44 980	15 058
Scrap	122 069	78 393	172 330	246 777	231 761
Romania					
Pig iron	39 154	...	7 473	2 548	2 686
Sponge and powder	8 544	8 857	7 767	7 264	7 797
Ferro-alloys	47 625	8 186	61 255	66 286	88 368
Ingots, blooms, billets	148 306	237 609	59 291	435 748	162 991
Scrap	759 347	1 325 996	2 289 430	1 679 265	2 070 119

## Exports of Iron, Steel and Ferro-Alloys

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Country	1998	1999	2000	2001	2002
<b>Russia</b>					
Pig iron	2 466 100	2 908 000	3 691 000	3 516 869	4 085 302
Sponge and powder	421 164	401 263	481 896	633 357	1 200 740
Ferro-chrome	130 387	158 873	161 496	114 467	113 457
Ferro-silico-chrome	23 930	12 634	6 346	...	1 840
Ferro-manganese	6 226	1 884	3 062	2 675	779
Ferro-silico-manganese	4 620	6 235	8 164	9 195	19 900
Ferro-molybdenum	889	381	34	29	66
Ferro-nickel	4 549	3 414	4 681	2 469	4 151
Ferro-silicon	145 442	196 811	193 217	212 285	217 096
Ferro-titanium and Fe-Si-Ti	12 794	15 546	14 197	12 807	18 926
Ferro-tungsten and Fe-Si-W	1 759	1 025	443	121	2
Ferro-vanadium	3 134	4 631	5 902	6 717	4 838
Other ferro-alloys	1 349	1 119	864	1 422	3 178
Silicon metal	36 214	33 462	44 502	53 136	48 854
Ingots, blooms, billets	8 048 553	13 229 437	12 667 963	13 076 480	12 527 249
Scrap	7 260 386	7 546 891	6 821 377	5 694 879	5 760 208
<b>Serbia and Montenegro</b>					
Ferro-alloys	1 723	6	6 587	5	89
Scrap	8 566	16 756	42 871	40 947	72 715
<b>Slovakia</b>					
Pig iron	23 125	10 510	37 392	23 551	13 213
Ferro-silicon	(c) ...	64 144	58 041	53 629	39 551
Other ferro-alloys	149 358	82 922	116 412	102 422	118 125
Ingots, blooms, billets	(a) *114 000	(a) *49 000	53 720	202 645	191 414
Scrap	254 000	296 198	274 525	375 552	450 126
<b>Slovenia</b>					
Ferro-alloys	16 137	20 348	25 967	27 200	31 083
Ingots, blooms, billets	13 703	10 674	13 638	11 953	8 292
Scrap	86 802	87 155	114 018	136 041	126 233
<b>Spain</b>					
Pig iron	1 389	1 095	2 065	2 900	4 177
Sponge and powder	2 285	2 236	3 074	4 956	3 920
Ferro-chrome	906	1 151	1 257	466	472
Ferro-manganese	61 866	61 540	42 861	66 834	73 506
Ferro-silico-manganese	51 124	45 970	27 949	34 622	29 297
Ferro-molybdenum	221	229	362	120	326
Ferro-silicon	6 814	4 411	4 666	5 826	14 730
Other ferro-alloys	724	536	304	1 120	750
Silicon metal	8 517	16 580	15 379	14 027	17 621
Ingots, blooms, billets	384 502	369 672	376 331	263 813	241 944
Scrap	16 745	29 812	52 770	45 419	93 970
<b>Sweden</b>					
Pig iron	14 528	2 443	27 611	35 593	30 079
Sponge and powder	15 196	11 601	13 929	11 324	11 356
Ferro-chrome	76 912	45 000	53 700	1 023	617
Ferro-silico-magnesium	786	5 358	2 636	1 102	392
Ferro-manganese and Fe-Si-Mn	1 906	1 413	1 050	1 189	6 903
Ferro-molybdenum	134	80	134	65	745
Ferro-phosphorus	474	602	565	399	1 203
Ferro-silicon	2 756	602	564	762	736
Ferro-vanadium	115	27	30	24	427
Other ferro-alloys	1 815	165	458	3 138	6 903
Silicon metal	9	565	475	1 766	6 742
Ingots, blooms, billets	267 585	121 611	92 258	197 800	297 913
Scrap	357 589	399 749	473 534	560 297	722 509
<b>Switzerland</b>					
Silicon metal	10 533	4	3	1	8
Scrap	377 433	346 356	401 561	457 523	412 341
<b>Turkey</b>					
Pig iron	18 259	77 804	94 231	109 862	12 895
Ferro-chrome	86 457	136 643	68 597	15 446	61 163
Other ferro-alloys	825	3 902	742	673	1 156
Ingots, blooms, billets	796 778	658 024	1 262 574	2 132 421	2 734 188
Scrap	28 144	29 303	28 583	28 937	34 512



## Exports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
<b>Ukraine</b>					
Pig iron	2 082 673	1 881 204	1 612 051	(a) *826 700	(a) *937 500
Ferro-manganese	172 112	121 804	194 351	(a) *167 000	(a) *122 000
Ferro-silico-manganese	353 747	342 070	465 814	(a) *374 200	(a) *447 700
Ferro-nickel	2 154	5 752	9 736	30 704	(a) *18 900
Ferro-silicon	...	596 640	838 230	...	...
Other ferro-alloys	14 957	2 035	3 662	(a) *7 100	(a) *14 600
Ingots, blooms, billets	4 937 336	7 989 718	9 361 509	...	...
Scrap	3 281 108	4 743 490	5 188 159	4 510 000	...
<b>United Kingdom</b>					
Pig iron	1 632	446	679	6 749	3 366
Sponge and powder	1 349	1 895	2 231	3 164	2 878
Ferro-chrome and ferro-silico-chrome	1 854	1 047	876	1 206	815
Ferro-manganese	2 878	452	1 327	792	1 301
Ferro-silico-manganese	2 456	1 327	1 307	8	116
Ferro-molybdenum	10 453	8 311	7 251	9 278	11 887
Ferro-nickel	3 376	0	9	104	368
Ferro-niobium	32	47	107	280	46
Ferro-phosphorus	167	95	22	26	57
Ferro-silicon	2 502	2 382	1 400	2 247	2 778
Ferro-titanium and Fe-Si-Ti	20 211	18 894	18 839	16 422	16 451
Ferro-vanadium	96	77	49	118	55
Other ferro-alloys	5 049	5 033	6 818	6 013	9 226
Ingots, blooms, billets	561 451	407 044	520 306	746 730	558 690
Scrap	3 177 490	3 578 027	4 378 117	4 821 840	5 520 433
<b>Algeria</b>					
Pig iron	49 473	93 102	111 025	...	...
Ingots, blooms, billets	31 055	82 857	136 363	...	...
Scrap	57 365	28 811	59 239	...	...
<b>Botswana</b>					
Scrap	7 383	...	7 399	9 091	...
<b>Egypt</b>					
Ferro-alloys	41 312	33 060	...	50 794	*42 400
Scrap	4 424	13 168	*15 000	24 217	*41 500
<b>Mauritius</b>					
Scrap	12 602	11 593	18 009	16 481	16 227
<b>Morocco</b>					
Scrap	105 631	92 837	145 780	166 239	...
<b>Senegal</b>					
Scrap	14 045	6 140	5 000	18 399	19 744
<b>South Africa</b>					
Pig iron	512 253	570 027	499 458	523 755	902 280
Sponge and powder	2 123	3 771	5 891	11 112	17 396
Ferro-chrome	1 649 874	1 897 110	2 118 562	1 975 679	2 189 878
Ferro-manganese	433 432	421 636	458 131	405 876	475 600
Ferro-silico-manganese	298 512	227 488	221 850	210 359	215 259
Ferro-silicon	48 002	46 366	36 579	31 400	73 000
Ferro-vanadium	(c) ...	(c) ...	...	9 854	10 165
Other ferro-alloys	4 997	9 071	919	380	799
Silicon metal	38 745	33 120	40 955	39 400	29 700
Ingots, blooms, billets	491 156	309 109	597 410	643 753	713 098
Scrap	449 823	593 449	1 363 045	505 107	1 253 603
<b>Sudan</b>					
Scrap	2 035	...	6 268	12 283	21 127
<b>Tunisia</b>					
Scrap	3 198	31 429	51 712	88 288	...
<b>Zambia</b>					
Ferro-alloys	...	1 630	222	215	1 729
Scrap	...	603	4 115	2 047	5 978
<b>Zimbabwe</b>					
Ferro-chrome	268 650	233 558	(b) 289 481	(b) *265 000	423 642
Ferro-silico-chrome	21 767	25 124	...	...	4 193
Ingots, blooms, billets	12 896	41 458	31 158	*30 000	68 569
Scrap	43 641	76 696	46 164	...	16 055

## Exports of Iron, Steel and Ferro-Alloys

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Country	1998	1999	2000	2001	2002
Canada					
Pig iron	165 393	116 757	109 058	124 596	110 920
Sponge and powder	166 558	84 409	144 497	70 332	119 599
Ferro-chrome	53	215	76	470	1 291
Ferro-manganese	1 770	53	1 292	975	3 227
Ferro-silico-manganese	305	242	476	491	521
Ferro-niobium	2 060	2 200	2 479	3 570	4 128
Ferro-silicon	20 891	23 356	20 764	23 800	26 413
Other ferro-alloys	1 648	1 536	1 060	1 032	957
Silicon metal	37 722	43 749	59 282	45 013	41 231
Ingots, blooms, billets	324 632	369 333	357 359	234 042	221 731
Scrap	2 244 744	1 881 465	1 914 053	1 933 550	2 133 433
Cuba					
Ingots, blooms, billets (a)	*33 800	*57 000	*89 000	*82 100	*68 400
Scrap (a)	*2 000	*98 000	*59 200	*28 000	*33 800
Dominican Republic					
Ferro-nickel	69 420	62 678	71 644	59 735	60 437
Scrap	*11 000	*11 000	11 047	13 468	...
Mexico					
Ferro-manganese	34 329	30 120	34 237	27 388	12 321
Ferro-silico-manganese	47 802	52 150	49 864	19 029	9 975
Other ferro-alloys	486	713	1 166	1 009	1 949
Ingots, blooms, billets	2 488 820	2 650 417	2 491 835	1 445 758	1 891 355
Scrap	155 618	148 005	168 949	167 117	218 604
Nicaragua					
Scrap	17 763	6 600	12 508	11 722	9 930
Trinidad and Tobago					
Sponge	223 113	521 700	678 073	1 146 584	...
Ingots, blooms, billets	3 800	...	3 119	14 800	...
USA					
Pig iron	97 140	106 151	76 137	46 039	39 683
Sponge and powder	69 071	44 012	53 582	39 881	105 635
Ferro-chrome and ferro-silico-chrome	15 464	15 340	51 101	25 727	37 802
Ferro-manganese	21 591	23 768	19 336	19 443	17 903
Ferro-silico-manganese	12 969	8 914	5 292	6 521	5 293
Ferro-molybdenum	1 582	1 839	1 575	1 427	1 890
Ferro-nickel	1 747	85	62	135	69
Ferro-niobium	25	166	60	162	250
Ferro-phosphorus	2 543	1 621	4 879	2 590	(c) ...
Ferro-silicon	52 362	49 814	47 905	25 280	18 581
Ferro-vanadium	868	497	271	142	194
Other ferro-alloys	4 590	5 344	5 106	8 513	11 511
Silicon metal	24 767	38 871	21 552	16 585	17 396
Ingots, blooms, billets	241 434	131 336	106 085	135 423	180 998
Scrap	5 928 593	5 390 686	5 938 113	7 407 847	9 088 650
Argentina					
Pig iron	185 902	63 556	...	...	...
Ferro-silico-manganese	17 364	238	...	...	...
Ferro-silicon	2 176	2 705	3 208	4 061	7 471
Other ferro-alloys	14 693	8 293	5 140	3 443	4 471
Silicon metal	5 166	3 454	4 149	218	5
Ingots, blooms, billets	21 724	97 681	30 365	138 456	274 337
Brazil					
Pig iron	3 214 615	3 030 491	3 808 760	4 135 297	4 401 292
Ferro-chrome	3 790	227	135	144	425
Ferro-manganese	33 026	23 279	52 613	22 201	68 740
Ferro-nickel	8 516	4 431	6 656	2 518	3 401
Ferro-niobium	27 542	26 588	27 927	28 429	31 256
Fe-silico-spiegeleisen and Si-Mn	36 600	58 680	80 857	65 633	77 903
Ferro-silicon	134 664	160 061	182 197	110 231	103 817
Other ferro-alloys	37 142	29 450	29 127	26 916	22 943
Silicon metal	102 737	123 218	154 009	104 538	148 040
Ingots, blooms, billets	5 426 212	6 378 997	6 213 427	6 364 730	7 779 066
Chile					
Ferro-alloys	3 232	3 784	3 224	4 235	3 347
Ingots, blooms, billets	...	...	12 489	10 354	...
Scrap	16 365	4 381	4 486	8 212	25 875

## Exports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
Colombia					
Ferro-nickel	57 183	61 501	54 280	94 969	115 671
Ecuador					
Scrap	13 218	3 163	7 240	3 056	3 845
Suriname					
Scrap	4 457	*4 000	*4 000	...	...
Venezuela					
Sponge and powder	1 554 276	2 239 643	2 713 829	2 814 123	...
Ferro-silico-manganese	24 129	16 077	22 777	6 199	...
Ferro-nickel	----	----	----	34 511	56 342
Ferro-silicon	36 294	36 427	64 807	66 244	...
Ingots, blooms, billets	327 634	...	436 135	506 649	472 957
Scrap	129 466	29 738	55 857	27 886	...
Bahrain					
Scrap	45 793	33 448	50 772	54 672	163 122
China					
Pig iron	2 424 656	1 621 161	3 332 747	685 879	396 762
Sponge and powder	15 813	56 472	60 804	17 047	23 614
Ferro-chrome	102 083	73 813	131 160	208 894	51 952
Ferro-silico-chrome	40 725	17 465	23 628	16 463	12 156
Ferro-manganese	130 658	122 257	190 036	156 770	233 810
Ferro-silico-manganese	297 669	298 511	362 427	353 649	450 900
Ferro-molybdenum	31 739	38 586	44 370	37 671	29 629
Ferro-silicon	265 981	349 231	491 627	512 289	538 707
Ferro-titanium and Fe-Si-Ti	859	746	1 356	935	1 465
Ferro-tungsten and Fe-Si-W	3 617	4 111	5 127	6 303	5 133
Ferro-vanadium	2 308	2 125	3 073	2 110	1 679
Other ferro-alloys	84 319	57 101	60 736	63 043	64 683
Silicon metal	275 823	268 229	328 844	324 693	388 317
Ingots, blooms, billets	2 172 881	2 328 264	5 089 204	2 729 389	1 351 559
Scrap	24 922	62 873	47 280	9 673	6 264
Dubai					
Scrap	184 056	202 329	...	...	...
Hong Kong					
Ferro-alloys	8 944	5 370	3 395	2 158	2 224
Silicon metal	1 095	732	...	...	1 151
Ingots, blooms, billets	20 708	984	4 227	5 387	5 238
Scrap	754 109	692 804	769 869	937 425	977 806
India					
Pig iron (d)	211 659	130 952	205 481	327 400	466 680
Sponge and powder (d)	26 682	2 589	7 476	16 193	38 366
Ferro-chrome (d)	148 672	107 389	143 205	66 163	62 477
Ferro-silico-chrome (d)	5 770	6 275	820	2 367	236
Ferro-manganese (d)	7 343	1 459	5 382	12 338	27 555
Ferro-silico-manganese (d)	34 113	35 684	61 502	26 667	40 328
Other ferro-alloys (d)	19 836	8 028	3 427	3 074	10 343
Silicon metal (d)	777	362	5 588	2 574	2 531
Ingots, blooms, billets (d)	57 643	62 552	155 133	132 122	363 342
Scrap (d)	8 607	2 240	1 569	26 397	14 908
Indonesia					
Sponge and powder	25 515	27 863	3 336	441	2 698
Ferro-nickel	41 342	35 590	52 674	36 898	23 731
Ingots, blooms, billets	97 364	25 087	4 140	4 405	4 781
Scrap	10 325	29 790	40 082	36 916	35 094
Iran					
Pig iron (a)	*65 600	*42 700	*100 000	*132 300	*146 200
Ferro-chrome	(a) *10 500	(a) *11 400	(a) *5 700	(a) *1 000	8 135
Ferro-silicon	17 585	20 109	15 446	65 881	11 512
Other ferro-alloys	(a) *800	2 378	(a) *1 700	(a) *1 300	7 209
Ingots, blooms, billets	*658 328	889 544	(a) *352 700	(a) *641 000	716 792
Scrap (a)	*48 100	*171 800	*116 000	*84 000	*6 700
Israel					
Scrap (a)	*29 100	*9 100	*6 800	*6 700	*15 200

## Exports of Iron, Steel and Ferro-Alloys

tonnes

Country	1998	1999	2000	2001	2002
Japan					
Pig iron	2 310 635	1 734 043	223 775	528 602	678 805
Sponge and powder	24 345	35 842	44 058	37 266	57 270
Ferro-chrome	700	1 462	2 544	2 686	1 362
Ferro-manganese	26 814	19 400	44 249	28 018	14 855
Ferro-silico-manganese	217	3 104	4 928	431	478
Ferro-nickel	74 018	111 311	114 829	121 708	119 508
Ferro-silicon	4 065	5 065	4 888	4 287	5 592
Other ferro-alloys	2 762	3 625	3 625	3 470	2 441
Silicon metal	2 447	2 768	3 269	3 486	4 240
Ingots, blooms, billets	1 196 176	2 256 797	1 499 028	3 083 080	3 967 363
Scrap	3 821 597	4 315 228	2 895 444	6 150 682	6 034 602
Jordan					
Scrap	16 332	20 411	16 749	13 631	9 650
Kazakhstan					
Ferro-chrome	443 035	563 505	655 910	...	(c) ...
Ferro-silico-chrome	14 119	18 916	16 507	30 246	43 501
Ferro-manganese	131	60	782	...	(c) ...
Ferro-silico-manganese	47 577	65 207	89 850	111 458	158 628
Ferro-phosphorus	1 140	2 801	(c) ...	4 881	4 672
Ferro-silicon	66 107	71 714	74 635	...	(c) ...
Other ferro-alloys	274	11	7 660	680 884	743 915
Ingots, blooms, billets	8 846	170 358	211 784	246 650	64 383
Scrap	515 198	1 270 559	2 136 493	2 107 186	1 309 949
Korea, Dem. P.R. of					
Pig iron (a)	*65 600	*42 700	*100 000	*132 300	*146 200
Ferro-alloys (a)	*3 600	*3 100	*1 700	*3 100	*3 200
Ingots, blooms, billets (a)	*54 900	*53 700	*36 900	*50 500	*58 000
Scrap (a)	*33 200	*51 700	*30 000	*66 700	*125 600
Korea, Republic of					
Ferro-manganese	22 928	11 996	17 033	12 616	14 870
Ferro-silico-manganese	15 573	7 453	15 490	14 978	12 529
Ferro-vanadium	124	355	458	123	263
Other ferro-alloys	729	...	6 493	7 107	6 742
Silicon metal	443	1 151	9 394	1 933	311
Ingots, blooms, billets	636 250	218 644	124 125	418 033	199 388
Scrap	41 819	26 341	37 235	61 856	118 349
Kuwait					
Scrap	162 132	194 504	240 082	...	...
Kyrgyzstan					
Scrap	16 543	12 779	40 538	122 203	202 738
Lebanon					
Scrap	130 613	128 901	148 853	184 781	...
Macao					
Scrap	3 563	8 466	16 221	8 842	14 348
Malaysia					
Sponge and powder	513 006	478 822	369 123	503 291	...
Ingots, blooms, billets	225 807	111 644	7 910	39 292	...
Scrap	9 800	9 900	43 294	...	...
Mongolia					
Ingots, blooms, billets	10 200	5 600	7 800	2 559	5 852
Scrap	*55 000	*50 000	*50 000	...	...
Oman					
Scrap	100 861	24 739	28 433	26 948	11 420
Philippines					
Scrap	38 547	21 610	76 801	181 084	...
Saudi Arabia					
Pig iron	7 731	8 879	704	26 577	8 016
Ferro-alloys	7 053	4 261	2 163	1 463	913
Silicon metal	1 934	32 861	8 938	3 910	808
Scrap	2 330	3 417	1 198	323	914
Singapore					
Ferro-alloys	1 205	720	340	200	448
Ingots, blooms, billets	3 065	...	18 558	7 418	10 441
Scrap	474 047	339 241	517 024	505 604	390 007
Sri Lanka					
Scrap	...	41 749	50 426	38 945	31 754

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

Country	1998	1999	2000	2001	2002
Taiwan					
Pig iron	1 943	4 477	6 103	45 233	11 274
Ferro-silicon	1 147	1 801	1 805	837	1 035
Other ferro-alloys	1 620	1 529	813	828	1 448
Silicon metal	731	1 159	1 476	1 976	905
Ingots, blooms, billets	32 598	37 300	92 779	66 623	64 106
Scrap	94 857	107 331	149 695	175 284	131 606
Thailand					
Scrap	96 161	76 003	99 960	102 465	87 122
Yemen, Republic of					
Scrap	19 167	...	34 984	24 540	...
Australia					
Sponge and powder	591	253 531	268 047	1 189 079	1 233 075
Ferro-manganese	57 316	27 470	...	...	20 941
Ferro-silico-manganese	81 313	70 188	...	...	...
Silicon metal	28 244	36 954	28 886	33 851	31 273
Ingots, blooms, billets	1 826 387	1 545 831	678 743	20 140	1 292
Scrap	576 772	758 865	767 223	1 109 792	1 036 335
New Caledonia					
Ferro-nickel	158 929	156 843	154 103	154 862	159 106
New Zealand					
Ingots, blooms, billets	10 032	12 261	4 936	3 688	9 467
Scrap	96 062	86 396	135 000	158 519	141 360

## Note(s):

(1) In this table the term 'ingots, blooms, billets' corresponds to items 7206, 7207, 7218 and 7224 of the Harmonised System which includes those of alloy and high carbon steel

- (a) BGS estimates, based on known imports into certain countries
- (b) Including ferro-silico-chrome
- (c) Included with 'other ferro-alloys'
- (d) Years ended 31 March following that stated

## Imports of Iron, Steel and Ferro-Alloys

tonnes

Country	1998	1999	2000	2001	2002
Albania					
Ingots, blooms, billets	2 261	4 570	29 974	23 923	19 862
Austria					
Pig iron	24 618	22 503	29 401	34 724	30 284
Sponge and powder	10 648	10 519	11 258	10 385	14 873
Ferro-chrome	24 032	19 629	31 129	33 710	24 412
Ferro-silico-chrome	1 012	340	26	-----	-----
Ferro-silico-magnesium	1 248	1 239	969	829	877
Ferro-manganese	21 744	20 115	18 565	24 511	37 772
Ferro-silico-manganese	17 155	8 933	3 615	5 054	4 829
Ferro-molybdenum	942	683	1 524	1 087	1 348
Ferro-niobium and ferro-niobium-tantalum	620	388	361	543	781
Ferro-phosphorus	964	955	1 876	990	1 023
Ferro-silicon	21 433	17 623	18 929	20 884	23 493
Ferro-titanium and Fe-Si-Ti	1 156	681	865	737	1 136
Ferro-tungsten and Fe-Si-W	589	483	868	845	562
Ferro-vanadium	1 025	1 285	1 575	622	571
Other ferro-alloys	3 504	1 371	1 790	3 640	3 083
Silicon metal	6 728	6 298	6 659	8 478	10 273
Ingots, blooms, billets	272 943	167 328	183 202	163 944	120 409
Scrap	685 810	578 309	695 834	833 909	865 061
Belarus					
Pig iron	132 842	128 122	118 195	133 844	108 170
Sponge and powder	2 625	26 040	48 037	54 504	10 691
Ferro-alloys	33 474	31 815	41 910	28 491	20 542
Ingots, blooms, billets	21 579	19 835	23 426	12 151	31 063
Scrap	767 280	732 835	1 139 800	734 500	783 630
Belgium-Luxembourg					
Pig iron	203 699	200 890	334 225	233 325	270 015
Sponge and powder	4 778	31 988	47 970	8 425	13 234
Ferro-chrome	146 391	146 100	178 130	155 561	176 217
Ferro-silico-chrome	4 032	4 296	2 393	7 992	3 426
Ferro-silico-magnesium	2 310	2 782	3 424	1 414	425
Ferro-manganese	47 039	52 600	63 097	63 766	67 683
Ferro-silico-manganese	57 422	52 669	58 256	58 555	56 769
Ferro-molybdenum	3 248	2 850	2 748	2 355	3 573
Ferro-nickel	32 099	28 692	32 285	36 455	42 337
Ferro-niobium	719	535	701	849	720
Ferro-phosphorus	613	691	816	604	769
Ferro-silicon	69 163	60 179	59 406	67 460	73 251
Ferro-titanium and Fe-Si-Ti	1 323	1 347	1 851	1 436	1 761
Ferro-vanadium	310	198	241	331	182
Other ferro-alloys	9 478	1 710	1 524	4 791	8 591
Silicon metal	13 901	16 559	14 238	12 750	14 985
Ingots, blooms, billets	2 809 762	2 905 305	3 530 375	2 631 575	2 383 948
Scrap	3 938 147	2 474 180	2 727 227	2 740 480	3 146 151
Bulgaria					
Pig iron	21 600	23 145	44 989	...	...
Ferro-manganese	4 999	1 420	5 596	...	...
Other ferro-alloys	5 210	2 630	6 531	...	...
Scrap	143 321	54 440	84 179	...	...
Croatia					
Pig iron	10 696	10 329	10 449	12 560	14 124
Ferro-alloys	3 077	2 199	2 313	1 706	2 265
Silicon metal	427	451	357	438	...
Ingots, blooms, billets	27 390	26 718	23 638	22 673	13 527
Scrap	16 531	6 368	8 099	7 569	3 937

## Imports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
<b>Czech Republic</b>					
Pig iron	161 000	62 465	66 334	91 906	90 568
Sponge and powder	694	974	724	670	5 739
Ferro-chrome	36 114	31 425	44 880	39 975	43 181
Ferro-manganese	25 430	19 517	17 569	20 716	21 055
Ferro-silico-manganese	22 924	16 777	22 291	25 660	26 130
Ferro-molybdenum	695	563	898	1 157	1 054
Ferro-silicon	24 923	18 948	20 666	20 640	20 570
Ferro-vanadium	131	205	283	278	250
Other ferro-alloys	5 982	5 327	6 638	8 092	7 851
Silicon metal	4 510	3 151	4 099	2 832	2 713
Ingots, blooms, billets	313 838	184 221	188 542	272 751	263 839
Scrap	114 108	134 543	182 992	347 858	372 348
<b>Denmark</b>					
Pig iron	133 126	121 314	148 640	112 108	59 866
Sponge and powder	2 594	2 408	1 436	1 943	14 155
Ferro-manganese	3 889	3 112	3 735	3 497	1 674
Ferro-silico-manganese	6 879	6 291	5 284	6 079	2 071
Ferro-silicon	3 010	2 272	2 768	2 479	337
Other ferro-alloys	4 110	946	2 522	13 822	784
Silicon metal	2 123	2 323	2 410	1 686	2 179
Ingots, blooms, billets	83 489	7 541	4 351	11 604	75 117
Scrap	273 910	235 598	279 695	326 574	325 841
<b>Estonia</b>					
Pig iron	8 764	886	841	695	764
Ferro-alloys	40 558	44 456	16 033	12 273	9 905
Silicon metal	75	15 799	19 378	649	946
Scrap	401 586	339 645	265 312	28 995	17 142
<b>Finland</b>					
Pig iron	30 498	22 009	32 759	42 707	72 083
Sponge and powder	18 644	33 587	16 983	12 235	16 335
Ferro-chrome	9 685	4 314	3 828	5 073	5 690
Ferro-manganese	12 377	11 726	12 840	13 199	12 744
Ferro-silico-manganese	34 270	31 005	28 682	29 989	32 832
Ferro-molybdenum	1 646	1 673	1 764	1 873	2 333
Ferro-nickel	44 569	44 635	51 634	61 421	61 244
Ferro-niobium	449	423	469	426	485
Ferro-phosphorus	190	288	217	221	139
Ferro-silicon	15 113	14 411	15 500	18 928	20 729
Ferro-titanium and Fe-Si-Ti	852	735	833	1 271	1 271
Ferro-vanadium	207	240	171	175	222
Other ferro-alloys	6 303	3 026	2 521	4 767	3 162
Silicon metal	2 942	3 077	3 622	3 007	2 397
Ingots, blooms, billets	209 121	331 409	323 548	448 017	350 229
Scrap	449 640	345 704	465 528	482 372	476 516
<b>France</b>					
Pig iron	213 188	228 303	294 402	235 212	225 850
Sponge and powder	25 713	25 642	23 054	124 727	140 863
Ferro-chrome	283 292	283 009	314 783	253 110	310 760
Ferro-silico-chrome	108	196	87	127	2 116
Ferro-silico-magnesium	2 702	2 789	2 167	2 006	2 166
Ferro-manganese	59 532	50 040	47 814	42 103	57 442
Ferro-silico-manganese	59 597	45 014	69 823	53 527	64 538
Ferro-molybdenum	4 835	4 709	5 885	5 803	4 839
Ferro-nickel	41 604	19 050	25 071	27 640	36 725
Ferro-niobium	1 983	1 632	2 044	2 133	1 703
Ferro-phosphorus	3 437	3 174	3 136	2 550	2 464
Ferro-silicon	60 877	53 961	74 807	68 969	87 071
Ferro-titanium and Fe-Si-Ti	5 478	5 119	4 706	5 259	5 441
Ferro-tungsten and Fe-Si-W	769	299	569	622	283
Ferro-vanadium	1 154	1 059	1 008	1 401	940
Other ferro-alloys	22 355	11 864	13 234	42 196	16 543
Silicon metal	20 336	16 105	19 555	22 084	19 212
Ingots, blooms, billets	1 404 233	1 386 584	1 765 134	2 120 903	1 777 677
Scrap	2 748 147	2 948 480	3 236 091	2 934 281	2 833 589

## Imports of Iron, Steel and Ferro-Alloys

tonnes

Country	1998	1999	2000	2001	2002
<b>Germany</b>					
Pig iron	339 177	257 567	256 621	280 829	229 592
Sponge and powder	57 330	61 791	140 416	288 427	80 690
Ferro-chrome	449 711	417 825	420 503	381 746	383 712
Ferro-silico-chrome	19 592	9 003	8 144	6 087	2 740
Ferro-silico-magnesium	3 831	3 613	11 926	12 538	12 651
Ferro-manganese	180 041	131 569	197 356	198 415	183 336
Ferro-silico-manganese	101 243	134 131	133 257	130 975	147 113
Ferro-molybdenum	9 828	8 811	11 119	11 104	12 126
Ferro-nickel	56 098	29 629	58 291	80 666	89 782
Ferro-niobium	3 359	2 603	3 236	3 268	3 746
Ferro-phosphorus	4 612	5 662	6 176	5 285	5 807
Ferro-silicon	175 323	187 994	196 017	209 195	195 233
Ferro-titanium and Fe-Si-Ti	8 380	7 556	7 921	8 310	11 188
Ferro-tungsten and Fe-Si-W	645	549	403	561	498
Ferro-vanadium	5 506	4 075	5 263	6 832	4 767
Other ferro-alloys	27 124	9 872	14 481	33 594	43 225
Silicon metal	117 776	85 384	98 318	94 338	108 062
Ingots, blooms, billets	1 593 375	1 165 465	1 778 789	1 310 471	1 160 168
Scrap	2 678 292	2 863 594	3 523 681	3 560 264	3 804 881
<b>Greece</b>					
Pig iron	11 561	7 706	4 864	14 682	15 085
Ferro-manganese	*1 800	1 025	2 971	2 188	1 695
Ferro-silico-manganese	7 607	4 763	8 827	15 462	24 110
Ferro-silicon	3 048	2 212	1 987	11 059	3 990
Other ferro-alloys	800	436	649	163	642
Silicon metal	963	911	915	873	856
Ingots, blooms, billets	145 225	402 216	711 253	505 889	148 798
Scrap	491 145	278 010	309 235	776 523	1 179 017
<b>Hungary</b>					
Pig iron	45 615	25 644	25 167	23 983	23 881
Ferro-manganese	10 369	11 082	11 584	10 441	10 908
Ferro-silicon	6 415	6 213	5 830	5 736	5 173
Other ferro-alloys	4 556	4 046	4 309	5 764	6 406
Ingots, blooms, billets	282 161	292 283	210 739	168 833	82 919
Scrap	57 710	22 479	40 299	111 440	135 594
<b>Irish Republic</b>					
Pig iron	3 804	3 074	5 475	3 401	5 120
Ferro-alloys	2 325	2 821	626	3 772	663
Silicon metal	434	1 160	1 366	1 032	219
Ingots, blooms, billets	1 558	1 331	1 222	1 203	1 601
Scrap	12 661	94 958	88 914	26 285	1 420
<b>Italy</b>					
Pig iron	1 711 795	1 249 505	1 103 642	1 308 092	1 121 250
Sponge and powder	161 618	107 120	202 669	220 836	289 728
Ferro-chrome	259 357	299 033	294 176	303 726	378 402
Ferro-silico-chrome	172	393	347	...	189
Ferro-silico-magnesium	5 855	8 375	6 628	4 570	7 651
Ferro-manganese	68 274	77 851	72 812	74 801	77 121
Ferro-silico-manganese	81 050	90 136	83 192	95 270	151 140
Ferro-molybdenum	5 735	4 869	4 886	5 063	3 866
Ferro-nickel	40 062	26 998	23 913	36 887	60 680
Ferro-niobium	1 395	1 140	1 285	1 431	1 523
Ferro-phosphorus	1 492	1 278	1 653	917	1 021
Ferro-silicon	112 673	129 115	118 396	134 547	114 779
Ferro-titanium and Fe-Si-Ti	3 296	3 410	3 735	3 120	2 462
Ferro-tungsten and Fe-Si-W	146	114	180	177	108
Ferro-vanadium	1 296	1 566	1 380	2 014	2 180
Other ferro-alloys	16 523	7 189	8 562	14 245	17 338
Silicon metal	33 896	31 667	44 411	42 596	37 799
Ingots, blooms, billets	2 111 264	2 684 986	2 070 840	2 270 890	2 138 491
Scrap	5 112 063	4 255 639	4 056 830	4 348 543	4 045 986
<b>Latvia</b>					
Pig iron	2 665	1 959	200	14 209	14 351
Ferro-alloys	9 042	11 030	14 474	7 585	8 980
Silicon metal	471	1 309	1 793	1 895	2 572
Ingots, blooms, billets	44 455	41 995	64 766	91 262	99 588
Scrap	216 098	174 691	214 024	178 503	160 459



## Imports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
Lithuania					
Scrap	63 050	5 921	8 286	32 421	...
Macedonia					
Ingots, blooms, billets	11 317	17 619	12 046	6 517	...
Scrap	11 611	27 097	7 017	...	...
Netherlands					
Pig iron	196 800	79 328	127 682	132 065	144 375
Sponge and powder	2 956	19 458	95 375	42 829	114 868
Ferro-chrome	176 092	204 088	132 868	126 622	114 878
Ferro-silico-chrome	2 731	1 751	3 545	2 487	398
Ferro-silico-magnesium	1 891	1 020	502	318	3 212
Ferro-manganese	55 750	32 599	59 362	42 022	42 054
Ferro-silico-manganese	39 946	38 231	26 395	35 316	40 133
Ferro-molybdenum	4 735	6 279	7 956	8 781	1 457
Ferro-nickel	23 309	27 420	29 130	23 658	12 428
Ferro-niobium	4 263	6 049	6 575	7 888	31
Ferro-phosphorus	2 165	2 459	1 520	2 720	1 976
Ferro-silicon	75 765	74 596	81 450	90 882	129 678
Ferro-titanium and Fe-Si-Ti	1 380	2 588	2 389	1 736	1 565
Ferro-tungsten and Fe-Si-W	750	670	2 380	370	393
Ferro-vanadium	1 266	1 572	2 477	1 969	3 240
Other ferro-alloys	2 256	2 205	2 330	4 798	6 654
Silicon metal	26 156	44 396	42 360	32 276	33 395
Ingots, blooms, billets	123 650	85 602	279 573	119 504	102 428
Scrap	1 396 827	1 354 536	1 167 772	1 272 600	1 378 767
Norway					
Pig iron	10 216	17 924	15 874	18 207	16 844
Sponge and powder	900	37 267	42 414	44 037	48 170
Ferro-chrome	712	366	844	762	499
Ferro-manganese	22 231	37 484	17 467	10 848	3 987
Ferro-silico-manganese	294	52	438	19	716
Ferro-silicon	7 825	3 408	7 057	13 610	14 177
Other ferro-alloys	844	1 690	1 152	2 145	1 543
Silicon metal	8 235	10 456	7 898	8 649	8 629
Ingots, blooms, billets	178 746	117 345	176 632	161 217	132 220
Scrap	346 976	331 948	368 454	334 136	347 080
Poland					
Pig iron	26 300	22 338	11 745	146 508	103 349
Ferro-chrome	8 929	7 225	10 388	7 729	7 716
Ferro-silico-magnesium	1 672	1 725	2 313	...	...
Ferro-manganese	20 858	35 376	63 562	43 277	42 851
Ferro-silico-manganese	12 345	18 173	33 705	28 401	40 023
Ferro-molybdenum	794	586	795	809	833
Ferro-phosphorus	1 086	1 184	1 104	...	...
Ferro-silicon	9 858	14 345	25 762	24 657	25 664
Ferro-vanadium	246	361	541	386	308
Other ferro-alloys	2 530	2 879	3 500	6 424	6 431
Silicon metal	6 049	6 708	6 764	5 665	6 208
Ingots, blooms, billets	...	47 777	43 331	48 142	31 962
Scrap	19 300	86 886	170 108	104 820	69 947
Portugal					
Pig iron	27 032	18 969	24 253	23 395	25 139
Ferro-manganese	1 304	1 203	1 180	603	490
Ferro-silico-manganese	6 310	7 252	6 877	3 204	2 331
Ferro-silicon	4 360	4 017	3 749	3 439	2 296
Other ferro-alloys	4 576	5 353	5 922	5 942	4 762
Ingots, blooms, billets	22 860	53 177	46 558	73 499	123 087
Scrap	173 559	288 200	227 168	184 327	218 978
Romania					
Ferro-alloys	85 521	56 083	61 774	59 826	66 087
Silicon metal	2 044	1 979	2 460	1 759	1 590
Ingots, blooms, billets	346 160	238 673	512 266	648 391	724 751

## Imports of Iron, Steel and Ferro-Alloys

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Country	1998	1999	2000	2001	2002
<b>Russia</b>					
Pig iron	24 127	4 174	2 051	214	1 023
Sponge and powder	55 495	3 515	5 265	4 510	4 204
Ferro-chrome	8 734	7 449	9 057	8 277	11 123
Ferro-manganese	150 344	105 338	162 166	138 831	109 466
Ferro-silico-manganese	114 641	121 292	189 994	188 485	221 897
Ferro-molybdenum	1 124	2 141	3 701	3 066	2 473
Ferro-niobium	362	224	396	656	681
Ferro-silicon	15 249	4 464	18 634	23 996	14 905
Ferro-titanium and Fe-Si-Ti	1 437	387	2 310	730	126
Ferro-vanadium	219	233	817	995	656
Other ferro-alloys	1 465	2 367	2 485	6 846	5 462
Silicon metal	2 245	4 436	8 589	10 723	10 570
Ingots, blooms, billets	17 731	16 544	15 261	14 460	8 604
Scrap	77 093	301 901	312 433	116 692	106 772
<b>Serbia and Montenegro</b>					
Ferro-alloys	7 405	10 333	6 587	4 441	4 687
Ingots, blooms, billets	34 804	220 158	88 373	4 020	6 022
Scrap	42 372	82 104	42 871	19 844	95 065
<b>Slovakia</b>					
Pig iron	24 341	17 317	17 889	19 209	20 219
Sponge and powder	2 095	3 677	8 483	26	15 318
Ferro-alloys	15 508	12 408	18 946	24 870	31 332
Silicon metal	...	4 589	5 348	50	6 496
Ingots, blooms, billets	...	17 318	19 599	4 015	29 081
Scrap	188 586	134 405	219 213	383 068	475 898
<b>Slovenia</b>					
Pig iron	8 387	10 632	14 265	13 497	14 851
Ferro-alloys	25 332	26 458	28 058	28 298	32 616
Silicon metal	2 020	2 262	2 564	3 547	4 059
Ingots, blooms, billets	3 166	2 315	4 057	5 800	3 620
Scrap	261 088	179 747	250 090	249 517	262 294
<b>Spain</b>					
Pig iron	350 118	324 990	387 778	321 671	397 194
Sponge and powder	567 763	771 805	860 410	738 608	640 298
Ferro-chrome	192 914	218 710	215 228	246 756	229 425
Ferro-silico-chrome	5 351	4 151	4 186	2 951	1 878
Ferro-silico-magnesium	3 527	2 632	2 493	4 035	3 529
Ferro-manganese	13 514	20 919	32 615	53 221	45 100
Ferro-silico-manganese	25 312	31 338	15 121	26 375	28 237
Ferro-molybdenum	2 266	2 114	2 186	3 077	3 486
Ferro-nickel	32 235	34 987	43 770	49 769	51 626
Ferro-niobium	387	220	221	271	335
Ferro-phosphorus	1 990	1 649	1 841	2 127	2 051
Ferro-silicon	43 300	39 520	39 884	50 862	43 230
Ferro-titanium and Fe-Si-Ti	561	745	1 044	1 059	496
Ferro-vanadium	343	563	567	1 688	971
Other ferro-alloys	11 717	16 759	10 015	11 130	9 865
Silicon metal	4 953	3 045	3 328	3 816	4 528
Ingots, blooms, billets	438 176	848 086	772 207	855 775	1 062 109
Scrap	5 998 402	5 677 123	6 127 787	6 290 607	5 533 584

## Imports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
Sweden					
Pig iron	59 364	54 919	100 988	40 289	26 215
Sponge and powder	7 650	7 604	12 168	3 704	2 667
Ferro-chrome	76 916	80 231	85 046	92 574	109 391
Ferro-silico-chrome	3 458	2 642	5 244	3 239	2 789
Ferro-silico-magnesium	1 919	7 377	3 977	2 180	1 195
Ferro-manganese	28 899	31 463	29 280	33 034	33 238
Ferro-silico-manganese	19 347	20 701	28 840	17 309	13 357
Ferro-molybdenum	4 013	3 354	3 269	3 585	3 728
Ferro-nickel	15 090	5 195	12 756	12 418	8 765
Ferro-niobium	611	595	671	623	747
Ferro-phosphorus	969	987	1 114	777	1 553
Ferro-silicon	36 840	31 381	35 802	42 809	41 278
Ferro-titanium and Fe-Si-Ti	2 264	2 285	2 340	1 736	1 709
Ferro-tungsten and Fe-Si-W	601	402	510	867	183
Ferro-vanadium	1 575	1 487	1 209	855	1 037
Other ferro-alloys	4 947	2 729	2 257	7 631	5 822
Silicon metal	2 413	3 808	4 416	5 095	10 639
Ingots, blooms, billets	305 002	389 416	477 366	366 264	426 018
Scrap	612 175	454 865	490 184	376 456	429 341
Switzerland					
Pig iron	36 101	27 870	30 806	33 986	19 466
Sponge and powder	8 038	9 033	9 073	6 176	6 163
Ferro-aluminium	28	1	4	1	48
Ferro-chrome	1 012	913	1 412	1 020	978
Ferro-manganese	3 824	3 302	5 927	6 161	7 567
Ferro-silico-manganese	5 615	5 145	5 786	4 655	5 156
Ferro-silicon	6 042	5 741	5 944	5 952	4 291
Other ferro-alloys	1 276	1 153	1 971	1 511	1 198
Silicon metal	12 023	1 120	696	701	1 168
Ingots, blooms, billets	90 596	52 522	69 174	44 303	16 032
Scrap	217 924	208 365	239 387	246 179	347 211
Turkey					
Pig iron	194 160	153 706	226 951	155 350	324 368
Sponge and powder	14 088	8 634	20 281	22 674	84 443
Ferro-manganese	24 323	29 364	43 147	34 409	48 178
Ferro-silico-manganese	91 245	90 684	97 763	78 749	157 650
Ferro-silicon	48 971	51 768	58 630	44 864	55 575
Other ferro-alloys	6 554	9 308	11 385	10 041	11 587
Silicon metal	1 841	2 005	1 985	1 468	2 730
Ingots, blooms, billets	1 484 361	1 607 637	1 923 083	1 039 166	896 891
Scrap	6 550 614	7 877 831	7 457 315	4 993 240	9 749 780
Ukraine					
Ferro-alloys	18 096	12 930	38 531	...	...
Ingots, blooms, billets	12 425	15 765	103 936	...	...
Scrap	26 250	1 937	23 198	...	...
United Kingdom					
Pig iron	225 303	156 325	133 734	159 725	127 285
Sponge and powder	33 529	23 005	40 061	23 551	23 496
Ferro-chrome and ferro-silico-chrome	114 275	120 393	114 459	104 130	113 696
Ferro-silico-magnesium	9 671	8 565	6 965	5 318	5 942
Ferro-manganese	111 500	90 301	91 053	73 507	86 875
Ferro-silico-manganese	49 448	53 965	66 279	53 747	65 270
Ferro-molybdenum	599	792	490	351	326
Ferro-nickel	11 909	4 470	2 503	7 166	10 979
Ferro-niobium	1 086	952	1 548	1 261	1 048
Ferro-phosphorus	2 980	2 630	2 310	2 163	1 494
Ferro-silicon	82 802	80 753	67 821	72 663	75 989
Ferro-titanium and Fe-Si-Ti	4 887	4 054	2 672	2 465	2 595
Ferro-tungsten and Fe-Si-W	56	66	63	96	33
Ferro-vanadium	378	648	1 443	727	749
Other ferro-alloys	4 475	4 717	4 086	4 073	4 584
Silicon metal	45 285	58 164	78 089	86 026	81 155
Ingots, blooms, billets	549 465	412 482	518 194	388 350	1 443 091
Scrap	179 204	164 757	201 251	178 923	116 457

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

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Country	1998	1999	2000	2001	2002
Algeria					
Ferro-manganese	1 951	1 786	2 411	...	...
Other ferro-alloys	3 202	1 740	3 180	...	...
Botswana					
Ferro-alloys	5 571	...	4 490	6 409	...
Scrap	5 294	...	891	522	...
Cameroon					
Ingots, blooms, billets	...	10 756	35 687	22 942	...
Egypt					
Pig iron	32 122	42 259	...	709	...
Ferro-alloys	20 322	15 004	...	21 695	...
Ingots, blooms, billets	1 910 852	1 246 300	...	1 182 650	...
Scrap	277 279	518 218	*300 000	429 827	...
Ethiopia					
Ingots, blooms, billets	3 321	1 583	5 721	9 442	18 127
Scrap (f)	60 435	75 761	...	...	...
Ghana					
Ferro-alloys	1 106	974	1 157	1 259	...
Ingots, blooms, billets	5 532	16 497	15 796	12 585	...
Kenya					
Ingots, blooms, billets	43 426	74 089	65 712	...	35 673
Mauritius					
Ingots, blooms, billets	37 331	40 679	32 308	46 638	38 879
Morocco					
Pig iron	2 383	2 574	2 858	3 492	...
Ingots, blooms, billets	557 876	527 763	578 966	678 648	...
Nigeria					
Ferro-alloys	1 456	1 281	1 238	...	...
Ingots, blooms, billets	68 477	17 731	136 896	...	...
South Africa					
Sponge and powder	85 719	313 568	494 049	512 484	589 882
Ferro-chrome	628	9 080	580	1 142	2 041
Ferro-silico-magnesium	457	218	351	347	420
Ferro-silico-manganese	5 338	571	0	...	...
Ferro-molybdenum	1 040	1 419	845	598	1 196
Ferro-nickel	4 508	2 159	...	...	...
Ferro-niobium	223	79	119	153	135
Ferro-phosphorus	168	...	...	...	...
Ferro-silicon	2 844	3 564	7 887	3 322	3 913
Ferro-titanium and Fe-Si-Ti	537	562	605	281	410
Other ferro-alloys	1 428	1 696	3 073	1 160	2 017
Silicon metal	9 609	4 078	4 427	2 228	2 963
Scrap	43 066	47 454	65 447	75 177	94 915
Tanzania					
Ingots, blooms, billets	9 330	5 413	14 237	25 781	...
Togo					
Ingots, blooms, billets	298	4 372	11 366	7 253	2 306
Tunisia					
Ferro-alloys	2 216	2 709	2 794	2 681	...
Ingots, blooms, billets	106 408	192 070	157 639	154 224	...
Scrap	3 110	550	8 397	27 401	...
Zimbabwe					
Ferro-manganese	772	1 439	*1 000	...	734
Ferro-silicon	3 201	3 320	2 007	...	750

## Imports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
Canada					
Pig iron	124 430	168 225	67 706	68 105	54 865
Sponge and powder	35 831	15 050	184 467	739 616	807 934
Ferro-calcium-silicon	1 918	1 944	2 347	1 753	2 066
Ferro-chrome	50 502	45 329	43 755	37 725	48 473
Ferro-silico-chrome	487	697	501	513	729
Ferro-manganese	70 021	73 045	72 363	63 775	69 634
Ferro-silico-manganese	52 200	37 156	38 028	41 116	35 435
Ferro-molybdenum	1 846	1 838	1 885	1 659	2 580
Ferro-niobium	1 885	1 855	1 820	1 357	1 317
Ferro-phosphorus	1 270	1 175	861	978	833
Ferro-silicon	50 924	46 795	45 356	35 435	27 235
Ferro-titanium and Fe-Si-Ti	1 465	1 439	1 639	1 492	1 701
Ferro-vanadium	1 018	696	600	555	647
Other ferro-alloys	2 219	2 665	2 666	1 510	1 012
Silicon metal	19 522	20 873	27 597	19 557	29 248
Ingots, blooms, billets	835 063	392 208	531 258	420 600	971 085
Scrap	1 482 266	1 568 817	1 326 647	1 097 388	1 369 579
Costa Rica					
Ingots, blooms, billets	69 651	58 852	37 122	35 610	66 714
El Salvador					
Ingots, blooms, billets	69 711	64 130	27 041	85 944	50 581
Scrap	24 184	11 344	12 027	13 140	18 536
Guatemala					
Ingots, blooms, billets	182 242	130 362	34 552	86 781	45 461
Scrap	31 613	10 033	92 213	131 806	128 242
Mexico					
Pig iron	514 741	299 690	934 697	404 719	523 195
Sponge and powder	212 839	353 500	462 253	619 883	569 715
Ferro-chrome	8 154	7 940	7 644	5 651	8 579
Ferro-manganese	15 151	11 354	11 638	19 127	25 735
Ferro-silico-manganese	25 967	13 494	18 202	28 177	20 355
Ferro-silicon	31 062	31 468	31 763	24 786	30 645
Other ferro-alloys	8 811	8 936	8 298	9 819	12 469
Silicon metal	6 286	6 835	7 709	8 892	12 768
Ingots, blooms, billets	773 613	432 820	602 604	506 524	510 578
Scrap	1 280 083	1 150 000	1 961 941	1 547 493	1 831 958
Panama					
Ingots, blooms, billets	29 000	33 598	11 404	10 248	8 028
Trinidad and Tobago					
Ferro-alloys	6 102	...	9 713	5 947	...
USA					
Pig iron	5 145 121	4 989 059	4 969 628	4 372 758	4 623 056
Sponge and powder	1 170 294	1 338 542	1 582 218	1 771 503	2 162 007
Ferro-chrome	418 492	603 794	576 691	256 271	316 475
Ferro-silico-chrome	24 946	35 947	19 230	14 617	28 894
Ferro-manganese	336 097	314 929	312 237	251 340	275 085
Ferro-silico-manganese	345 044	299 997	378 929	269 246	246 908
Ferro-molybdenum	7 720	8 540	8 333	5 575	5 792
Ferro-nickel	35 918	37 840	40 044	29 904	34 246
Ferro-niobium	8 076	7 380	7 163	7 768	6 681
Ferro-phosphorus	13 651	10 598	13 049	10 300	...
Ferro-silicon	203 804	248 905	326 122	176 355	206 508
Ferro-titanium and Fe-Si-Ti	7 335	4 747	6 053	4 122	3 704
Ferro-tungsten and Fe-Si-W	825	895	630	475	598
Ferro-vanadium	2 455	2 730	3 480	3 326	3 163
Other ferro-alloys	39 356	31 897	34 330	25 300	30 330
Silicon metal	106 929	118 500	136 185	121 997	146 889
Ingots, blooms, billets	6 220 275	7 565 441	7 749 318	5 861 273	8 005 681
Scrap	3 024 556	3 686 289	3 229 893	2 610 930	3 121 025

## Imports of Iron, Steel and Ferro-Alloys

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Country	1998	1999	2000	2001	2002
Argentina					
Pig iron	1 580	975	2 550	2 902	5 840
Ferro-chrome	3 715	2 097	3 730	3 851	4 352
Ferro-manganese	8 649	8 212	12 146	8 458	11 490
Ferro-silico-manganese	4 344	17 187	22 732	28 389	30 085
Ferro-silicon	3 174	3 196	5 627	5 711	3 531
Other ferro-alloys	2 226	1 897	2 950	3 060	3 343
Silicon metal	4 214	5 292	8 535	6 135	7 016
Ingots, blooms, billets	413 903	151 337	87 203	120 841	81 745
Scrap	9 827	943	184	983	5 227
Brazil					
Sponge and powder	5 430	4 463	29 516	5 893	7 758
Ferro-chrome	5 676	4 970	10 649	7 183	8 921
Ferro-manganese	10 131	28 453	8 158	27 918	14 012
Other ferro-alloys	7 277	4 596	6 157	8 311	6 777
Chile					
Ferro-alloys	11 921	12 044	15 952	17 607	19 716
Colombia					
Ferro-chrome	331	135	595	538	431
Ferro-manganese	5 382	4 145	6 159	5 439	4 851
Ferro-silico-manganese	2 447	1 754	2 680	2 979	4 693
Ferro-silicon	2 233	1 896	2 830	3 076	2 832
Other ferro-alloys	853	916	1 054	1 246	1 664
Ingots, blooms, billets	171 523	87 543	116 296	147 726	87 627
Scrap	119 033	20 500	96 455	35 428	32 874
Ecuador					
Ingots, blooms, billets	177 712	129 394	210 869	218 844	223 024
Peru					
Sponge	22 113	36 649	104 778	151 490	122 293
Ferro-chrome	1 210	849	1 048	378	2 170
Ferro-manganese	2 320	3 927	972	1 747	2 572
Ferro-silico-manganese	8 375	3 050	5 098	4 512	9 689
Ferro-silicon	1 708	863	1 495	1 398	1 050
Ingots, blooms, billets	117 554	46 851	...	...	...
Scrap	18 883	...	10 477	17 188	21 955
Uruguay					
Ferro-alloys	666	706	649	679	701
Ingots, blooms, billets	3 004	...	...	...	...
Venezuela					
Sponge and powder	734	1 690	1 341	2 029	...
Ferro-chrome	209	93	268	301	...
Ferro-manganese	15 209	6 904	15 684	14 726	...
Other ferro-alloys	3 250	1 376	2 743	3 827	...
Silicon metal	1 086	1 560	1 945	1 540	...
Ingots, blooms, billets	...	12 933	8 375	28 782	*15 000
Scrap	98 256	23 003	...	11 697	...
Bahrain					
Silicon metal	...	...	3 643	4 572	5 392
China					
Pig iron	23 972	58 811	17 514	480 118	648 201
Sponge and powder	12 811	43 922	145 860	721 674	1 335 043
Ferro-alloys	6 975	9 003	9 310	35 964	93 048
Silicon metal	2 468	924	1 176	1 568	1 813
Ingots, blooms, billets	690 829	2 134 955	4 901 163	8 362 437	4 686 863
Scrap	2 018 655	3 339 073	5 099 105	9 776 318	7 853 464
Dubai					
Silicon metal	11 920	13 101	...	...	...
Ingots, blooms, billets	11 497	14 199	...	...	...
Scrap	26 205	19 826	...	...	...
Hong Kong					
Sponge and powder	2 378	3 122	11 945	1 139	1 241
Ferro-alloys	4 462	4 688	1 612	632	418
Silicon metal	1 008	811	1 239	775	422
Ingots, blooms, billets	237 749	360 476	441 876	542 834	314 506
Scrap	249 397	204 829	213 596	180 948	212 338

## Imports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
<b>India</b>					
Pig iron (e)	2 247	3 417	1 867	2 177	2 270
Sponge and powder (e)	3 209	2 625	57 309	2 564	2 056
Ferro-chrome and ferro-silico-chrome (e)	3 510	7 442	24 917	7 348	11 904
Ferro-manganese and Fe-Si-Mn (e)	7 117	10 727	9 273	5 595	9 976
Ferro-molybdenum (e)	153	60	16	43	126
Ferro-nickel (e)	4 924	5 412	1 956	1 940	1 299
Ferro-silicon (e)	7 898	33 350	23 460	24 812	35 547
Other ferro-alloys (e)	3 522	3 622	4 464	4 850	4 241
Silicon metal (e)	8 725	10 918	13 064	11 435	18 241
Ingots, blooms, billets (e)	607 764	579 883	354 952	145 872	97 667
Scrap (e)	1 494 745	1 924 390	1 698 895	2 879 077	2 397 985
<b>Indonesia</b>					
Pig iron	75 138	135 489	154 603	62 856	62 699
Sponge and powder	57 543	91 208	278 036	229 636	119 135
Ferro-manganese	7 482	10 274	16 609	6 146	38 844
Ferro-silico-manganese	16 085	10 937	21 340	19 989	26 415
Ferro-silicon	8 480	10 167	10 747	9 092	11 543
Other ferro-alloys	996	1 385	2 672	2 556	3 048
Silicon metal	785	1 242	1 165	1 569	1 516
Ingots, blooms, billets	268 109	434 099	1 251 167	1 089 251	1 295 902
Scrap	399 964	690 945	1 263 506	1 438 338	1 318 025
<b>Iran</b>					
Ferro-manganese	18 137	43 716	27 517	34 960	20 369
Other ferro-alloys	4 018	2 160	4 189	5 285	6 630
Silicon metal	935	1 409	557	793	1 648
Ingots, blooms, billets (c)	33 553	48 433	196 437	424 516	476 414
Scrap	43 878	10 100	19 945	33 014	56 526
<b>Japan</b>					
Pig iron	184 396	143 294	850 765	181 313	184 698
Sponge and powder	113 446	92 788	63 099	149 337	95 366
Ferro-chrome	628 345	599 839	776 333	739 540	783 334
Ferro-silico-chrome	3 414	3 171	5 817	3 493	2 812
Ferro-manganese	109 853	89 570	69 682	54 551	58 071
Ferro-silico-manganese	201 284	227 218	223 759	218 406	254 269
Ferro-molybdenum	2 214	2 193	3 345	3 872	3 993
Ferro-nickel	41 069	34 284	37 635	45 472	50 059
Ferro-niobium	6 516	6 889	5 566	6 278	6 805
Ferro-phosphorus	7 324	6 827	8 892	8 241	7 316
Ferro-silicon	401 939	440 152	504 764	472 840	463 304
Ferro-titanium and Fe-Si-Ti	4 792	3 979	3 537	4 858	4 234
Ferro-tungsten and Fe-Si-W	974	560	1 101	826	546
Ferro-vanadium	1 915	1 985	2 775	2 995	3 235
Other ferro-alloys	11 065	11 611	12 647	11 431	12 770
Silicon metal	163 202	184 596	200 369	191 003	195 774
Ingots, blooms, billets	45 554	8 042	12 195	27 914	11 862
Scrap	176 907	282 019	321 424	151 107	178 628
<b>Jordan</b>					
Ferro-alloys	610	1 076	1 267	1 968	915
Ingots, blooms, billets	299 418	332 755	295 651	399 859	278 479
Scrap	939	3 418	8 535	5 762	15 206
<b>Kazakhstan</b>					
Ferro-manganese	14 969	18 857	26 001	(d) ...	(d) ...
Other ferro-alloys	4 048	5 410	6 089	34 877	31 834
Ingots, blooms, billets	8 386	9 949	12 493	...	...
Scrap	1 884	4 706	4 788	10 089	8 945
<b>Korea, Dem. P.R. of</b>					
Ferro-manganese (b)	*2 300	*5 400	*5 400	*4 800	*3 400
Other ferro-alloys (b)	*8 300	*10 500	*3 700	*4 300	*26 500

## Imports of Iron, Steel and Ferro-Alloys

tonnes

Country	1998	1999	2000	2001	2002
Korea, Republic of					
Pig iron	2 481 263	2 752 486	2 271 671	1 445 469	1 365 320
Sponge and powder	607 926	742 820	604 926	595 082	418 331
Ferro-chrome	287 466	384 336	359 491	323 538	361 060
Ferro-silico-chrome	17 063	14 492	14 002	9 454	10 985
Ferro-manganese	36 445	33 766	54 318	50 990	49 810
Ferro-silico-manganese	89 959	84 002	108 763	100 082	132 852
Ferro-molybdenum	1 423	2 149	2 759	3 233	4 104
Ferro-nickel	86 594	85 779	98 032	106 584	101 722
Ferro-niobium	779	1 099	682	953	1 233
Ferro-phosphorus	3 681	4 271	3 921	3 245	3 231
Ferro-silicon	118 983	133 739	149 828	152 146	172 901
Ferro-titanium and Fe-Si-Ti	462	579	618	678	622
Ferro-tungsten and Fe-Si-W	90	122	143	172	71
Ferro-vanadium	762	632	414	339	559
Other ferro-alloys	6 465	...	4 912	9 189	9 999
Silicon metal	12 592	22 623	32 311	25 465	30 065
Ingots, blooms, billets	1 579 493	2 638 634	3 443 612	3 101 898	3 683 733
Scrap	5 566 790	6 583 505	6 851 903	6 731 384	7 221 415
Lebanon					
Ingots, blooms, billets	82 818	50 689	58 075	177 014	...
Scrap	7 044	1 938	5 042	40 294	...
Malaysia					
Pig iron	98 575	175 498	331 036	186 150	...
Sponge and powder	4 934	61 766	25 862	43 149	...
Ferro-manganese	4 791	13 800	31 001	...	...
Ferro-silicon	4 125	...	69 697	...	...
Ferro-vanadium	48	...	880	249	...
Other ferro-alloys	341	...	24 471	...	...
Ingots, blooms, billets	282 714	240 391	79 330	394 105	...
Scrap	417 000	979 313	1 587 341	...	...
Mongolia					
Ferro-alloys	1 094	650	898	1 044	...
Oman					
Ingots, blooms, billets	24 501	9 900	35	92	3 444
Pakistan					
Pig iron (a)	8 457	----	135 598	45	...
Ferro-chrome	1 200	1 300	1 700	...	...
Ferro-manganese (a)	7 582	6 828	12 473	6 129	9 387
Ferro-silicon (a)	...	6 515	9 156	9 262	8 277
Scrap (a)	65 790	...	190 375	4 173	5 253
Philippines					
Pig iron	12 574	...	2 259	253	...
Ferro-manganese	3 262	3 200	3 087	...	...
Ferro-silico-manganese	918	695	1 589	2 497	...
Ferro-silicon	5 255	2 644	4 372	...	...
Other ferro-alloys	164	257	198	...	...
Ingots, blooms, billets	983 318	1 310 206	1 105 121	1 103 768	...
Scrap	51 961	4 642	3 557	2 987	...
Qatar					
Ferro-alloys	5 168	329	...	5 466	4 089
Silicon metal	63	797	...	...	264
Saudi Arabia					
Pig iron	46 486	96 906	49 136	50 892	67 390
Sponge and powder	1 473	...	1 656	2 065	1 220
Ferro-alloys	2 837	9 497	5 899	1 983	2 998
Silicon metal	778	599	399	471	454
Ingots, blooms, billets	321 101	108 426	50 063	170 624	396 140
Scrap	23 853	12 124	35 889	1 516	643
Singapore					
Pig iron	26 510	63 399	21 891	11 196	20 855
Sponge and powder	1 507	2 111	2 569	3 222	2 482
Ferro-manganese	682	953	1 207	523	733
Ferro-silico-manganese	4 204	4 939	4 350	3 506	4 589
Ferro-silicon	1 420	3 484	2 057	1 099	1 570
Other ferro-alloys	406	349	464	422	863
Silicon metal	865	578	2 120	711	477
Ingots, blooms, billets	116 968	316 183	292 939	309 866	139 055
Scrap	68 633	141 027	233 888	177 181	158 709



## Imports of Iron, Steel and Ferro-Alloys

Country	1998	1999	2000	2001	2002
<b>Sri Lanka</b>					
Ingots, blooms, billets	132 766	131 913	151 895	101 766	131 273
<b>Syria</b>					
Ingots, blooms, billets	51 209	55 631	56 771	62 495	138 021
<b>Taiwan</b>					
Pig iron	955 323	951 797	847 323	448 377	940 065
Sponge and powder	22 969	24 836	28 633	36 997	29 099
Ferro-chrome	309 496	397 972	395 171	357 758	434 962
Ferro-manganese	42 990	67 161	69 468	59 629	70 060
Ferro-silico-manganese	79 780	71 212	77 001	86 494	105 286
Ferro-molybdenum	2 974	2 876	1 812	1 598	2 095
Ferro-nickel	90 978	110 969	117 094	120 898	135 193
Ferro-niobium	345	189	336	268	363
Ferro-silicon	64 723	66 445	74 432	67 235	73 868
Ferro-tungsten and Fe-Si-W	230	106	225	103	204
Ferro-vanadium	468	575	1 121	604	14 943
Other ferro-alloys	6 421	4 846	5 641	5 268	6 657
Silicon metal	19 434	18 092	17 321	12 662	17 369
Ingots, blooms, billets	7 528 921	9 121 332	9 026 461	5 480 483	7 317 152
Scrap	2 398 392	1 800 846	1 957 909	2 119 421	2 780 317
<b>Thailand</b>					
Pig iron	118 441	135 430	306 043	107 367	195 057
Sponge and powder	1 638	2 752	4 737	4 265	6 556
Ferro-chrome	3 398	3 977	7 188	4 218	5 471
Ferro-manganese	7 675	5 526	7 211	6 593	7 221
Ferro-silico-manganese	17 553	19 148	20 859	19 040	22 047
Ferro-silicon	12 569	14 910	17 506	17 291	18 183
Other ferro-alloys	2 418	1 614	1 853	1 043	1 495
Silicon metal	2 735	3 828	4 919	5 131	6 638
Ingots, blooms, billets	3 260 000	3 190 960	2 736 852	2 791 793	5 010 823
Scrap	320 014	629 698	741 332	693 905	949 465
<b>Australia</b>					
Pig iron	97 178	41 115	6 230	5 623	9 504
Sponge and powder	9 257	4 539	4 110	...	3 559
Ferro-chrome	8 438	11 871	8 127	8 980	9 045
Ferro-manganese and Fe-Si-Mn	11 933	6 600	5 024	6 223	6 300
Ferro-molybdenum	294	283	435	480	517
Ferro-niobium	100	91	41	8	5
Ferro-silicon	33 952	32 604	28 832	27 673	30 431
Ferro-titanium and Fe-Si-Ti	361	412	364	351	373
Ferro-vanadium	232	295	99	69	91
Other ferro-alloys	1 629	8 790	1 848	8 618	2 920
Silicon metal	3 771	4 076	5 611	4 434	5 513
Ingots, blooms, billets	37 217	...	14 984	6 296	12 244
Scrap	10 363	5 000	21 319	6 012	6 462
<b>New Zealand</b>					
Ferro-manganese	2 981	1 816	2 088	2 321	2 161
Ferro-silicon	1 892	2 234	2 486	1 586	2 102
Other ferro-alloys	2 045	2 419	3 117	2 985	3 368
Silicon metal	1 553	3 661	4 239	2 628	3 743

Note(s) :-

(1) In this table the term 'ingots, blooms, billets' corresponds to items 7206, 7207, 7218 and 7224 of the Harmonised System which includes those of alloy and high carbon steel

- (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) Included with 'other ferro-alloys'
- (e) Years ended 31 March following that stated
- (f) Years ended 7 July of that stated

## Production of Kaolin

tonnes

Country	1998	1999	2000	2001	2002
Austria	39 666	30 759	25 066	20 047	*10 000
Belgium	*300 000	*300 000	*300 000	*300 000	*300 000
Bosnia and Herzegovina	*3 000	*3 000	*3 000	*3 000	...
Bulgaria	154 760	144 341	*150 000	*150 000	*150 000
Czech Republic (h)	537 000	520 000	564 000	562 000	563 000
France	333 000	328 000	385 000	377 000	339 000
Germany (g)	669 500	691 195	714 936	696 832	740 821
Greece	46 388	64 931	54 226	60 075	...
Italy	247 970	295 871	284 148	286 069	...
Poland (k)	69 200	80 300	90 139	103 220	89 372
Portugal	271 296	213 796	162 674	148 706	...
Romania	24 742	25 456	18 942	21 867	22 514
Russia	40 600	82 300	...	...	...
Serbia and Montenegro	75 092	40 321	39 475	60 900	95 622
Slovakia	14 580	22 930	21 000	34 730	24 600
Spain (k)	312 539	326 803	353 355	*400 000	450 000
Turkey	403 733	449 954	390 830	505 773	372 344
Ukraine	201 670	221 526	172 800	...	...
United Kingdom (a) (l)	2 391 595	2 303 602	2 376 057	2 204 156	2 162 815
Algeria	13 640	16 833	11 616	13 356	9 505
Burundi	3 500	1 597	1 500	----	----
Egypt	285 497	290 000	290 000	*260 000	*260 000
Eritrea	3 809	1 138	943	*990	*400
Ethiopia (c)	378	681	1 654	1 790	...
Kenya	...	192	793	700	...
Nigeria	*110 000	*110 000	*110 000	*110 000	*110 000
South Africa	138 304	122 413	89 242	82 463	92 055
Cuba	11 000	10 400	9 700	...	...
Mexico	339 013	489 993	532 268	681 709	745 498
USA (e)	9 640 000	9 160 000	8 800 000	8 110 000	*7 450 000
Argentina	46 832	52 665	*50 000	*50 000	*50 000
Brazil (b)	1 499 381	1 652 997	1 827 826	*2 000 000	*1 900 000
Chile	11 530	4 361	6 445	5 300	6 164
Ecuador	5 600	20 652	11 022	8 818	8 144
Paraguay	*66 700	*66 500	*66 500	*66 500	*66 700
Peru	4 968	1 332	6 165	5 532	1 934
Venezuela	4 000	12 000	*10 000	*10 000	...
Bangladesh (d)	7 731	7 700	7 900	8 000	8 100
China	1 000 000	1 332 000	1 450 000	*1 500 000	*1 500 000
India (i) (j)	159 493	168 618	179 274	187 232	200 048
Indonesia	8 567	21 389	*15 000	*15 000	...
Iran (m)	451 807	529 767	635 693	760 615	...
Israel	27 000	20 000	13 000	13 300	...
Japan	83 257	53 092	25 739	19 976	...
Jordan	50 531	34 040	36 795	*38 000	...
Kazakhstan	*20 000	*20 000	*20 000	*20 000	*20 000
Korea, Republic of	627 360	672 824	705 145	850 360	1 054 543
Malaysia	198 930	213 973	233 885	381 594	323 916
Pakistan (d)	66 672	64 692	63 494	12 980	55 584
Philippines	1 783	5 465	1 510	5 111	...
Saudi Arabia	7 100	7 500	7 500	...	...
Sri Lanka	11 110	12 573	12 230	9 403	8 613
Taiwan	72 188	75 784	38 606	28 921	18 403
Thailand (h)	262 859	127 770	221 062	181 583	...
Uzbekistan (i)	*10 000	*15 000	*150 000	*150 000	*150 000
Vietnam	*1 100	*1 100	*1 200	*1 300	...

**Production of Kaolin**

Country	1998	1999	2000	2001	2002
Australia (d) (f)	182 000	201 000	223 000	232 000	228 000
New Zealand	16 965	16 686	16 310	15 620	17 250
<b>World Total</b>	<b>21 600 000</b>	<b>21 800 000</b>	<b>22 100 000</b>	<b>22 000 000</b>	<b>21 400 000</b>

## Note(s):

(1) In addition to the countries listed, Colombia, Denmark, Dem. P. R. of Korea and Lebanon are believed to produce kaolin

- (a) Sales
- (b) Including beneficiated and directly shipped material
- (c) Years ended 7 July of that stated
- (d) Years ended 30 June of that stated
- (e) Sold or used by producers
- (f) Excluding New South Wales
- (g) Washed and dried
- (h) Beneficiated
- (i) Beneficiated; excludes directly used natural kaolin
- (j) Years ended 31 March following that stated
- (k) Washed
- (l) Dry weight
- (m) Years ended 20 March following that stated

## Exports of Kaolin

tonnes

Country	1998	1999	2000	2001	2002
Austria	2 965	2 743	3 235	2 998	3 105
Belgium-Luxembourg	324 359	248 829	324 267	357 363	332 718
Bulgaria	95 322	77 891	155 429	(a) *119 600	(a) *112 500
Croatia	3 605	3 143	3 080	2 620	5 319
Czech Republic	418 948	428 342	442 934	455 089	443 674
Denmark	1 436	1 003	1 045	1 050	688
Finland	3 572	5 466	6 915	7 561	10 698
France	330 616	307 307	348 868	290 332	325 323
Germany	194 610	387 173	367 230	350 804	333 927
Greece	8 952	3 811	4 252	723	884
Hungary	1 814	1 539	2 229	3 121	3 539
Italy	56 878	60 852	56 689	58 835	47 652
Netherlands	138 731	185 784	233 688	282 035	234 669
Poland	...	3 342	1 903	6 321	3 538
Portugal	2 741	9 701	10 287	11 944	15 318
Russia	302	1 233	1 050	1 214	1 477
Spain	104 342	103 831	130 290	155 446	159 759
Sweden	35 697	13 507	11 491	7 199	8 200
Turkey	185 431	262 211	272 128	227 159	190 404
Ukraine	230 888	246 565	294 039	...	...
United Kingdom (c)	2 093 460	2 018 969	2 074 548	1 928 230	1 899 220
Egypt	46 205	2 806	*3 000	4 328	...
Senegal	...	...	...	10 813	15 841
South Africa	4 962	5 199	3 986	10 023	7 969
USA	3 585 990	3 349 793	3 727 982	3 482 037	3 486 199
Argentina	9 620	8 158	11 646	6 334	4 996
Brazil	964 268	1 156 593	1 390 636	1 437 400	1 444 160
Colombia	5 530	6 255	7 107	11 371	8 894
China	882 169	892 785	871 042	777 033	708 072
Hong Kong	284 962	205 996	147 159	77 668	93 875
India (b)	7 810	9 335	8 462	9 168	8 923
Indonesia	90 976	128 923	114 138	88 242	82 861
Iran	31 126	12 920	57 900	141 491	148 224
Israel (a)	...	*15 500	*17 800	*5 100	*3 700
Japan	12 475	13 628	7 554	5 490	11 182
Jordan	768	11 526	15 018	8 895	2 261
Kazakhstan	8 020	(a) *2 900	1 170	4 234	481
Korea, Dem. P.R. of (a)	*7 500	*4 800	*4 400	*7 100	*3 000
Korea, Republic of	24 504	22 926	20 840	14 250	15 040
Malaysia	59 371	91 490	80 391	115 896	...
Singapore	539	1 471	618	477	404
Taiwan	19 262	17 129	13 033	5 582	4 964
Thailand	10 454	15 237	13 162	9 440	12 489
Australia	24 796	24 150	15 936	16 889	31 107
New Zealand	14 925	11 213	5 000	...	...

## Note(s):

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

(b) Years ended 31 March following that stated

(c) Dry weight

## Imports of Kaolin

Country	1998	1999	2000	2001	2002
Austria	216 307	222 559	250 552	254 030	249 132
Belarus	21 909	33 581	30 966	28 195	27 569
Belgium-Luxembourg	596 714	556 417	470 979	467 193	607 908
Croatia	4 849	5 636	5 513	6 357	6 046
Cyprus	4 020	5 197	3 712	369	380
Czech Republic	16 028	13 412	17 649	19 514	12 791
Denmark	20 210	19 910	18 505	19 369	34 441
Finland	1 357 735	1 249 452	1 493 786	1 355 460	1 207 343
France	368 970	400 812	379 697	380 166	386 197
Germany	739 660	719 302	809 665	749 260	750 621
Greece	44 061	44 968	43 835	23 933	43 586
Hungary	37 509	33 601	28 869	34 000	30 130
Irish Republic	11 627	12 980	12 539	11 505	20 919
Italy	930 913	989 397	1 108 281	1 020 131	952 526
Latvia	2 303	3 630	2 607	3 386	4 933
Macedonia	9 895	6 152	7 553	7 945	...
Moldova	4 924	3 066	6 400	6 457	4 347
Netherlands	393 780	460 095	560 760	455 737	444 622
Norway	250 210	263 832	274 484	251 950	234 592
Poland	55 000	54 656	53 027	66 759	77 155
Portugal	121 639	128 709	140 863	151 525	125 201
Romania	49 338	53 812	68 404	71 015	71 628
Russia	101 940	133 106	190 328	163 881	132 537
Serbia and Montenegro	9 075	8 778	25 637	12 694	7 056
Slovakia	74 800	76 847	81 985	93 735	111 841
Slovenia	24 816	24 934	28 703	25 583	27 112
Spain	585 468	630 623	797 987	796 040	792 920
Sweden	371 589	402 204	548 460	422 071	437 528
Switzerland	59 144	46 985	45 273	37 383	37 298
Turkey	139 326	114 965	198 837	117 550	149 559
United Kingdom	47 272	28 502	42 537	95 337	68 092
Algeria	10 684	3 556	7 201	...	...
Egypt	120 712	87 720	*90 000	9 763	...
Ethiopia	270	91	137	893	52
Ghana	3 597	3 208	3 116	3 434	...
Kenya	3 100	2 759	3 014	...	1 735
Mauritius	937	855	639	189	692
Morocco	25 541	25 520	25 231	31 004	...
South Africa	24 753	17 509	16 353	15 675	17 825
Tunisia	57 353	65 454	88 680	117 555	...
Zimbabwe	1 528	5 510	2 353	...	3 265
Canada	860 450	917 129	906 761	967 886	955 011
Costa Rica	3 909	3 639	4 818	4 063	5 580
Guatemala	2 682	4 306	7 257	7 717	9 279
Mexico	338 176	367 455	351 446	330 443	381 211
Nicaragua	1 715	2 107	4 252	4 463	3 703
USA	52 943	57 255	62 656	113 625	157 581
Argentina	25 684	19 129	17 457	13 018	11 619
Brazil	4 941	3 746	5 367	5 686	5 079
Chile	16 002	20 728	22 116	19 808	24 285
Colombia	8 967	7 763	11 259	8 376	10 507
Ecuador	13 911	8 589	22 293	26 743	17 427
Peru	2 704	1 907	3 671	3 574	2 999
Uruguay	13 333	9 026	9 416	9 932	6 576
Venezuela	21 987	24 181	23 463	24 327	...
China	64 326	105 182	182 763	190 967	232 851
Dubai	32 228	17 919	...	...	...
Hong Kong	139 015	56 287	30 412	20 323	39 926
India (c)	4 825	6 690	6 671	10 622	17 080
Indonesia	134 903	101 232	145 253	94 990	120 753
Iran (a)	19 975	23 845	19 126	...	*26 000
Israel	*17 000	*16 500	...	...	...
Japan	1 393 293	1 347 092	1 400 969	1 397 275	1 293 750
Jordan	4 486	3 515	5 003	4 760	4 822

**Imports of Kaolin**

tonnes

Country	1998	1999	2000	2001	2002
Korea, Republic of	211 674	255 206	259 975	292 290	287 280
Lebanon	44 377	36 336	27 526	29 619	...
Malaysia	31 962	93 569	48 686	...	...
Pakistan (b)	10 138	8 270	8 718	8 827	8 422
Philippines	59 000	67 063	72 422	27 012	...
Saudi Arabia	4 790	6 513	9 218	16 349	39 279
Singapore	9 613	10 907	8 846	7 849	6 440
Sri Lanka	8 358	3 474	4 273	4 300	4 879
Syria	7 855	14 618	16 658	27 825	6 302
Taiwan	988 891	994 472	834 904	741 957	742 205
Thailand	38 281	53 087	64 154	61 355	70 662
Australia	16 578	8 892	10 482	12 159	6 566
New Zealand	8 206	12 817	11 105	10 946	16 187

Note(s) :-

- (a) Years ended 20 March following that stated
- (b) Years ended 30 June of that stated
- (c) Years ended 31 March following that stated

## Mine Production of Lead

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Bulgaria	24 200	13 800	13 700	18 500	19 800
Finland	1 800	130	380	----	----
Greece	22 632	19 699	15 554	26 588	29 300
Irish Republic	35 900	39 200	57 500	44 500	41 700
Italy	6 800	6 500	3 300	2 700	*3 000
Macedonia	30 000	27 000	24 000	20 000	15 000
Poland	59 533	62 900	51 200	52 600	56 600
Romania	15 128	17 489	18 750	19 676	17 500
Russia	13 000	14 000	14 000	14 000	13 000
Serbia and Montenegro	16 700	8 631	3 790	4 291	4 355
Spain	21 422	28 715	51 793	35 573	6 171
Sweden	114 430	116 393	106 584	85 975	42 954
Turkey	14 603	14 225	15 888	17 884	17 277
United Kingdom	*1 600	1 000	*1 000	*800	*700
Algeria	730	760	510	560	690
Morocco	81 000	80 000	82 147	76 748	61 000
Namibia	13 500	9 886	9 797	12 827	12 088
South Africa	84 128	80 191	75 262	50 771	49 444
Tunisia	4 274	6 300	6 200	6 942	5 081
Canada	189 752	162 180	148 769	153 932	97 185
Honduras	4 329	5 226	4 805	6 750	8 128
Mexico	166 060	125 656	137 975	118 247	138 707
USA	493 094	520 165	464 700	466 400	450 600
Argentina	15 004	14 256	14 115	12 334	12 011
Bolivia	13 848	10 153	9 523	9 090	9 268
Brazil	7 567	10 281	8 832	9 754	9 253
Chile	337	608	785	1 193	2 895
Peru	257 713	271 782	270 576	289 546	297 704
China	580 500	548 900	659 500	676 000	568 400
India	37 700	37 700	36 000	32 000	35 000
Iran	12 500	14 400	17 200	11 800	*12 000
Japan	6 198	6 074	8 835	4 997	5 700
Kazakhstan	30 200	34 200	39 300	37 500	45 500
Korea, Dem. P.R. of	*30 000	*26 000	*22 000	*26 000	*26 000
Korea, Republic of	3 559	1 800	2 700	1 000	30
Myanmar	2 200	1 800	1 200	900	*900
Tajikistan	*2 000	*2 000	*2 000	*2 000	*2 000
Thailand	6 100	9 500	9 900	300	2 600
Uzbekistan	*1 000	----	----	----	----
Australia	618 000	677 000	651 000	759 000	694 000
World Total	3 000 000	3 000 000	3 100 000	3 100 000	2 800 000

**Production of Refined Lead**

tonnes

Country	1998	1999	2000	2001	2002
Austria	23 248	23 773	23 773	23 666	*24 000
Belgium	92 000	110 000	119 000	100 000	88 000
Bulgaria	77 084	81 600	84 100	83 000	71 000
Czech Republic	24 327	27 017	28 700	30 500	*30 500
France	290 200	275 400	263 200	231 400	203 400
Germany	352 885	352 772	387 167	373 622	379 905
Greece	*6 000	*6 000	*6 000	*6 000	*6 000
Irish Republic	13 000	13 000	8 500	9 800	6 600
Italy	199 300	215 300	230 500	221 900	192 700
Macedonia	28 415	19 738	22 939	19 737	*19 700
Netherlands	17 200	*18 000	21 000	20 000	18 000
Poland	64 400	63 985	55 900	66 000	65 800
Portugal	*6 000	*6 000	*6 000	*6 000	*6 000
Romania	19 872	17 462	23 555	26 900	28 000
Russia	33 100	55 260	51 501	60 000	54 000
Serbia and Montenegro	23 756	----	1 242	----	200
Slovenia	14 000	15 700	15 300	15 400	15 400
Spain	90 000	96 000	120 000	121 600	115 552
Sweden	91 631	83 927	82 375	77 633	68 553
Switzerland	8 572	9 173	10 007	10 250	8 670
Turkey	8 800	9 000	*9 000	*9 000	*9 000
Ukraine	7 340	9 902	15 034	12 800	12 800
United Kingdom	349 704	347 317	327 904	366 305	374 646
Algeria	6 300	6 200	5 700	6 100	6 000
Kenya	*1 000	*1 000	*1 000	*1 000	*1 000
Morocco	61 953	65 209	66 812	58 178	71 840
Namibia	236	----	----	----	----
Nigeria	*5 000	*5 000	*5 000	*5 000	*5 000
South Africa	50 000	52 000	46 000	55 000	61 000
Zimbabwe	*2 000	*2 000	*1 000	*1 000	----
Canada	265 487	266 415	284 333	230 928	251 264
Mexico	250 200	199 000	232 900	233 300	218 200
Trinidad and Tobago	*1 000	*1 000	*1 000	*1 000	*1 000
USA (b)	1 390 600	1 447 000	1 457 000	1 376 000	1 364 000
Argentina	30 357	25 695	35 700	35 433	41 600
Brazil (c)	48 000	52 000	50 000	47 000	50 000
Colombia	*12 000	*11 000	*10 000	*9 000	*9 000
Peru	109 493	111 276	116 412	121 181	119 588
Venezuela	25 000	25 000	25 000	25 000	25 000
China	756 900	918 400	1 099 900	1 195 400	1 288 200
India	63 700	60 500	57 400	74 400	64 200
Indonesia	22 000	18 000	18 000	18 000	17 000
Iran	35 000	31 500	28 600	33 000	*33 000
Israel	12 000	13 000	13 000	20 000	22 000
Japan	302 064	293 525	311 562	302 387	280 300
Kazakhstan	118 634	158 890	205 501	158 700	162 200
Korea, Dem. P.R. of	20 000	14 000	10 000	7 000	7 000
Korea, Republic of	191 409	190 405	219 123	211 010	230 000
Malaysia	29 000	33 000	32 000	38 000	40 000
Myanmar (a)	1 855	1 717	1 100	1 800	2 000
Pakistan	*3 000	*3 000	*3 000	*3 000	*2 000
Philippines	22 000	24 000	25 000	26 000	*26 000
Saudi Arabia	18 000	19 000	18 000	16 000	16 000
Taiwan	38 700	44 400	41 800	40 000	40 000
Thailand	22 125	26 766	27 193	30 000	*30 000
United Arab Emirates	2 000	2 000	2 000	2 000	2 000



**Production of Refined Lead**

Country	1998	1999	2000	2001	2002
Australia	206 000	272 000	251 000	270 000	302 000
New Zealand	10 000	10 000	10 000	10 000	10 000
<b>World Total</b>	<b>6 000 000</b>	<b>6 300 000</b>	<b>6 600 000</b>	<b>6 600 000</b>	<b>6 600 000</b>

## Note(s):

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

- (a) Years ended 31 March following that stated
- (b) Excluding Pb content of primary antimonial lead
- (c) Including scrap for direct use

## Exports of Lead

tonnes

Country	1998	1999	2000	2001	2002
Albania					
Scrap (f)	*500	*400	*400	*300	*300
Austria					
Unwrought	6 380	5 066	4 519	6 375	7 831
Belarus					
Unwrought	2 909	19	182	226	296
Scrap	5 268	4 623	3 865	3 871	3 924
Belgium-Luxembourg					
Ore	106 868	96 153	126 905	96 613	104 187
Unwrought	83 399	90 857	122 509	96 885	84 303
Scrap	5 100	6 984	8 979	9 465	6 981
Bulgaria					
Unwrought	63 800	70 702	72 777	(f) *55 900	(f) *48 000
Croatia					
Unwrought	1 341	1 027	115	20	39
Scrap	485	480	590	809	749
Cyprus					
Scrap	1 211	1 958	2 371	1 965	1 874
Czech Republic					
Unwrought	2 784	6 704	9 200	6 786	5 724
Scrap	3 039	3 313	4 152	3 750	3 346
Denmark					
Unwrought	645	13 859	2 186	3 090	3 048
Scrap	5 987	1 306	1 959	1 864	1 338
Estonia					
Scrap	282	1 059	278	459	437
Finland					
Scrap	1 160	12 366	12 653	811	338
France					
Unwrought	89 483	77 916	76 757	62 680	60 095
Scrap	3 024	5 101	20 275	21 979	23 473
Germany					
Ore	5 170	16 443	27 765	8 868	22 024
Unwrought	88 922	83 669	117 138	160 412	169 142
Scrap	14 910	15 561	13 112	12 669	13 646
Greece					
Unwrought	2 594	5 885	3 671	6 127	1 712
Hungary					
Scrap	2 509	2 315	1 718	1 944	1 421
Irish Republic					
Ores and concentrates	36 158	33 400	48 056	58 150	21 069
Italy					
Ore	4 850	5 000	-----	32	-----
Unwrought	21 132	26 381	24 103	8 646	20 987
Scrap	1 423	4 589	5 595	2 716	4 792
Lithuania					
Scrap	417	650	779	1 129	...
Macedonia					
Ore	17 642	14 955	16 259	14 034	...
Unwrought	20 837	19 656	21 892	22 537	...
Netherlands					
Unwrought	1 966	2 919	3 532	1 256	1 263
Scrap	21 856	20 227	24 706	26 188	5 670
Norway					
Scrap	10 660	13 494	15 329	15 693	5 188
Poland					
Ores and concentrates	59 992	76 115	59 977	73 989	77 493
Unwrought	36 800	45 838	41 381	44 691	38 602
Scrap	391	489	1 501	1 921	2 107
Portugal					
Unwrought	5	202	60	567	3 769
Scrap	1 541	3 556	2 827	3 506	2 733
Romania					
Unwrought	3 348	3 788	18 260	16 142	16 544
Scrap	1 456	5 224	6 083	1 483	1 518

## Exports of Lead

Country	1998	1999	2000	2001	2002
Russia					
Ores and concentrates	21 754	21 006	19 321	16 688	29 558
Unwrought (f)	*27 700	*24 600	*59 600	*28 600	*27 800
Scrap	14 796	4 410	3 076	787	...
Serbia and Montenegro					
Concentrates	4 510	3 585	----	6 846	6 671
Unwrought	5 335	2 220	5 102	2 264	2 737
Slovakia					
Unwrought	(f) *3 600	(f) *2 000	3 311	2 873	984
Scrap	(f) *500	...	83	...	0
Slovenia					
Unwrought	6 095	7 014	6 392	6 587	3 757
Spain					
Ore	41 230	34 760	113 715	97 594	13
Unwrought	2 073	6 217	5 842	6 098	9 458
Scrap	1 465	1 073	2 706	3 684	6 797
Sweden					
Ore	114 854	124 500	127 922	118 723	63 204
Unwrought	57 865	57 377	67 565	54 414	61 079
Scrap	680	221	73	545	424
Switzerland					
Unwrought	3 155	2 849	5 730	4 074	7 160
Scrap	6 607	6 032	4 883	4 479	2 565
Turkey					
Ore (e)	10 135	12 836	20 915	11 172	42 390
Unwrought	978	2 720	1 890	4 985	4 728
Ukraine					
Unwrought	(f) *6 600	7 040	11 068	(f) *7 400	(f) *7 500
Scrap (f)	*3 500	*900	*1 000	...	...
United Kingdom					
Unwrought	104 327	82 887	82 539	93 552	101 718
Unwrought alloys	33 096	31 460	35 145	42 308	57 420
Scrap	6 178	11 577	7 352	10 700	12 410
Algeria					
Unwrought	1 595	971	1 010	1 036	860
Scrap	1 798	690	253	...	...
Morocco					
Ore	48 195	47 803	39 196	33 726	...
Unwrought	59 017	53 588	55 079	52 274	...
Scrap	4 205	2 412	----	----	...
Namibia					
Concentrates (b)	11 999	5 360	12 775	9 524	14 304
South Africa					
Concentrates (b)	77 029	67 000	75 100	49 856	40 888
Unwrought	2 701	1 721	787	11 762	2 058
Tunisia					
Ore	3 684	7 885	8 980	10 183	...
Scrap	2 121	546	233	2 728	...
Zambia					
Scrap	...	1 512	1 692	376	1 080
Canada					
Ores and concentrates (b) (g)	52 249	58 831	72 546	69 092	53 183
Unwrought	206 103	220 965	226 232	172 693	187 673
Scrap	7 632	6 465	4 047	1 632	401
Dominican Republic					
Scrap	...	...	4 005	5 444	...
Honduras					
Ores and concentrates (b)	4 329	5 226	4 805	6 750	8 128
Mexico					
Ores and concentrates	12 238	37 054	57 870	29 818	10 379
Unwrought	71 834	28 670	29 487	19 779	10 540
Scrap	1 292	1 830	1 678	1 377	486

## Exports of Lead

tonnes

Country	1998	1999	2000	2001	2002
USA					
Ores and concentrates (b)	87 938	93 504	116 678	180 390	240 637
Unwrought	70 417	84 599	49 893	(a) 21 014	(a) 33 169
Unwrought alloys	6 642	6 054	6 116	...	...
Scrap	101 667	115 030	72 469	108 265	106 628
Argentina					
Ores and concentrates	18 976	13 406	10 269	2 747	...
Unwrought	204	733	10 183	19 443	22 270
Bolivia					
Ore	34 937	24 925	27 253	23 631	28 808
Brazil					
Ores and concentrates	11 228	9 723	20 677	11 225	11 230
Peru					
Ores and concentrates	200 695	225 555	301 825	208 866	331 734
Unwrought	96 721	98 675	108 900	113 600	110 538
Venezuela					
Unwrought	10 319	7 945	9 367	10 708	...
China					
Ore	34 371	22 906	2 766	210	13
Unwrought	250 940	468 368	467 810	472 072	418 281
Scrap	1 751	1 060	37	51	45
Dubai					
Scrap	2 871	5 886	...	...	...
Hong Kong					
Unwrought	13 039	12 506	14 008	16 912	22 369
Scrap	429	1 195	1 368	2 805	920
India					
Unwrought (c)	411	171	229	1 043	138
Indonesia					
Unwrought	15 358	5 929	8 989	3 316	993
Scrap	3 791	139	198	49	6
Iran					
Ore	*9 600	9 810	*15 000	...	17 024
Israel					
Unwrought (f)	*3 600	*5 400	*7 000	*7 700	*8 100
Scrap (f)	*700	*1 500	*800	*1 200	*1 500
Japan					
Unwrought	6 416	6 858	6 478	6 729	23 002
Scrap	8 575	9 368	5 166	3 857	9 634
Jordan					
Scrap	937	1 527	2 359	2 612	2 287
Kazakhstan					
Unwrought	85 170	109 968	155 452	131 238	131 915
Korea, Dem. P.R. of					
Unwrought (f)	*2 600	*3 400	*2 800	*2 700	*3 000
Korea, Republic of					
Unwrought	45 217	30 949	36 063	35 212	49 877
Malaysia					
Unwrought	18 000	35 900	7 602	23 310	...
Scrap	800	700	1 317	1 746	...
Saudi Arabia					
Unwrought	10 008	7 631	5 895	5 593	6 839
Scrap	1 211	4 681	2 482	1 710	1 970
Singapore					
Unwrought	30 946	18 022	68 254	89 028	67 457
Scrap	4 161	2 475	2 488	1 714	839
Taiwan					
Unwrought	11 496	17 976	24 626	24 176	30 218
Thailand					
Ore	18 502	19 500	6 300	14 544	5 437
Unwrought	4 313	15	169	5 445	1
Scrap	519	775	788	761	819

**Exports of Lead**

Country	1998	1999	2000	2001	2002
Australia					
Ores and concentrates	350 755	408 968	430 000	443 724	362 329
Unwrought , base bullion (d)	134 897	150 809	109 000	148 414	151 767
Unwrought, refined	170 416	244 972	218 000	206 921	246 566
Scrap	2 438	4 872	4 600	3 020	5 142
New Zealand					
Unwrought	11 745	9 025	6 274	2 739	6 266

## Note(s):

(1) In this table the term 'unwrought' lead corresponds to item 7801 of the Harmonised System and comprises base bullion, pigs, unwrought bars, etc.

(2) The term 'unwrought' as used here includes alloys unless these are separately specified

- (a) Including alloys
- (b) Pb content
- (c) Years ended 31 March following that stated
- (d) Includes a substantial precious metal content, mainly silver
- (e) Complex lead-zinc ore
- (f) BGS estimates, based on known imports into certain countries
- (g) Including Pb content of zinc concentrates

## Imports of Lead

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Unwrought	50 910	36 534	40 438	46 677	44 878
Scrap	2 314	2 351	2 538	1 921	1 844
Belarus					
Unwrought	3 659	484	633	474	613
Scrap	931	607	13	9	125
Belgium-Luxembourg					
Ore	95 581	96 710	117 528	101 613	115 471
Unwrought	52 659	62 275	28 653	30 894	27 490
Scrap	19 611	28 612	32 043	38 002	25 527
Bulgaria					
Ore	*68 000	76 143	88 338	...	...
Croatia					
Unwrought	2 949	827	2 365	841	1 635
Cyprus					
Unwrought	2 888	2 105	1 927	2 359	2 367
Czech Republic					
Unwrought	28 816	34 306	52 886	58 777	56 941
Denmark					
Unwrought	3 876	2 531	3 364	3 447	2 073
Scrap	1 611	1 895	2 032	1 535	2 489
Finland					
Unwrought	1 830	2 133	3 425	1 825	3 032
Scrap	542	81	181	287	137
France					
Ore	201 999	192 078	222 259	182 072	146 270
Unwrought	50 393	74 128	87 602	80 869	80 812
Scrap	43 194	51 764	48 198	40 099	44 079
Germany					
Ore	135 270	191 178	209 758	267 848	228 055
Unwrought	122 657	113 501	134 230	189 697	158 048
Scrap	13 735	16 738	18 724	19 056	19 472
Greece					
Unwrought	2 982	5 420	3 764	5 970	5 309
Scrap	10 861	4 897	1 350	882	3 349
Hungary					
Unwrought	12 387	9 867	11 577	10 117	6 552
Irish Republic					
Unwrought	27 329	20 761	21 083	24 432	35 376
Scrap	5 066	7 889	5 974	9 163	9 985
Italy					
Ore	97 969	182 670	158 478	109 714	98 430
Unwrought	82 108	98 155	88 093	90 537	111 214
Scrap	2 843	2 157	1 965	6 346	4 737
Macedonia					
Unwrought	1 024	496	581	202	...
Netherlands					
Unwrought	31 942	19 212	12 184	9 316	17 070
Scrap	9 787	10 821	11 164	8 427	8 824
Norway					
Unwrought	2 322	2 483	4 111	3 213	3 971
Poland					
Unwrought	8 900	14 788	33 525	33 400	43 821
Portugal					
Unwrought	28 072	19 615	18 053	20 604	16 952
Romania					
Ores and concentrates	7 449	12 966	32 615	30 678	32 043
Unwrought	2 355	6 537	4 377	3 767	2 811
Russia					
Ore (f)	*28 000	*45 000	*62 700	*45 000	*19 300
Unwrought	19 536	27 242	52 668	44 089	47 574
Slovakia					
Unwrought	1 053	957	885	633	427
Slovenia					
Unwrought	10 233	9 025	10 923	10 738	12 629
Spain					
Unwrought	95 983	101 293	106 245	117 501	178 929
Scrap	12 394	13 972	8 903	13 311	19 914

## Imports of Lead

tonnes

Country	1998	1999	2000	2001	2002
Sweden					
Unwrought	5 902	5 208	6 940	6 777	5 023
Scrap	1 857	3 055	2 152	2 548	1 970
Switzerland					
Unwrought	4 468	6 237	6 976	7 098	5 943
Turkey					
Unwrought	50 713	40 283	56 168	41 970	64 513
United Kingdom					
Ores and concentrates (b)	34 276	34 080	*34 000	*33 000	...
Unwrought , base bullion (h)	169 839	174 757	140 344	184 518	184 076
Unwrought, other	30 015	39 284	109 102	33 202	31 520
Scrap	5 537	7 704	10 849	15 633	5 015
Algeria					
Unwrought	7 280	6 273	4 536	...	...
Egypt					
Unwrought	13 079	8 960	*9 000	8 062	...
Scrap	5 256	----	----	...	...
Kenya					
Unwrought	786	1 022	587	...	400
Morocco					
Ore	20 585	26 681	27 338	18 008	...
South Africa					
Unwrought	16 914	11 774	13 386	13 144	14 306
Scrap	7 126	3 253	495	4 745	6 819
Tunisia					
Unwrought	5 650	4 642	7 138	8 760	...
Canada					
Ores and concentrates (b) (g)	36 855	58 980	52 041	58 216	68 853
Unwrought	34 140	13 575	17 534	4 024	2 122
Scrap	93 476	110 108	65 669	55 178	41 415
Cuba					
Unwrought	1 102	4 230	319	...	...
El Salvador					
Scrap	3 231	2 697	1 123	985	579
Mexico					
Ores and concentrates	26 615	26 742	38 707	36 311	31 557
Unwrought	14 372	56 586	36 587	38 663	48 749
USA					
Ores and concentrates (b)	90 018	40 896	66 392	11 193	5
Unwrought	234 350	276 398	316 324	(a) 257 683	(a) 252 745
Unwrought alloys	34 339	36 972	33 964	...	...
Scrap	12 184	16 171	17 547	11 638	3 547
Argentina					
Unwrought	8 755	4 306	3 212	1 643	706
Brazil					
Unwrought	59 956	56 013	70 723	73 454	71 025
Scrap	*5 000	*4 000	*1 000	...	...
Chile					
Unwrought	3 995	3 719	6 439	4 942	1 000
Colombia					
Unwrought	9 800	7 644	8 522	8 672	9 325
Venezuela					
Unwrought	5 892	5 207	6 338	5 874	...
Scrap	1 338	517	352	783	...
China					
Ores and concentrates	236 034	169 669	311 395	397 116	389 184
Unwrought	15 413	15 774	16 261	28 788	57 886
Dubai					
Unwrought	4 042	1 606	...	...	...
Scrap	351	579	...	...	...
Hong Kong					
Unwrought	20 502	13 790	13 150	19 278	21 121

## Imports of Lead

tonnes

Country	1998	1999	2000	2001	2002
India					
Ore (c)	10 678	12 270	13 344	4 219	1 059
Unwrought (c)	65 147	64 186	54 110	74 924	93 841
Scrap (c)	16 373	13 657	12 773	19 798	31 282
Indonesia					
Unwrought	32 819	27 575	46 939	32 684	45 882
Scrap	0	0	65	3 993	222
Iran					
Unwrought (d)	9 892	780	1 862	...	4 383
Scrap	1 024	263	409	1 375	924
Israel					
Unwrought	1 383	(f) *600	3 040	(f) *3 100	(f) *1 600
Japan					
Ore	183 272	167 880	185 484	186 207	155 118
Unwrought	35 693	21 087	31 385	52 045	17 223
Jordan					
Unwrought	2 496	2 447	1 899	1 637	1 223
Kazakhstan					
Ore	57 382	98 989	129 873	107 940	54 444
Scrap	9 337	8 581	19 222	25 209	23 002
Korea, Republic of					
Ores and concentrates	164 829	178 010	251 644	242 355	229 367
Unwrought	118 535	116 563	122 517	141 082	143 422
Scrap	972	6 359	1 187	4 975	7 221
Malaysia					
Unwrought	61 800	101 000	83 544	74 129	...
Oman					
Unwrought	4 916	4 608	4 580	2 740	3 487
Pakistan					
Unwrought (e)	6 594	237	7 176	17 000	56 118
Philippines					
Unwrought	5 872	19 479	19 142	9 184	...
Saudi Arabia					
Unwrought	1 390	3 791	3 355	2 648	1 933
Singapore					
Unwrought	35 457	101 716	84 681	96 094	92 791
Scrap	2 281	2 236	2 504	627	833
Taiwan					
Unwrought	111 118	138 247	139 360	132 944	133 292
Thailand					
Unwrought	23 762	166 180	69 106	57 466	68 797
Australia					
Ores and concentrates	*50 000	*43 000	*43 000	...	16 376
Unwrought	11 251	10 417	14 839	5 753	30 548
New Zealand					
Unwrought	...	1 757	737	570	1 023
Scrap	7 108	4 164	925	2 640	2 728

## Note(s) :-

- (1) In this table the term 'unwrought' lead corresponds to item 7801 of the Harmonised System and comprises base bullion, pigs, unwrought bars, etc.  
(2) The term 'unwrought' as used here includes alloys unless these are separately specified

- (a) Includes 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) Includes a substantial precious metal content, mainly silver



**Production of Lithium Minerals**

Country	1998	1999	2000	2001	2002
Portugal Lepidolite	13 306	14 862	9 352	11 571	16 325
Namibia	247	----	----	----	----
Zimbabwe	28 055	36 671	37 914	36 103	29 320
Canada	*22 500	*22 500	*22 500	*22 500	*22 500
USA (a)	1 500	1 500	*1 500	*1 500	*1 500
Argentina (b) (c)	8 583	4 387	5 276	4 512	5 635
Brazil					
Petalite	260	442	1 077	187	----
Spodumene	9 035	10 629	9 796	8 897	12 046
Chile (c)	28 377	30 231	35 869	31 320	35 242
China	43 122	46 198	31 967	34 276	...
Australia					
Spodumene (d)	62 948	75 824	64 983	56 370	101 212
World Total (Li content)	*11 300	*11 300	*12 100	*11 000	*12 500

## Note(s):

(1) In addition to the countries listed, Russia also produces lithium minerals

(a) Li content

(b) Chloride

(c) Carbonate

(d) Years ended 30 June of that stated

**Exports of Lithium**

tonnes

Country	1998	1999	2000	2001	2002
Belgium-Luxembourg					
Oxides	273	406	406	470	548
Carbonate	2 804	3 951	3 549	3 392	3 935
France					
Oxides	131	88	90	19	10
Carbonate	2 528	2 563	2 819	3 130	2 955
Germany					
Oxides	644	650	740	647	532
Carbonate	989	1 403	1 690	1 771	1 768
Italy					
Carbonate	88	51	124	87	138
Netherlands					
Oxides	299	220	380	590	203
Carbonate	156	281	142	205	104
Russia					
Oxides	868	627	1 033	1 402	1 184
Slovenia					
Carbonate	72	72	67	91	68
Spain					
Carbonate	14	301	6 839	1 617	639
Switzerland					
Oxides	117	63	9	96	53
United Kingdom					
Oxides	134	85	116	95	188
Carbonate	397	308	285	214	147
Zimbabwe					
Lithium minerals	8 872	16 480	27 912	*5 600	...
USA					
Oxides	4 365	5 027	5 045	5 548	6 178
Carbonate	3 295	2 789	2 847	3 279	4 033
Argentina					
Carbonate	5 082	1 280	1 259	1 098	454
Chile					
Carbonate	24 699	32 011	34 912	33 432	35 755
China					
Oxides	1 913	2 195	2 302	2 438	1 722
Carbonate	932	602	861	1 335	1 165
Indonesia					
Oxides	...	...	...	60	232
New Zealand					
Carbonate	75	95	404	387	178

## Imports of Lithium

Country	1998	1999	2000	2001	2002
Austria					
Carbonate	280	106	118	114	113
Belgium-Luxembourg					
Oxides	603	643	793	784	1 159
Carbonate	3 500	4 020	5 542	5 136	5 879
France					
Oxides	429	482	432	420	329
Carbonate	1 203	1 293	1 333	1 133	1 612
Germany					
Oxides	4 563	3 903	5 529	5 100	3 198
Carbonate	2 429	4 034	4 026	4 187	4 825
Italy					
Oxides	278	274	165	168	209
Carbonate	1 937	1 057	1 662	1 659	1 581
Netherlands					
Oxides	298	249	332	539	217
Carbonate	673	754	952	897	854
Poland					
Oxides	97	111	87	39	69
Carbonate	27	31	44	46	55
Russia					
Oxides	55	517	856	781	1 660
Carbonate	1 647	1 793	1 787	1 824	1 835
Slovenia					
Oxides	80	100	82	116	80
Spain					
Oxides	238	257	243	347	357
Carbonate	421	633	469	713	1 046
Sweden					
Oxides	156	160	126	130	155
Carbonate	103	208	126	183	179
Turkey					
Oxides	...	83	113	70	136
Carbonate	...	109	107	134	157
United Kingdom					
Oxides	589	389	376	374	418
Carbonate	1 925	818	779	499	623
South Africa					
Oxides	152	199	168	169	264
Carbonate	146	133	51	81	86
Canada					
Oxides	129	211	239	558	181
Carbonate	1 151	1 086	1 046	814	912
USA					
Carbonate	14 005	13 927	14 629	10 254	9 827
Venezuela					
Carbonate	141	680	600	228	...
China					
Oxides	300	182	15	31	200
Carbonate	2 956	3 543	4 479	4 687	4 437
Hong Kong					
Oxides	302	40	6	63	28
India					
Oxides (a)	784	1 070	653	910	1 108
Carbonate (a)	152	237	20	400	348
Indonesia					
Oxides	63	152	85	381	394
Carbonate	42	76	278	46	23
Iran					
Oxides	36	81	76	45	57
Japan					
Oxides	1 343	1 572	1 558	1 312	1 019
Carbonate	4 768	6 655	7 194	6 843	7 721

**Imports of Lithium**

tonnes

Country	1998	1999	2000	2001	2002
Korea, Republic of					
Oxides	249	...	313	327	341
Carbonate	713	983	1 037	1 114	1 112
Singapore					
Oxides	117	123	123	147	119
Taiwan					
Oxides	183	280	39	38	37
Carbonate	437	115	180	102	173
Thailand					
Oxides	50	120	172	119	166
Carbonate	...	...	24	58	53
Australia					
Oxides	230	271	218	301	288
Carbonate	162	127	8	...	84
New Zealand					
Oxides	48	206	787	721	56

Note(s) :-

(a) Years ended 31 March following that stated

**Production of Magnesite**

Country	1998	1999	2000	2001	2002
Austria	722 876	748 635	725 832	680 534	728 235
Greece	698 049	495 144	442 785	483 296	*500 000
Netherlands (f)	216 000	220 000	233 000	250 000	230 000
Poland	33 700	38 800	26 140	22 200	22 100
Russia	2 200 000	2 400 000	2 500 000	2 600 000	2 600 000
Serbia and Montenegro	80 923	30 642	40 925	36 173	33 350
Slovakia	877 842	826 902	1 000 211	961 212	929 630
Spain	482 295	505 209	534 234	598 000	637 024
Turkey	2 703 720	1 724 744	2 673 525	2 738 086	3 044 440
Egypt (d)	2 806	...	...	...	...
South Africa	74 375	74 000	...	18 500	...
Zimbabwe	4 321	5 356	4 029	2 466	2 546
Canada (b)	*165 000	*165 000	*165 000	*165 000	*165 000
Brazil (c)	342 485	282 145	279 876	265 000	270 000
Colombia	*10 500	*10 500	*10 500	*10 500	*10 500
China	*8 500 000	*9 500 000	*10 000 000	*10 000 000	*10 000 000
India (e)	349 852	325 764	317 765	282 943	272 798
Iran (a)	121 529	154 631	113 040	113 434	...
Korea, Dem. P.R. of	*800 000	*800 000	*650 000	*650 000	*450 000
Pakistan (d)	3 157	2 175	2 697	5 795	5 936
Philippines	*700	*700	410	4 093	...
Australia	360 113	280 363	349 538	599 994	483 838
World Total	18 800 000	18 600 000	20 100 000	20 500 000	20 500 000

## Note(s):

(1) In addition to the countries listed, Bulgaria, 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 30 June of that stated
- (e) Years ended 31 March following that stated
- (f) Chloride produced from solution mining

## Exports of Magnesite and Magnesias

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Magnesite	80	880	7 713	...	...
Magnesia	95 145	18 437	33 490	...	...
Belgium-Luxembourg					
Magnesite	384	364	883	276	440
Magnesia	82 040	51 821	47 634	60 846	73 182
Czech Republic (a)	*3 800	*300	*4 400	*1 000	*100
Denmark	1 427	976	363	299	131
France					
Magnesia	16 809	12 889	11 743	9 561	14 126
Germany					
Magnesite	602	119	217	233	186
Magnesia	71 504	41 274	56 707	90 154	66 559
Greece					
Magnesite	16 205	19 027	19 205	18 555	35 594
Magnesia	149 459	138 019	135 809	128 124	94 668
Irish Republic	554	707	1 177	1 541	65 428
Italy					
Magnesite	7 393	4 505	3 016	2 521	3 170
Magnesia	54 927	38 418	68 596	57 158	52 206
Netherlands					
Magnesite	476	636	562	2 502	2 944
Magnesia	95 637	113 402	69 044	448 602	438 407
Norway	*3 500	----	6 361	----	----
Russia	204 662	161 814	200 888	190 488	172 454
Serbia and Montenegro					
Magnesia	4 338	259	9 558	637	779
Slovakia	310 400	375 100	385 032	377 755	343 123
Spain					
Magnesite	397	24 080	23 270	9 201	24 152
Magnesia	139 567	153 600	151 712	150 632	154 661
Turkey					
Magnesite	39 135	36 089	28 266	37 723	52 446
Magnesia	173 115	188 931	207 486	190 347	213 384
United Kingdom					
Magnesite	234	53	89	78	335
Magnesia	46 754	37 010	43 835	40 023	25 685
Canada					
Magnesia	57 102	61 944	68 187	61 147	58 977
Mexico					
Magnesia	30 872	35 567	35 468	14 652	12 627
USA					
Magnesite	54 398	29 589	31 127	18 949	19 847
Magnesia	94 948	92 868	100 013	109 080	119 959
Brazil					
Magnesia	88 092	67 173	79 930	56 657	67 725
China					
Magnesite	108 535	33 131	43 807	109 267	97 779
Magnesia	1 945 208	2 068 708	1 993 826	1 997 547	1 914 330
Hong Kong	9 284	31 088	24 273	7 918	1 817
India					
Magnesite (b)	319	761	2 253	982	2 605
Magnesia (b)	1 350	3 100	2 743	2 089	2 614
Israel					
Magnesia	*11 000	*7 500	*7 200	...	...
Japan					
Magnesite	285	174	83	38	51
Magnesia	37 054	38 354	40 946	41 076	46 040
Korea, Dem. P.R. of (a)	*31 500	*67 500	*121 700	*153 900	*116 200
Korea, Republic of					
Magnesia	2 607	5 190	5 809	14 774	15 348
Singapore	1 259	197	211	251	109
Taiwan					
Magnesia	327	2 171	10 441	2 755	2 401

tonnes

**Exports of Magnesite and Magnesia**

Country	1998	1999	2000	2001	2002
Australia					
Magnesite	811	163	166	37 835	72 390
Magnesia	139 568	123 655	186 165	166 535	148 722

## 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

**Imports of Magnesite and Magnesias**

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Magnesite	136 780	108 884	135 281	...	...
Magnesia	53 684	32 182	30 013	26 220	20 545
Belarus	2 846	4 007	9 837	8 497	8 676
Belgium-Luxembourg					
Magnesite	1 585	1 738	8 732	12 733	2 547
Magnesia	82 172	61 148	67 637	90 663	73 514
Bulgaria	7 915	5 306	6 905	...	...
Croatia	836	405	666	764	949
Czech Republic					
Magnesite	885	1 810	1 522	4 362	3 516
Magnesia	40 207	36 544	34 156	33 375	32 090
Denmark					
Magnesite	1 077	639	2 841	1 204	1 085
Magnesia	5 178	3 509	4 803	4 770	3 731
Finland					
Magnesia	12 834	12 536	14 770	12 856	10 159
France					
Magnesite	9 615	21 054	23 738	13 047	9 434
Magnesia	199 802	145 692	164 453	148 516	146 526
Germany					
Magnesite	8 371	15 190	17 337	16 285	19 665
Magnesia	471 106	385 102	493 512	451 522	453 680
Greece					
Magnesite	9 851	8 275	5 505	13 087	19 308
Magnesia	541	814	1 358	11 507	7 442
Hungary	12 163	9 787	11 963	12 032	32 296
Irish Republic					
Magnesite	252	3 531	296	108	1 500
Magnesia	45 694	44 757	56 551	47 947	59 905
Italy					
Magnesite	31 542	30 695	29 864	32 911	18 687
Magnesia	111 329	98 192	106 661	106 250	120 820
Latvia	4 573	3 014	3 322	3 071	3 021
Lithuania					
Magnesite	1 182	2 167	444	5	...
Netherlands					
Magnesite	2 890	13 228	5 562	2 242	5 758
Magnesia	210 890	235 603	286 232	377 804	362 706
Norway					
Magnesite	5 302	5 469	6 594	4 013	3 148
Magnesia	386	222	368	403	130
Poland	98 400	79 277	95 007	69 772	73 266
Portugal					
Magnesite	1 762	1 869	2 892	1 888	909
Magnesia	2 597	3 203	2 288	18 635	6 078
Romania	27 905	21 960	23 280	31 707	35 478
Russia	32 524	42 092	90 238	93 188	82 024
Serbia and Montenegro					
Magnesite	5 617	1 054	3 030	114	36
Magnesia	...	122	6 528	----	----
Slovakia	18 600	21 518	34 249	36 609	32 571
Slovenia	7 117	7 993	7 584	8 406	9 377
Spain					
Magnesite	5 548	4 421	6 924	1 521	1 303
Magnesia	103 699	95 497	104 268	112 201	101 620
Sweden					
Magnesia	37 095	39 854	34 884	40 361	26 875
Switzerland					
Magnesite	1 114	306	547	394	228
Magnesia	3 867	3 538	4 278	4 600	4 521
Turkey					
Magnesia	15 164	18 288	30 964	23 373	50 238
Ukraine	357 850	484 823	507 169	...	...
United Kingdom					
Magnesite	12 176	38 325	24 541	7 122	9 238
Magnesia	147 167	122 870	127 360	108 988	96 719



## Imports of Magnesite and Magnesia

Country	1998	1999	2000	2001	2002
Egypt	11 748	10 937	*11 200	15 376	...
South Africa					
Magnesite	3 965	3 441	2 687	2 892	13 382
Magnesia	69 005	54 229	55 844	50 821	46 456
Tunisia	709	716	956	856	...
Zimbabwe	...	11 134	30 883	...	868
Canada					
Magnesite	120 294	25 914	88 883	40 887	238 864
Magnesia	103 898	112 090	92 210	78 261	100 925
Mexico					
Magnesite	1 023	522	492	793	431
Magnesia	38 693	33 018	54 884	38 053	...
USA					
Magnesite	4 645	7 822	14 574	11 477	11 854
Magnesia	568 382	532 292	655 845	510 073	559 423
Argentina					
Magnesia	22 385	14 879	22 767	18 305	11 742
Brazil					
Magnesia	121 966	46 717	7 690	7 610	7 437
Chile					
Magnesia	18 688	13 474	14 116	14 683	26 521
Colombia	11 960	8 616	12 438	9 868	12 896
Peru					
Magnesia	5 067	2 274	2 038	5 537	4 240
Venezuela					
Magnesite	13 487	8 888	17 229	11 857	...
Magnesia	16 585	12 640	7 875	10 899	...
China	7 420	5 295	8 008	9 460	24 570
Hong Kong	3 296	3 066	4 911	2 633	2 486
India					
Magnesite (a)	5 074	9 755	11 448	22 263	20 880
Magnesia (a)	37 026	47 453	54 768	40 157	50 785
Indonesia					
Magnesite	217	3 049	3 328	2 733	3 609
Magnesia	27 163	28 200	36 890	18 421	24 769
Iran	13 027	4 486	25 059	53 132	49 438
Israel	*1 400	*1 800	*1 300	...	...
Japan					
Magnesite	1 828	1 607	2 244	1 870	2 524
Magnesia	499 443	486 827	632 117	648 844	517 322
Jordan	136	393	292	223	195
Kazakhstan	12 184	9 317	10 158	...	...
Korea, Republic of					
Magnesite	1 240	1 237	923	242	6 013
Magnesia	175 726	177 116	203 145	207 546	209 618
Malaysia					
Magnesite	4 500	15 200	6 513	15 410	...
Magnesia	8 200	26 400	36 365	...	...
Philippines					
Magnesite	1 971	133	2 120	583	...
Magnesia	2 653	1 535	6 525	4 113	...
Saudi Arabia	1 710	...	2 256	7 091	12 903
Singapore	9 286	2 504	2 734	2 025	3 736
Taiwan					
Magnesite	2 209	273	470	2 321	44 011
Magnesia	195 145	211 222	235 169	189 352	187 918
Thailand					
Magnesite	16 544	24 144	25 965	25 317	27 658
Magnesia	4 976	4 043	5 749	6 493	8 870

**Imports of Magnesite and Magnesia**

tonnes

Country	1998	1999	2000	2001	2002
Australia					
Magnesite	2 428	2 391	293	533	613
Magnesia	4 469	3 990	4 807	6 281	5 200
New Zealand					
Magnesite	3 209	3 160	7 687	7 273	5 744
Magnesia	20 016	29 197	21 884	25 276	33 745

Note(s) :-

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

(a) Years ended 31 March following that stated

**Production of Manganese Ore**

Country	1998	1999	2000	2001	2002
Austria (a)	33 869	33 018	35 060	36 783	38 700
Bulgaria	55 600	-----	-----	1 515	4
Georgia (e)	16 000	54 900	63 100	98 300	103 400
Hungary	34 000	41 000	41 000	43 000	43 000
Italy	974	972	1 038	803	...
Romania	*100 000	*60 000	27 080	*70 000	*60 000
Turkey	53 283	29 000	23 300	20 000	20 000
Ukraine (e)	2 217 000	1 984 800	2 740 600	2 710 000	2 740 000
Gabon	2 092 000	1 908 000	1 743 000	1 791 000	1 856 000
Ghana	384 406	638 937	895 669	1 076 666	1 135 828
Morocco	28 332	29 150	25 830	13 757	17 484
South Africa					
Metallurgical	3 012 827	3 092 784	3 613 154	3 239 903	3 302 129
Chemical	31 294	29 210	22 273	26 241	19 516
Mexico	510 062	458 946	418 300	261 284	233 025
Brazil (b)	2 107 219	1 699 618	2 179 480	*2 100 000	*2 700 000
Chile	48 931	40 505	41 716	31 320	12 195
China	5 283 000	3 186 000	3 514 000	4 306 800	...
India (c)	1 537 693	1 585 726	1 595 458	1 587 305	1 662 004
Iran (d)	101 390	96 883	110 917	140 418	...
Kazakhstan	634 100	944 000	1 201 900	1 386 500	1 834 500
Australia	1 501 000	1 900 000	1 613 000	1 977 000	2 187 000
World Total	19 800 000	17 800 000	19 900 000	20 900 000	22 300 000

## Note(s):

(1) In addition to the countries listed, Colombia, Cuba and Vietnam are believed to produce manganese ore

- (a) Mn content of domestic iron ore
- (b) Including beneficiated and direct shipping ore
- (c) Years ended 31 March following that stated
- (d) Years ended 20 March following that stated
- (e) Marketable

## Exports of Manganese

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Metal	58	2 517	21 614	28 326	29 058
Belgium-Luxembourg					
Ore	16 648	18 734	21 966	47 237	16 949
Metal	2 247	1 347	1 652	4 129	3 216
Bulgaria					
Ore	48 958	34 104	21 104	...	...
Czech Republic					
Metal	20	157	26	...	0
Estonia					
Metal	41	437	820	490	----
France					
Ore (a)	116 556	198 347	303 274	382 914	413 461
Metal	610	120	431	261	168
Georgia					
Metal	(c) *200	(c) *200	1 440	1 080	...
Germany					
Metal	8 243	6 654	11 747	10 186	11 548
Italy					
Metal	103	623	84	62	120
Netherlands					
Ore	14 075	12 125	13 617	9 889	14 115
Metal	5 160	5 806	6 503	9 614	3 869
Norway					
Metal	35	...	0	2	...
Russia					
Metal (c)	*5 400	*2 200	*5 300	*2 500	*1 200
Spain					
Ore	1 414	1 844	3 588	11 474	1 208
Metal	2 334	2 924	5 331	6 113	5 727
Sweden					
Ore	...	12 575	12 524	1	25
Metal	115	105	116	99	425
Turkey					
Metal	25	107	3	----	1
Ukraine					
Ore	286 622	172 377	23 420	...	...
Metal	(c) *26 200	34 950	65 101	(c) *64 800	(c) *52 900
United Kingdom					
Metal	4 742	*3 800	*3 800	*3 700	...
Gabon					
Ore	2 063 800	1 883 800	1 920 000	*1 800 000	*1 800 000
Ghana					
Ore	387 179	479 437	645 700	...	...
Morocco					
Ore	23 485	22 512	16 876	15 491	...
South Africa					
Ore	1 679 975	1 568 560	1 845 247	1 527 947	1 539 331
Metal	35 362	29 960	(c) *29 800	(c) *33 500	(c) *32 200
Canada					
Metal	484	223	438	1 064	3 494
Mexico					
Ore	48 713	29 755	20 379	14 070	10 126
Metal	690	697	988	1 354	1 324
USA					
Ore	8 406	4 240	20 108	9 884	15 000
Metal	5 837	3 575	2 369	1 944	2 324
Brazil					
Ore	1 089 946	506 640	1 026 253	1 222 154	903 028

**Exports of Manganese**

Country	1998	1999	2000	2001	2002
China					
Ore	1 616	7 206	5 196	3 300	4 374
Metal	73 214	80 626	97 200	126 784	136 900
Hong Kong					
Metal	38	130	0	1	41
India					
Ore (b) (d)	166 963	75 685	265 010	248 103	335 672
Japan					
Metal	391	35	44	48	29
Kazakhstan					
Ore	421 832	547 877	521 012	422 070	409 116
Metal (c)	*900	*200	*100	*1 300	...
Korea, Republic of					
Metal	...	36	710	273	988
Singapore					
Ore	19 825	19 319	17 253	16 656	21 934
Australia					
Ore	*1 066 000	*1 312 000	*1 408 000	*1 612 000	*2 187 000
Metal	49	1 218	2 500	...	...

## 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

## Imports of Manganese

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Metal	2 143	8 287	14 288	19 889	18 223
Belgium-Luxembourg					
Ore	127 521	83 407	78 179	106 749	72 216
Metal	3 728	4 823	5 884	8 136	5 413
Bulgaria					
Ore	3 249	----	315	...	...
Croatia					
Metal	51	14	49	58	57
Czech Republic					
Ore	3 507	3 505	10 436	7 314	11 507
Metal	207	155	244	206	376
Denmark					
Metal	29	129	79	76	115
Estonia					
Metal	41	437	847	821	155
Finland					
Ore	22 184	18 681	25 093	10 538	36 014
Metal	1 375	774	4 896	259	997
France					
Ore (b)	1 204 454	950 913	1 618 372	1 390 507	968 498
Metal	8 251	6 396	10 132	11 081	8 693
Germany					
Ore (b)	23 108	21 711	8 644	7 380	6 629
Metal	42 939	27 449	47 498	45 296	45 208
Greece					
Ore	22 396	23 050	20 853	22 329	...
Metal	500	474	546	681	1 289
Hungary					
Metal	357	361	453	476	677
Irish Republic					
Ore (b)	37 408	39 799	54 840	38 977	27 456
Metal	64	55	59	49	23
Italy					
Ore (b)	283 914	135 299	253 215	100 908	111 716
Metal	2 791	2 708	3 466	10 089	4 723
Macedonia					
Ore	12 625	1 161	6 157	...	...
Netherlands					
Ore	24 485	19 833	11 984	10 209	7 086
Metal	8 270	8 156	14 471	9 661	4 533
Norway					
Ore	721 529	650 379	608 216	711 545	660 348
Metal	2 224	1 783	2 284	1 699	2 155
Poland					
Ore	109 600	9 950	38 975	43 603	14 597
Metal	310	337	345	1 834	821
Romania					
Ore	46 763	35 545	127 114	128 961	209 891
Metal	115	153	137	158	...
Russia					
Ore	479 117	738 422	621 078	483 787	515 725
Metal	1 320	2 832	4 345	9 578	12 970
Slovakia					
Ore	148 434	185 765	132 601	...	186 061
Metal	...	117	101	185	121
Slovenia					
Metal	137	112	70	42	154
Spain					
Ore	486 951	332 673	420 908	352 275	431 720
Metal	5 147	4 227	6 913	12 475	8 174
Sweden					
Ore	1 735	3 071	6 298	1 871	98
Metal	3 257	8 059	8 164	8 072	6 660
Switzerland					
Metal	483	480	553	449	404
Turkey					
Metal	78	50	85	34	182

## Imports of Manganese

Country	1998	1999	2000	2001	2002
United Kingdom					
Ore (b)	28 300	8 234	2 956	2 701	1 206
Metal	8 796	7 284	8 620	9 636	7 561
Cameroon					
Ore	2 041	1 980	1 200	...	...
Egypt					
Ore	674	483	*500	18 412	...
South Africa					
Ore	4 023	5 017	19 416	50 488	108 678
Metal	83	322	23	1 489	462
Canada					
Ore (a)	24 967	59 301	26 302	24 110	24 416
Metal	5 580	5 853	3 765	4 373	4 021
Mexico					
Ore	78 176	73 071	99 702	66 417	56 527
Metal	905	1 631	2 324	2 527	3 310
USA					
Ore	345 645	471 706	434 349	357 639	426 633
Metal	16 026	15 335	16 706	21 550	29 542
Argentina					
Ore	64 419	20 345	20 396	14 716	21 824
Brazil					
Metal	2 247	2 161	3 075	3 823	3 429
Colombia					
Ore	18 036	1 816	22 027	22 278	713
Venezuela					
Ore	99 802	47 785	102 362	69 127	...
Bahrain					
Metal	...	...	557	825	2 515
China					
Ore	1 179 052	1 056 874	1 202 466	1 711 506	2 080 150
Metal	122	79	75	36	82
Dubai					
Metal	29	8	...	...	...
Hong Kong					
Metal	254	354	377	90	244
India					
Ore (c)	4 343	5 102	2 887	7 721	7 620
Metal (c)	1 565	1 910	1 937	1 838	6 452
Indonesia					
Ore (b)	24 724	5 566	3 463	1 737	2 720
Metal	37	131	147	50	101
Iran					
Metal	98	40	64	89	69
Israel					
Ore	*1 800	*200	*900	...	...
Japan					
Ore (b)	1 207 907	1 227 064	1 148 008	1 226 835	1 114 654
Metal	39 197	39 936	43 270	52 748	45 779
Korea, Republic of					
Ore	494 333	503 337	546 970	506 879	456 813
Metal	5 539	10 580	11 931	15 436	20 883
Philippines					
Ore (b)	800	2 758	1 037	...	...
Saudi Arabia					
Ore	93 219	115 806	167 115	174 422	11 517
Metal	...	904	185	251	231
Singapore					
Ore	17 408	46 379	27 503	27 030	38 020
Metal	134	1 112	1 541	2 025	322
Taiwan					
Ore	57 714	29 028	32 418	38 352	15 344
Metal	886	841	1 027	700	1 102

## Manganese

**Imports of Manganese**

tonnes

Country	1998	1999	2000	2001	2002
Thailand					
Metal	148	114	150	190	185
Australia					
Ore	2 034	11 138	44 066	39 492	34 990
Metal	2 121	1 921	1 743	1 485	1 500
New Zealand					
Metal	29	43	...	140	74

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) Years ended 31 March following that stated



**Production of Mercury**

Country	1998	1999	2000	2001	2002
Finland	54 000	55 000	76 100	71 200	50 600
Slovenia	5 000	-----	-----	-----	-----
Spain	672 681	433 000	236 600	524 000	726 139
Algeria	224 077	240 327	215 625	320 091	307 119
Mexico	*15 000	*15 000	*15 000	*15 000	*15 000
USA	*15 000	*15 000	*15 000	*15 000	*15 000
Chile (a) (b)	5 000	6 500	*7 000	*7 500	*7 500
China	225 000	195 000	203 000	193 000	*250 000
Kyrgyzstan	637 600	645 900	550 000	574 400	*600 000
Tajikistan	*35 000	*35 000	*40 000	*40 000	*20 000
<b>World Total</b>	<b>1 900 000</b>	<b>1 600 000</b>	<b>1 400 000</b>	<b>1 800 000</b>	<b>2 000 000</b>

## Note(s):

(1) Several countries are believed to have unrecorded production of mercury from copper electrowinning processes

(a) From copper solvent extraction and electrowinning processes

(b) Exports

## Exports of Mercury

kilograms

Country	1998	1999	2000	2001	2002
Austria	67 100	2 100	8 400	24 100	900
Belgium-Luxembourg	22 300	52 500	...	54 100	15 900
Czech Republic	3 000	3 000	19 000	12 000	16 542
Denmark	399	245	126	865	3 642
Estonia	17 000	...	...	...	2 476
Finland	115 238	36 918	82 808	77 627	54 859
France	34 000	94 600	11 400	12 500	7 100
Germany	136 400	152 300	567 400	412 000	59 500
Italy	12 011	1 164	28 325	21 968	274 624
Netherlands	199 700	90 600	426 300	298 000	344 400
Norway	32 008	14 525	...	...	...
Poland	...	7 000	94 317	82 000	24 000
Russia (a)	*70 000	...	*155 400	*65 900	*19 300
Slovakia	...	17 000	1 000	34 000	1 188
Slovenia	16 097	545	831	1 446	1 312
Spain	312 578	511 305	956 655	569 833	820 527
Sweden	2 000	1 000	----	23 000	...
Switzerland	21 679	41 153	60 114	92 862	36 900
Ukraine	5 028	----	60 500	...	...
United Kingdom	34 528	5 413	3 069	17 299	6 092
Algeria	376 913	100 050	142 140	172 500	448 500
Morocco	9 000	...	10 000	...	...
South Africa	77 775	3 905	7 344	46 415	1 154
Canada	8 037	1 778	4 108	8 045	11 250
USA	63 155	203 230	221 984	108 000	327 166
Chile	5 382	6 500	*7 000	*7 500	*7 500
China	88 442	2 088	4 242	50 005	300
Hong Kong	352 114	141 700	14 728	...	34 511
India (b)	...	35 837	359 534	18 604	2 300
Indonesia	...	...	100 000	14 400	681
Japan	4 924	7 074	38 851	16 502	5 773
Korea, Republic of	598	1 903	1 140	...	3 450
Kyrgyzstan	623 000	552 000	547 000	481 300	(a) *197 000
Singapore	3 872	4 254	5 105	55 413	52 254
Taiwan	1 728	----	----	21 545	111
Australia	14 946	3 000	33 936	1 315	140 462

Note(s):

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

(b) Years ended 31 March following that stated

## Imports of Mercury

Country	1998	1999	2000	2001	2002
Austria	900	1 500	300	2 400	5 700
Azerbaijan	1 000	...	15 000	...	...
Belgium-Luxembourg	72 600	102 600	21 000	18 000	22 600
Czech Republic	4 000	3 000	3 000	1 000	1 875
Denmark	856	1 070	587	1 276	796
Finland	9 070	12 659	77	177	158
France	36 000	206 700	31 400	23 100	25 200
Germany	41 400	27 600	59 300	68 300	19 900
Greece	4 000	4 001	20 940	125 335	291
Irish Republic	429	103 960	1 298	2 401	1 008
Italy	11 268	17 341	48 484	32 672	15 389
Netherlands	424 300	59 900	560 000	908 200	517 600
Norway	585	314	180	347	99
Poland	3 000	4 000	5 287	7 000	21 976
Portugal	933	869	749	7 546	533
Russia	46 000	11 000	110 000	54 964	47 250
Serbia and Montenegro	2 000	4 000	-----	3 000	-----
Slovakia	771	8 322	8 022	4 000	3 677
Spain	224 706	132 400	143 032	734 351	318 263
Sweden	15 000	17 000	1 000	1 000	1 000
Switzerland	11 333	7 895	27 379	24 309	18 901
Turkey	40 830	38 032	3 981	10 602	5 358
United Kingdom	7 935	8 337	18 719	5 042	23 193
Botswana	101 114	...	165 000	72 000	...
Egypt	2 000	4 000	...	2 000	...
Kenya	3 000	16 000	...	...	21 239
Nigeria	15 000	4 000	...	...	...
South Africa	...	...	12 528	12 424	12 044
Togo	2 062	5 500	4 125	6 187	6 187
Canada	11 383	9 434	12 000	7 419	8 340
Mexico	19 800	26 382	9 584	52 057	43 844
USA	128 344	61 599	135 695	99 000	209 616
Argentina	13 000	37 284	48 681	56 027	14 152
Brazil	82 000	49 720	40 537	62 545	66 889
Chile	2 538	1 396	1 043	730	...
Colombia	97 000	26 000	68 000	57 000	52 760
Ecuador	9 480	11 460	8 200	9 888	6 100
Peru	45 000	42 000	31 000	73 000	63 396
Uruguay	-----	-----	3 500	...	...
Venezuela	...	3 000	7 000	1 000	...
China	523 664	883 201	774 820	488 679	224 560
Hong Kong	861 554	174 154	73 816	64 688	86 287
India (b)	124 823	207 384	285 644	260 440	53 120
Indonesia	16 281	61 620	48 686	1 286	466
Iran	66 000	122 000	181 000	130 709	103 603
Japan	6 911	10 351	6 901	11 045	6 902
Korea, Republic of	17 804	25 533	11 459	14 204	27 919
Malaysia	2 987	...	3 000	5 000	...
Pakistan (a)	60 516	121 452	79 832	33 859	48 965
Philippines	39 396	64 000	30 000	20 000	...
Singapore	64 938	319 035	129 542	143 444	238 251
Sri Lanka	889	1 025	1 788	921	1 543
Taiwan	7 173	6 317	4 500	3 393	6 420
Thailand	13 000	13 000	12 077	17 170	10 711
Australia	39 901	27 000	34 439	57 863	46 937

Note(s) :-

(a) Years ended 30 June of that stated

(b) Years ended 31 March following that stated

**Production of Mica**

tonnes

Country	1998	1999	2000	2001	2002
Finland	7 241	8 470	10 035	8 983	7 170
France (e)	*17 000	19 000	21 000	15 000	17 000
Russia	*10 000	*10 000	*10 000	*10 000	*10 000
Serbia and Montenegro	247	229	1 727	303	426
Spain (e)	10 278	9 362	10 086	9 874	9 200
Madagascar	1 232	54	67	90	45
Morocco	-----	210	1 897	-----	-----
South Africa	1 556	1 010	676	950	859
Zimbabwe	1 309	499	273	-----	-----
Canada	*30 000	*30 000	*30 000	*30 000	*30 000
Mexico	890	971	1 658	648	456
USA (d) (e)	87 000	95 400	101 000	97 800	81 100
Argentina	3 480	3 097	*3 100	2 772	2 357
Brazil	*4 000	*5 000	*4 000	*4 000	*4 000
China (c)	*40 200	*40 700	*43 300	*52 200	*54 000
India (b)	2 551	3 386	4 117	6 095	4 618
Iran (f)	1 200	1 470	4 562	4 615	...
Korea, Republic of (a)	38 459	24 734	65 295	109 339	29 870
Malaysia (g)	3 642	3 675	3 835	4 107	3 669
Sri Lanka	2 784	1 425	1 491	1 161	1 161
Taiwan	7 750	6 966	6 862	9 733	6 595
Australia	639	1 016	749	959	605
World Total	270 000	270 000	330 000	370 000	270 000

## Note(s):

(1) In addition to the countries listed, Namibia, Pakistan and Romania are believed to produce mica

(a) Mainly sericite

(b) Years ended 31 March following that stated

(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

(g) Sericite

## Exports of Mica

Country	1998	1999	2000	2001	2002
Austria	3 431	3 634	2 629	2 951	3 512
Belgium-Luxembourg	304	61	416	829	915
Finland	5 592	7 969	8 331	7 362	5 514
France	12 108	12 567	4 649	2 836	4 387
Germany	2 028	1 630	2 173	1 922	2 018
Italy	374	451	352	349	667
Netherlands	1 362	1 913	4 589	1 397	4 384
Norway	2 051	2 172	1 833	1 760	2 155
Russia	837	730	828	1 090	1 156
Spain	460	1 745	1 925	1 856	2 001
Sweden	983	60	87	102	89
Turkey	575	308	296	338	503
United Kingdom					
Unmanufactured	24	120	68	22	20
Ground	4 686	3 913	3 638	3 758	4 117
Waste	474	254	56	17	46
Madagascar	212	511	796	...	...
South Africa	334	262	263	216	328
Zimbabwe	1 109	535	207	...	...
Canada	18 099	24 435	25 195	20 094	21 546
USA					
Unmanufactured	1 660	4 422	1 664	2 025	2 439
Ground	6 901	7 753	9 380	8 063	9 321
Brazil	498	1 009	1 205	1 404	1 255
China	40 178	40 714	43 332	52 219	54 018
India					
Block (a)	997	1 227	2 119	1 610	791
Splittings (a)	644	881	1 112	19 911	958
Condenser films (a)	10	----	51	58	22
Ground (a)	41 991	38 926	55 304	33 743	27 888
Waste (a)	6 040	5 000	4 659	2 360	4 188
Japan	626	862	951	1 133	1 215
Korea, Republic of	6 859	40	34	45	88
Malaysia	4 198	4 140	4 912	...	...
Singapore	517	207	392	150	348
Sri Lanka	2 433	1 347	...	1 078	1 203
Taiwan	2 079	1 861	1 955	1 577	1 665
Australia					
Mica	77	77	4 049	4 660	11 719

## 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 31 March following that stated

## Imports of Mica

tonnes

Country	1998	1999	2000	2001	2002
Austria	604	696	483	570	599
Belgium-Luxembourg					
Ground	729	844	1 138	1 033	1 359
Czech Republic	657	699	707	890	926
Denmark	298	226	254	241	408
Finland	1 273	768	1 118	1 818	2 621
France					
Ground (a)	1 151	1 320	1 596	1 689	1 241
Waste	2 039	2 025	2 470	981	2 001
Germany					
Unmanufactured	878	1 485	1 453	387	227
Ground	26 492	18 735	19 428	21 498	23 488
Waste	66	294	56	468	345
Greece	61	201	119	48	114
Irish Republic	557	582	657	639	463
Italy					
Unmanufactured	230	326	121	62	52
Ground	2 220	4 442	2 741	2 594	2 586
Netherlands	3 476	3 742	4 005	3 383	6 320
Norway	2 998	3 150	2 051	2 426	1 174
Poland	891	826	883	820	557
Portugal	110	144	57	56	113
Russia	1 853	126	34	172	365
Spain	2 351	2 129	1 287	1 185	5 447
Sweden	963	475	713	562	547
Switzerland	476	665	297	300	289
Turkey	81	56	117	136	33
United Kingdom					
Unmanufactured	29	125	203	344	241
Ground	7 961	6 977	5 355	7 258	9 352
Waste	10 379	5 854	8 119	4 016	4 224
Botswana	545	...	161	39	...
South Africa	...	...	214	313	270
Zimbabwe					
Mica	...	3 244	4 872	...	5 913
Canada	4 861	5 073	6 507	6 400	6 569
Jamaica	202	267	223	...	...
Mexico	1 435	1 792	1 991	1 997	2 305
USA					
Block	73	37	107	405	106
Splittings	2 630	2 659	4 017	2 770	551
Ground	15 492	20 626	22 111	17 713	20 777
Other unmanufactured	7 637	5 143	6 458	14 657	13 213
Colombia	254	318	317	282	241
Venezuela	250	333	325	...	...
China	1 213	1 090	5 400	5 325	7 803
Dubai	195	500	...	...	...
Hong Kong	51	192	198	169	175
India (b)	327	409	339	967	1 232
Indonesia	773	1 075	1 009	2 032	1 283
Iran (c)	258	439	148	...	*1 500
Japan					
Unmanufactured	7 581	7 863	11 060	10 991	9 091
Ground	32 436	34 496	32 717	34 222	36 427
Waste	3 572	2 609	1 591	2 689	1 970
Korea, Republic of	4 379	6 117	6 147	6 308	7 366
Malaysia	5 223	4 111	5 143	16 001	...
Philippines	223	504	343	609	...
Saudi Arabia	1 123	1 597	1 430	3 694	2 389
Singapore	933	817	1 206	643	579
Taiwan					
Unmanufactured	499	760	758	485	500
Ground	1 683	2 592	2 848	2 180	2 433
Thailand	590	860	889	1 291	1 498

**Imports of Mica**

Country	1998	1999	2000	2001	2002
Australia	1 879	2 172	2 286	1 888	2 071
New Zealand	£149 000	£132 000	£144 000	£107 000	£91 000

## 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) Including unmanufactured
- (b) Years ended 31 March following that stated
- (c) Years ended 20 March following that stated

**Mine Production of Molybdenum**

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Armenia	*2 600	2 756	3 082	2 943	2 883
Russia	4 800	4 800	3 700	4 800	4 800
Canada	8 469	5 932	7 457	8 233	7 996
Mexico	5 949	7 961	6 886	5 518	3 428
USA	53 300	42 400	40 900	37 600	*32 600
Chile	25 298	27 270	33 639	33 492	29 467
Peru	4 336	5 472	7 205	8 351	8 319
China	30 015	29 745	28 755	28 201	39 089
Iran (a)	2 400	2 600	2 000	2 600	...
Kazakhstan	100	155	215	94	...
Kyrgyzstan	148	242	*250	*250	...
Mongolia	1 848	1 954	1 336	1 423	1 590
Uzbekistan	*500	*500	348	580	...
<b>World Total</b>	<b>140 000</b>	<b>132 000</b>	<b>136 000</b>	<b>134 000</b>	<b>134 000</b>

## Note(s):

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

(a) Years ended 20 March following that stated



## Exports of Molybdenum

Country	1998	1999	2000	2001	2002
Armenia					
Metal	...	98	219	...	279
Austria					
Metal	1 684	1 700	1 864	2 023	2 123
Oxides	85	1	36	0	0
Belgium-Luxembourg					
Ores and concentrates	17 437	12 615	11 951	9 864	9 271
Metal	104	143	802	543	199
Oxides	216	242	132	242	1 621
Estonia					
Metal	18	49	106	76	1
France					
Ores and concentrates	118	89	6	99	1
Metal	65	57	161	93	65
Oxides	...	...	27	11	20
Germany					
Ores and concentrates	36	206	39	157	240
Metal	1 070	1 132	1 337	1 220	1 274
Oxides	770	17	3 863	4 441	...
Italy					
Metal	197	94	34	98	57
Netherlands					
Ores and concentrates	6 106	4 869	7 303	16 092	52 237
Metal	249	167	380	829	81
Oxides	96	246	2 109	2 014	1 920
Russia					
Ores and concentrates	7 368	10 941	9 297	9 373	10 500
Metal	932	569	355	383	181
United Kingdom					
Ores and concentrates	2 401	998	317	297	499
Metal	248	104	277	...	317
South Africa					
Metal	1	173	260	1	27
Canada					
Ores and concentrates (a)	10 748	10 558	10 640	13 743	16 097
Mexico					
Ores and concentrates	10 702	9 838	8 404	11 976	8 747
USA					
Ores and concentrates (a)	42 480	28 527	23 740	28 624	20 036
Metal	1 127	976	1 056	1 076	864
Oxides	1 149	1 155	1 279	951	1 689
Chile					
Ores and concentrates	43 323	44 720	53 511	58 012	51 224
Oxides	3 618	2 030	2 978	3 907	2 734
Peru					
Ores and concentrates	8 011	9 824	13 355	15 249	18 971
China					
Ores and concentrates	4 567	9 300	14 172	22 582	34 425
Metal	849	1 029	1 639	1 744	1 744
Oxides	17 147	7 976	4 221	4 107	2 675
Iran					
Ores and concentrates	809	4 974	4 044	13 762	1 312
Oxides	...	460	478	555	3 559
Japan					
Metal	126	121	171	172	188
Oxides	106	24	108	35	33
Korea, Republic of					
Ores and concentrates	339	855	1 109	562	1 354
Metal	107	153	444	169	898
Mongolia					
Ores and concentrates	4 131	4 164	3 028	3 082	3 469

**Exports of Molybdenum**

tonnes

Country	1998	1999	2000	2001	2002
Taiwan					
Metal	254	122	13	10	15
Oxides	86	55	4	29	12

## Note(s):

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

(a) Mo content

## Imports of Molybdenum

Country	1998	1999	2000	2001	2002
Austria					
Metal	289	163	198	197	356
Oxides	2 761	2 139	3 274	...	...
Belgium-Luxembourg					
Ores and concentrates	22 613	13 339	19 268	19 527	24 746
Metal	208	156	374	1 196	277
Oxides	529	605	388	635	730
Czech Republic					
Metal	60	37	39	45	29
Estonia					
Metal	38	34	128	102	0
Finland					
Ores and concentrates	2 959	3 258	3 591	3 296	3 581
France					
Ores and concentrates	2 354	3 273	2 384	2 126	1 604
Metal	...	526	817	635	686
Oxides	57	73	104	119	284
Germany					
Ores and concentrates	12 976	10 331	10 866	10 814	8 663
Metal	1 922	1 993	2 159	2 364	2 406
Oxides	703	378	311	318	397
Greece					
Metal	97	26	1	12	21
Hungary					
Metal	124	122	150	114	105
Italy					
Ores and concentrates	4 629	3 575	3 140	4 065	4 097
Metal	173	159	241	284	163
Oxides	94	90	92	74	141
Netherlands					
Ores and concentrates	18 706	18 939	25 656	25 896	21 723
Metal	340	346	530	192	285
Oxides	814	1 153	1 758	1 958	1 891
Poland					
Ores and concentrates	152	173	144	111	16
Metal	48	102	75	54	84
Portugal					
Metal	16	14	17	14	15
Russia					
Ores and concentrates	1 491	1 202	939	2 134	2 250
Metal	41	292	253	319	191
Spain					
Ores and concentrates	3 129	3 050	3 578	3 811	4 226
Metal	81	50	45	34	91
Sweden					
Ores and concentrates	6 271	5 173	5 742	5 409	6 132
Metal	186	205	208	249	219
Oxides	448	626	784	659	791
Switzerland					
Metal	37	25	30	25	21
Turkey					
Metal	10	42	5	2	4
United Kingdom					
Ores and concentrates	17 495	13 872	12 457	16 373	21 374
Metal	903	1 374	846	1 165	1 247
Oxides	110	65	34	60	145
South Africa					
Ores and concentrates	1 815	1 107	2 138	2 261	2 111
Metal	11	...	12	123	314
Oxides	465	742	550	89	655

## Imports of Molybdenum

tonnes

Country	1998	1999	2000	2001	2002
Canada					
Metal	92	92	84	95	78
Oxides	664	1 074	1 029	954	1 351
USA					
Ores and concentrates	10 736	10 325	10 043	9 444	7 691
Metal	662	688	744	1 129	864
Oxides	1 182	842	1 211	1 013	1 205
Brazil					
Ores and concentrates	3 479	3 932	4 384	4 598	4 504
Metal	164	199	135	116	121
Oxides	44	42	414	65	853
Chile					
Ores and concentrates	11 252	8 667	7 345	8 405	8 304
China					
Ores and concentrates	10 843	15 680	18 769	24 577	17 240
Metal	410	189	178	216	173
Oxides	261	166	781	146	42
Hong Kong					
Metal	...	...	19	26	186
India					
Ores and concentrates (a)	2 682	2 967	3 141	4 462	4 863
Metal (a)	111	97	70	113	130
Indonesia					
Ores and concentrates	751	68	8	3	85
Metal	16	77	287	127	44
Japan					
Ores and concentrates	30 540	26 477	32 402	31 747	30 190
Metal	517	484	833	882	782
Oxides	1 816	1 147	1 167	1 492	1 166
Korea, Republic of					
Ores and concentrates	5 379	6 402	5 482	5 887	5 165
Metal	100	278	200	205	1 069
Kyrgyzstan					
Metal	18	14	18	19	14
Malaysia					
Metal	163	...	24	1 127	...
Singapore					
Metal	18	4	4	42	87
Oxides	67	94	59	207	375
Taiwan					
Ores and concentrates	----	517	1 216	1 080	1 741
Metal	240	297	195	78	284
Oxides	249	240	449	324	79
Australia					
Ores and concentrates	434	381	18	78	144
Metal	69	141	343	348	403
Oxides	587	46	131	53	3

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

**Mine Production of Nickel**

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Finland	1 967	730	3 347	2 200	2 500
Greece	18 544	16 556	23 365	20 742	22 700
Macedonia	5 800	100	-----	-----	-----
Norway	3 219	2 965	2 536	2 800	2 052
Russia	235 000	235 000	235 000	235 000	237 000
Serbia and Montenegro	800	-----	-----	-----	-----
Ukraine	-----	-----	-----	1 500	1 500
Botswana	22 851	22 898	21 446	22 454	23 896
South Africa (a)	36 679	36 200	36 614	36 443	38 546
Zimbabwe	10 135	9 593	5 968	8 009	7 835
Canada	208 302	186 236	190 793	194 058	188 071
Cuba	65 100	63 900	68 500	73 400	*72 200
Dominican Republic	40 311	39 997	39 943	33 419	37 399
Brazil	36 764	43 784	45 317	47 097	45 029
Colombia	29 422	39 274	58 927	53 000	58 200
Venezuela	-----	-----	2 472	11 400	15 500
China	48 700	49 500	50 300	51 000	54 600
Indonesia	74 100	89 100	98 200	102 100	124 300
Kazakhstan	3 600	3	284	-----	-----
Philippines	20 685	12 389	20 200	27 500	26 500
Australia	143 900	119 600	165 700	205 400	207 000
New Caledonia	124 729	109 509	126 041	112 460	99 871
World Total	1 131 000	1 077 000	1 195 000	1 240 000	1 265 000

Note(s):

(a) Includes metal and metal content of sulphate and concentrates

**Smelter/Refinery Production of Nickel**

tonnes

Country	1998	1999	2000	2001	2002
Austria	1 800	1 500	1 300	1 300	*1 500
Finland	43 379	52 800	54 429	54 600	55 300
France	11 778	11 700	12 300	13 036	11 444
Greece	15 004	13 462	17 126	17 675	19 200
Macedonia	5 800	-----	-----	3 000	5 100
Norway	70 150	74 100	58 700	68 200	68 500
Russia	233 900	238 000	242 000	248 000	243 000
Serbia and Montenegro	466	-----	-----	-----	-----
Ukraine	-----	-----	-----	1 500	*1 500
United Kingdom	39 050	38 086	37 980	33 800	33 800
South Africa	36 410	32 600	36 600	36 500	38 500
Zimbabwe	19 300	19 800	19 300	19 500	17 600
Canada	146 755	124 260	134 225	140 591	144 476
Cuba	38 192	37 510	39 511	40 700	*40 000
Dominican Republic	25 222	24 456	27 829	21 662	23 303
USA	4 290	-----	-----	-----	-----
Brazil	21 083	22 931	23 253	22 431	23 687
Colombia	28 140	28 341	27 737	38 446	43 987
Venezuela	-----	-----	...	8 100	17 900
China	40 100	44 400	50 900	49 700	53 500
Indonesia	8 500	9 225	10 111	10 300	8 800
Japan	126 500	134 700	160 700	153 600	158 900
Australia	79 600	83 600	112 200	129 000	133 000
New Caledonia	44 491	45 289	43 914	45 912	48 650
<b>World Total</b>	<b>1 040 000</b>	<b>1 037 000</b>	<b>1 110 000</b>	<b>1 158 000</b>	<b>1 192 000</b>

## Note(s):

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

## Exports of Nickel

Country	1998	1999	2000	2001	2002
Austria					
Mattes, sinters etc.	109	49	99	153	288
Unwrought (a)	524	586	908	532	570
Scrap	219	471	307	495	377
Belgium-Luxembourg					
Unwrought	11 566	12 324	12 143	12 265	12 351
Unwrought alloys	1 920	1 936	1 978	2 531	1 752
Scrap	770	1 126	1 021	2 595	6 118
Czech Republic					
Unwrought (a)	125	353	71	42	211
Scrap	751	899	218	237	219
Oxides	93	157	231	126	159
Denmark					
Scrap	912	1 343	322	280	190
Estonia					
Mattes, sinters etc.	13	1 020	1 011	938	1
Unwrought (a)	324	198	412	619	----
Scrap	341	408	224	1 587	195
Finland					
Ore	11 480	14 868	25 804	30 711	11 939
Unwrought	26 409	29 457	28 504	36 815	39 367
Scrap	454	76	218	50	118
Oxides	1 399	1 106	1 664	...	...
France					
Unwrought	7 347	6 884	9 950	9 094	7 460
Unwrought alloys	707	707	1 187	434	294
Scrap	10 420	5 674	7 190	9 134	6 625
Oxides	...	...	387	551	24
Germany					
Ores and concentrates	30	666	8 914	8 083	12 229
Unwrought	17 087	13 553	7 346	8 418	5 582
Unwrought alloys	4 678	4 573	7 190	6 328	5 837
Scrap	6 674	12 308	26 627	10 826	8 277
Oxides	46	19	77	670	505
Irish Republic					
Scrap	662	935	833	674	701
Italy					
Unwrought (a)	2 985	1 443	2 472	2 102	2 701
Scrap	1 162	805	1 354	1 057	552
Latvia					
Scrap	2 651	2 412	4 303	2 293	1 004
Lithuania					
Scrap	51	65	711	739	...
Netherlands					
Mattes, sinters etc.	27 745	(b) *6 400	(b) *9 200	(b) *8 200	(b) *19 400
Unwrought (a)	23 450	26 234	27 901	54 127	25 214
Scrap	2 017	1 204	2 042	1 365	1 494
Oxides	1 384	1 126	1 817	...	2 528
Norway					
Ore	34 016	26 546	24 999	30 142	25 902
Unwrought	70 153	73 328	59 956	65 829	67 718
Scrap	176	399	173	255	139
Russia					
Ore	----	250	1 648	3 756	...
Mattes, sinters etc.	(b) *12 000	(b) *16 200	(b) *18 400	(b) *13 700	18 101
Unwrought	212 186	207 448	188 484	182 950	271 597
Unwrought alloys	1 948	3 837	8 469	6 740	9 680
Scrap (b)	*10 700	*5 400	*7 400	*7 400	*5 700
Oxides	845	350	33	52	88
Slovenia					
Unwrought	352	435	850	225	262
Spain					
Unwrought (a)	2 252	8 013	3 743	169	609
Scrap	143	584	190	385	208
Sweden					
Unwrought (a)	103	301	1 040	613	1 905
Scrap	166	532	696	432	1 661

## Exports of Nickel

tonnes

Country	1998	1999	2000	2001	2002
Switzerland					
Unwrought (a)	50	469	103	179	105
Scrap	445	606	917	492	587
Ukraine					
Unwrought	2 535	121	294	...	...
Scrap	57	(b) *300	(b) *700	(b) *100	(b) *1 100
United Kingdom					
Mattes, sinters etc.	58	197	1 634	136	122
Unwrought	20 502	20 728	21 678	21 670	19 709
Unwrought alloys	4 271	3 733	5 203	5 955	4 177
Scrap	5 109	5 432	7 015	7 736	7 564
Botswana					
Mattes, sinters etc. (c)	16 516	16 342	19 041	12 683	...
Morocco					
Scrap	...	110	123	125	...
South Africa					
Unwrought (d)	22 570	16 195	15 275	14 295	15 915
Scrap (b)	*3 000	*900	*1 800	*1 200	*1 200
Tunisia					
Scrap	356	480	553	405	...
Zimbabwe					
Unwrought	10 324	11 462	13 863	*14 000	19 828
Canada					
Mattes, sinters etc.	107 817	103 250	73 208	92 504	100 416
Unwrought (a)	107 257	87 135	99 395	111 980	101 961
Scrap	2 322	3 200	5 682	2 927	2 114
Cuba					
Oxide, sinter and sulphide (e)	*68 800	*67 600	*70 500	*75 100	*75 000
USA					
Mattes, sinters etc.	1 690	1 991	2 556	2 611	976
Unwrought (a)	7 394	10 517	12 683	15 945	11 888
Scrap	25 952	24 191	29 983	31 647	27 461
Oxides	1 157	569	790	846	646
Brazil					
Mattes, sinters etc.	8 724	19 015	16 330	20 038	13 832
Unwrought	7 933	13 008	11 927	9 614	11 227
China					
Unwrought (a)	15 051	14 455	9 218	5 422	4 468
Scrap	779	861	444	180	258
Oxides	251	325	443	289	281
Hong Kong					
Unwrought (a)	5 682	6 184	13 340	17 136	13 807
Scrap	316	911	398	136	277
Indonesia					
Ore	2 214 986	1 675 375	1 444 436	2 244 912	2 640 205
Mattes, sinters etc.	34 881	54 429	47 997	33 094	217
Israel					
Scrap (b)	*1 400	*2 700	*3 400	*2 500	*3 600
Japan					
Mattes, sinters etc.	6 129	7 905	23 072	25 480	46 224
Unwrought (a)	393	501	1 223	954	384
Scrap	954	489	683	712	308
Oxides	3 312	4 580	3 873	3 077	4 428
Korea, Republic of					
Unwrought (a)	16	29	32	73	300
Scrap	1 568	1 096	1 730	1 228	2 254
Philippines					
Ores and concentrates	1 249 923	1 417 406	1 724 687	1 740 369	...
Scrap	2 447	385	1	...	...
Saudi Arabia					
Unwrought	2 246	584	69	136	19
Scrap	1 063	3 154	5 047	3 040	2 705



**Exports of Nickel**

Country	1998	1999	2000	2001	2002
Singapore					
Unwrought	5 901	9 229	13 325	12 784	13 523
Scrap	971	1 303	1 734	1 975	2 488
Oxides	409	315	246	492	609
Taiwan					
Unwrought (a)	118	575	269	165	149
Scrap	934	1 681	1 953	1 242	1 871
Oxides	77	215	401	282	338
Australia					
Ore	216 731	225 750	229 172	240 584	259 069
Mattes, sinters etc.	70 171	(b) *49 100	(b) *64 200	(b) *61 200	(b) *61 800
Unwrought	53 007	71 146	86 441	89 064	89 065
Unwrought alloys	1 371	1 794	2 002	2 280	2 835
Scrap (b)	*500	*400	*700	*1 400	*1 600
New Caledonia					
Ores	4 237 400	3 790 066	4 108 676	3 697 230	3 064 581
Mattes, sinters etc.	16 813	15 808	18 158	18 390	14 504

## Note(s):

- (1) In this table the term 'unwrought' nickel corresponds to item 7502 of the Harmonised System 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) Includes Ni content of metal, sulphate and concentrate  
(e) Ni-Co content (mainly nickel)

## Imports of Nickel

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Mattes, sinters etc.	334	245	197	552	737
Unwrought (a)	3 618	3 742	7 296	5 150	4 554
Scrap	84	73	620	540	641
Oxides	24	151	765	853	609
Belarus					
Unwrought (a)	56	127	385	500	141
Belgium-Luxembourg					
Mattes, sinters etc.	13	448	213	33	216
Unwrought	27 872	36 987	31 107	33 851	32 016
Unwrought alloys	2 054	559	460	682	488
Scrap	719	694	835	2 577	2 611
Oxides	234	207	341	292	326
Czech Republic					
Unwrought (a)	1 475	1 077	1 758	2 231	1 825
Oxides	206	214	251	177	236
Denmark					
Unwrought (a)	160	84	157	202	114
Estonia					
Mattes, sinters etc.	33	1 135	962	1 779	1 075
Unwrought	367	211	427	11	12
Scrap	284	352	289	1 641	211
Finland					
Ore	247 276	249 028	217 154	250 973	178 968
Mattes, sinters etc.	21 701	24 266	26 654	30 946	57 571
Unwrought (a)	7 976	6 558	5 880	9 809	14 977
Scrap	289	183	379	31	90
Oxides	540	2	0	48	6 093
France					
Mattes, sinters etc.	16 697	15 985	16 638	19 437	15 496
Unwrought	39 221	36 956	40 991	34 347	39 979
Unwrought alloys	6 658	6 652	5 491	7 372	2 269
Scrap	2 199	2 040	3 351	1 848	2 048
Oxides	537	397	317	219	140
Germany					
Mattes, sinters etc.	11 560	8 436	10 701	9 525	23 006
Unwrought	77 030	79 030	94 153	81 674	84 677
Unwrought alloys	1 502	1 705	4 335	1 660	1 625
Scrap	7 486	9 103	12 599	9 254	11 197
Oxides	472	779	701	590	668
Greece					
Unwrought	127	144	226	126	67
Irish Republic					
Unwrought (a)	1 487	1 170	1 154	1 834	1 361
Italy					
Mattes, sinters etc.	171	14	77	225	515
Unwrought	46 414	45 687	46 241	50 142	49 803
Unwrought alloys	1 112	1 036	1 640	1 845	1 577
Scrap	1 808	1 964	5 970	2 141	559
Netherlands					
Mattes, sinters etc.	18 593	...	...	...	10 394
Unwrought	42 306	75 302	65 684	59 920	61 898
Unwrought alloys	211	643	59	401	47
Scrap	1 881	1 995	2 368	3 083	4 398
Oxides	570	544	752	1 728	6 764
Norway					
Mattes, sinters etc.	139 094	151 010	118 719	131 096	145 072
Unwrought (a)	168	154	175	134	138
Poland					
Unwrought	1 925	1 488	2 052	2 307	1 561
Portugal					
Unwrought (a)	356	265	282	315	293
Romania					
Unwrought	593	391	467	671	...
Russia					
Ore	12 975	17 729	*30 000	30 421	12 268
Unwrought	2 096	412	1 837	3 796	319
Scrap	3 158	4 021	3 971	3 986	462

## Imports of Nickel

Country	1998	1999	2000	2001	2002
Slovenia					
Unwrought (a)	3 916	4 275	3 718	2 954	1 595
Spain					
Mattes, sinters etc.	43	22	42	18	31
Unwrought (a)	18 222	25 979	20 849	31 752	32 795
Oxides	149	213	231	231	306
Sweden					
Mattes, sinters etc.	6 289	5 700	5 756	6 124	12 476
Unwrought	20 039	21 667	28 583	24 547	24 982
Unwrought alloys	1 546	1 185	687	942	863
Scrap	17 967	9 570	12 901	13 495	18 399
Switzerland					
Unwrought (a)	1 596	1 068	1 511	1 591	1 417
Scrap	234	161	122	61	54
Turkey					
Unwrought (a)	1 815	1 493	1 459	1 584	1 919
Oxides	...	90	94	92	160
United Kingdom					
Mattes, sinters etc.	59 263	57 457	54 768	51 963	52 512
Unwrought	12 538	15 669	18 825	47 030	47 071
Unwrought alloys	4 182	7 355	2 095	2 788	1 873
Scrap	11 884	15 731	22 644	14 963	25 326
Oxides	98	199	131	145	108
Botswana					
Ores	2 612	...	22 531	32 168	...
Slurry, mattes, sinters etc.	56	...	276	72	...
Egypt					
Unwrought	328	351	*400	134	*180
South Africa					
Unwrought (a)	9 579	8 460	8 695	5 543	12 879
Canada					
Ores and concentrates (b)	1 138	934	1 152	1 941	90 340
Mattes, sinters etc.	51 363	61 173	65 750	72 317	63 736
Unwrought (a)	1 946	3 319	3 255	2 959	2 558
Scrap	16 641	20 448	20 507	22 207	21 555
Oxides	2 774	2 116	3 722	3 625	1 891
Mexico					
Unwrought (a)	2 277	5 455	2 009	1 862	1 703
USA					
Ores and concentrates (b)	3 110	0	193	15	16
Slurry, mattes, sinters etc.	2 762	4 260	3 388	1 735	1 695
Unwrought (a)	122 517	108 758	123 279	115 319	99 823
Scrap	8 430	9 037	13 215	11 215	6 059
Oxides	2 176	1 859	2 109	2 145	1 466
Argentina					
Unwrought	529	420	460	483	426
Brazil					
Unwrought (a)	6 277	8 870	10 524	7 829	11 483
Colombia					
Unwrought	148	86	180	158	156
Venezuela					
Unwrought (a)	190	81	85	133	50
China					
Ore	1 813	79	1 232	6 986	7 074
Mattes, sinters etc.	560	640	2 672	3 645	19 593
Unwrought (a)	4 983	4 498	11 951	37 406	38 422
Scrap	70	138	34	165	212
Oxides	1 642	2 154	3 281	2 984	4 743
Hong Kong					
Mattes, sinters etc.	157 378	86	453	25	0
Unwrought (a)	13 122	10 760	18 721	22 924	20 229
Oxides	1 424	1 747	2 524	1 862	2 534

**Imports of Nickel**

tonnes

Country	1998	1999	2000	2001	2002
India					
Mattes, sinters etc. (c)	1 055	368	348	405	595
Unwrought (a) (c)	11 526	9 820	12 287	23 527	22 250
Scrap (c)	1 347	925	111	380	875
Indonesia					
Unwrought (a)	880	224	491	398	366
Iran					
Unwrought	1 143	515	257	1 219	1 149
Japan					
Ore	4 086 149	3 905 809	4 579 118	4 418 798	4 406 512
Mattes, sinters etc.	80 563	87 820	113 263	118 247	103 849
Unwrought	39 003	48 282	57 822	28 139	40 415
Unwrought alloys	1 050	624	431	623	884
Scrap	10 273	11 736	15 657	16 039	14 033
Oxides	129	103	131	60	106
Korea, Republic of					
Mattes, sinters etc.	24 281	24 504	37 717	34 020	80 010
Unwrought (a)	21 374	38 782	24 704	21 577	25 883
Scrap	61	545	558	44	216
Oxides	207	168	245	226	297
Malaysia					
Unwrought (a)	529	1 100	861	...	...
Pakistan					
Unwrought (a) (d)	555	373	406	642	557
Philippines					
Scrap	5 000	600	44 000	45 000	...
Singapore					
Unwrought	6 775	9 227	14 141	22 297	14 351
Scrap	605	664	523	555	535
Oxides	449	453	430	735	902
Taiwan					
Mattes, sinters etc.	10 928	10 784	11 586	13 711	35 658
Unwrought (a)	38 803	55 578	55 588	37 710	41 306
Scrap	155	534	645	658	382
Oxides	1 156	1 147	1 381	762	1 304
Thailand					
Unwrought (a)	1 002	7 056	1 872	1 411	1 721
Australia					
Unwrought (a)	1 545	1 196	924	1 360	792
Scrap	-----	131	51	1 023	1 676

Note(s) :-

- (1) In this table the term 'unwrought' nickel corresponds to item 7502 of the Harmonised System which excludes all electro-plating anodes  
(2) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

- (a) Including alloys  
(b) Ni content  
(c) Years ended 31 March following that stated  
(d) Years ended 30 June of that stated

## Production of Crude Petroleum

Country	1998	1999	2000	2001	2002
Albania	309 000	268 000	314 000	329 000	352 000
Austria	959 285	962 393	970 513	957 472	941 008
Azerbaijan	11 400 000	13 800 000	14 000 000	14 909 100	15 333 500
Belarus	1 830 000	1 840 000	1 851 000	1 852 000	1 846 000
Bulgaria	31 700	38 700	42 456	33 888	33 000
Croatia	1 389 409	1 292 665	907 154	1 120 797	1 108 434
Czech Republic	172 000	176 000	168 000	178 000	253 000
Denmark	11 752 000	14 931 000	17 753 000	17 378 000	18 494 000
France	1 708 883	1 539 131	1 417 568	1 382 646	1 316 890
Georgia	119 200	91 300	109 500	98 800	70 000
Germany	2 894 526	2 740 073	3 119 592	3 444 298	3 768 054
Greece	315 000	*300 000	256 000	188 109	*190 000
Hungary	1 241 380	1 272 140	1 130 850	1 058 060	1 049 770
Italy	5 560 072	5 049 417	4 499 420	4 045 352	5 498 000
Lithuania	160 000	...	...	470 000	433 000
Netherlands	1 714 352	1 594 061	1 443 443	1 370 302	2 231 959
Norway	150 006 000	148 728 000	158 625 000	163 088 000	157 262 000
Poland	360 000	424 806	652 696	767 004	727 973
Romania	6 309 043	6 140 000	6 042 000	6 011 000	5 840 000
Russia	303 283 000	305 000 000	323 000 000	348 000 000	379 000 000
Serbia and Montenegro	913 029	704 838	804 768	746 056	681 544
Slovakia	60 000	60 270	56 940	54 115	51 921
Spain	535 140	304 292	226 422	344 074	323 666
Turkey	3 226 873	2 938 479	2 747 630	2 551 647	2 440 202
Ukraine	3 899 900	3 797 900	3 692 900	3 700 000	3 700 000
United Kingdom	124 210 000	129 155 000	118 064 000	109 491 000	108 021 000
Algeria	54 924 000	56 231 000	58 585 000	57 147 000	61 487 000
Angola	36 000 000	36 700 000	36 825 000	36 469 000	44 600 000
Benin	*150 000	----	----	...	...
Cameroon	5 300 000	4 800 000	4 500 000	4 100 000	3 700 000
Congo	12 288 822	12 775 737	12 667 606	12 108 033	*11 500 000
Congo, Democratic Republic	1 300 000	1 250 000	1 250 000	1 200 000	1 100 000
Egypt	43 000 000	41 400 000	38 800 000	37 300 000	37 000 000
Equatorial Guinea	4 100 000	5 000 000	5 600 000	9 000 000	11 700 000
Gabon	16 900 000	17 000 000	16 400 000	15 000 000	14 700 000
Ghana	*250 000	*250 000	*250 000	...	...
Ivory Coast	1 002 000	1 373 000	1 606 000	*1 650 000	...
Libya	69 600 000	67 000 000	69 500 000	67 000 000	64 700 000
Morocco	...	11 300	13 000	10 100	12 800
Nigeria	105 900 000	99 200 000	103 300 000	107 800 000	98 600 000
South Africa	*1 200 000	*1 100 000	*1 200 000	*1 100 000	*900 000
Sudan	600 000	3 100 000	8 600 000	10 400 000	11 500 000
Tunisia	3 895 300	3 938 000	3 700 000	3 343 900	3 475 600
Barbados	79 143	97 113	76 895	63 642	53 612
Canada	107 213 800	101 744 300	106 982 100	108 815 100	*120 000 000
Cuba	1 678 200	2 136 300	2 620 800	2 773 400	3 533 400
Guatemala	1 280 739	1 177 413	1 050 092	1 067 317	1 248 953
Mexico	163 630 000	155 047 000	160 786 000	166 732 000	168 800 000
Trinidad and Tobago	6 318 301	6 439 502	6 153 729	5 840 504	6 731 294
USA	311 193 000	292 727 000	289 790 000	288 745 000	286 007 000
Argentina	44 834 345	42 423 518	40 994 335	41 445 316	40 242 083
Bolivia	1 602 357	1 355 157	1 282 403	1 449 570	1 438 604
Brazil	51 620 023	58 310 277	65 540 000	68 620 000	77 020 000
Chile	427 553	335 558	297 247	351 688	306 839
Colombia	38 885 956	42 041 092	35 527 000	31 158 988	29 806 000
Ecuador	19 121 078	19 011 567	20 390 618	20 749 000	19 985 000
Peru	5 696 200	5 219 862	4 902 588	4 784 726	4 773 299
Suriname	600 000	700 000	720 000	764 000	733 000
Venezuela	174 291 000	160 175 000	165 156 000	159 941 000	*145 000 000
Abu Dhabi	*99 800 000	*89 400 000	*99 800 000	*96 700 000	*90 000 000
Bahrain	1 890 000	1 870 000	1 870 000	1 860 000	1 870 000
Brunei	8 600 000	9 700 000	10 300 000	10 100 000	10 200 000
China (a)	160 176 000	160 215 400	162 620 300	164 931 400	168 900 000
Dubai	*16 500 000	*15 800 000	*14 800 000	*14 300 000	*13 300 000

**Production of Crude Petroleum**

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Country	1998	1999	2000	2001	2002
India (d)	32 722 000	31 949 000	32 426 000	32 032 000	33 043 000
Indonesia	71 300 000	73 100 000	68 800 000	68 000 000	62 400 000
Iran	188 900 000	176 200 000	187 500 000	182 600 000	166 800 000
Iraq	104 400 000	124 900 000	127 300 000	116 500 000	99 700 000
Israel	5 630	4 100	3 400	3 400	...
Japan	722 000	666 000	675 000	694 000	660 000
Jordan	2 100	2	13 083	1 515	888
Kazakhstan	25 945 100	30 130 400	35 316 800	36 060 000	42 066 700
Kuwait (c)	107 200 000	98 300 000	104 000 000	101 900 000	91 800 000
Kyrgyzstan	77 100	77 000	77 100	75 500	75 500
Malaysia	34 630 000	33 000 000	33 100 000	31 800 000	33 400 000
Mongolia	6 000	10 000	9 000	10 000	19 000
Myanmar	480 000	490 000	580 000	734 000	858 000
Oman	44 748 000	45 049 000	47 675 000	47 500 000	44 600 000
Pakistan (b)	2 739 000	2 665 000	2 719 000	2 811 000	3 093 000
Philippines	41 000	43 000	57 000	65 000	277 000
Qatar	34 600 000	33 400 000	36 800 000	35 800 000	34 700 000
Ras al Khaimah	*23 000	*23 000	*23 000	*23 000	*23 000
Saudi Arabia (c)	452 000 000	419 100 000	450 600 000	434 100 000	418 100 000
Sharjah	*3 500 000	*2 300 000	*2 400 000	*2 500 000	*2 300 000
Syria	28 800 000	28 900 000	27 600 000	29 100 000	28 600 000
Taiwan	49 200	43 000	33 900	40 500	46 600
Tajikistan	20 000	20 000	20 000	20 000	20 000
Thailand	4 000 000	4 500 000	5 800 000	6 100 000	6 900 000
Turkmenistan	6 819 200	7 159 800	7 181 000	8 343 000	9 000 000
Uzbekistan	8 100 000	8 100 000	7 500 000	7 256 000	7 200 000
Vietnam	12 500 000	15 200 000	16 300 000	16 700 000	16 900 000
Yemen, Republic of	17 600 000	18 770 000	20 720 000	22 300 000	22 400 000
Australia	28 000 000	27 000 000	37 000 000	34 000 000	33 000 000
New Zealand	2 054 300	1 811 700	1 608 000	1 508 800	1 363 600
Papua New Guinea	3 775 065	4 100 452	3 257 077	2 693 749	2 100 000
<b>World Total</b>	<b>3 422 000 000</b>	<b>3 347 000 000</b>	<b>3 473 000 000</b>	<b>3 460 000 000</b>	<b>3 429 000 000</b>

## Note(s):

(1) The figures shown in this table exclude natural gasoline

- (a) Including oil from shale and coal
- (b) Years ended 30 June of that stated
- (c) Including shares of production from the Neutral Zone
- (d) Years ended 31 March following that stated

## Production of Natural Gas

million m<sup>3</sup>

Country	1998	1999	2000	2001	2002
Albania	16	13	11	10	10
Austria	1 568	1 741	1 805	1 954	2 015
Azerbaijan	5 590	5 997	5 643	5 535	5 144
Belarus	252	256	257	255	246
Bulgaria	33	27	12	21	11
Croatia	1 570	1 567	1 768	2 009	2 122
Czech Republic	137	143	118	101	91
Denmark	7 348	7 741	8 000	8 200	8 169
France	2 183	1 940	1 883	1 809	1 751
Georgia	----	----	80	40	17
Germany	21 967	23 072	21 720	21 698	21 556
Greece	33	...	36	32	*35
Hungary	3 958	3 562	3 349	3 286	3 100
Irish Republic	1 742	1 366	1 187	816	839
Italy	18 981	17 635	16 380	15 442	14 940
Netherlands	77 105	71 702	69 180	74 323	71 786
Norway	48 146	51 582	53 076	57 465	68 881
Poland	4 852	4 757	4 956	5 179	5 263
Romania	14 441	14 617	14 607	14 090	13 425
Russia	564 000	563 000	555 000	551 000	595 000
Serbia and Montenegro	731	679	729	506	400
Slovakia	260	219	203	212	212
Slovenia	12 500	5 700	6 800	6 100	5 704
Spain	114	148	179	557	551
Turkey	202	...	493	266	242
Ukraine	17 967	18 092	17 884	18 300	18 400
United Kingdom	95 506	105 070	115 338	112 803	109 512
Algeria	72 519	81 425	83 244	78 240	80 367
Angola	580	560	580	530	620
Egypt	13 860	13 500	13 300	15 500	14 900
Equatorial Guinea	78	83	98	790	1 050
Gabon	100	100	100	100	100
Ivory Coast	*1 000	1 395	1 323	1 230	*1 300
Libya	6 360	5 200	5 880	6 180	6 240
Morocco	...	44	50	50	49
Nigeria	5 900	6 950	12 460	15 680	15 120
South Africa	*1 500	*2 000	*2 000	*2 000	*1 000
Tunisia	300	300	2 000	2 530	2 386
Canada	188 984	195 733	201 569	204 571	208 000
Cuba	124	460	574	595	585
Mexico	34 330	36 150	35 820	35 310	35 310
Trinidad and Tobago	8 642	9 423	9 758	14 023	17 127
USA (b)	538 700	533 300	543 200	557 200	539 400
Argentina	32 832	37 616	41 229	40 813	40 311
Bolivia	3 106	2 612	3 597	5 275	6 421
Brazil	6 300	6 700	7 200	7 600	9 100
Chile	3 218	2 957	2 702	2 684	2 543
Colombia	6 300	5 200	5 900	6 100	6 200
Peru	*650	678	612	629	*710
Venezuela	32 335	27 410	27 924	29 593	27 300
Afghanistan	*2 200	*2 500	*2 500	...	...
Bahrain	8 555	8 782	8 951	9 263	9 405
Bangladesh	7 800	8 300	10 000	10 700	11 200
Brunei	10 800	11 300	11 600	11 300	11 200
China	22 321	25 198	27 226	30 344	32 600
India (c)	25 706	26 885	27 860	28 037	29 969
Indonesia	84 370	86 887	82 354	79 288	*84 000
Iran	50 000	56 755	60 147	69 145	70 530
Iraq	2 950	3 180	3 150	2 760	2 300
Japan	2 301	2 280	2 453	2 521	2 571
Jordan	300	282	287	279	256
Kazakhstan	4 878	6 585	8 228	4 950	6 018
Kuwait (a)	9 491	8 688	9 600	9 500	8 710
Kyrgyzstan	18	25	32	33	29

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

Country	1998	1999	2000	2001	2002
Malaysia	38 485	40 863	45 155	46 964	48 329
Myanmar	*1 750	1 674	*3 300	*6 800	...
Oman	5 200	5 500	8 400	14 000	14 800
Pakistan (d)	19 814	21 095	23 173	24 786	26 158
Qatar	19 580	22 050	24 900	27 900	29 300
Saudi Arabia (a)	46 720	46 200	49 970	53 690	57 300
Syria	4 000	3 900	3 900	6 000	5 700
Taiwan	879	856	747	849	887
Tajikistan	30	40	40	50	30
Thailand	17 598	19 195	20 194	19 632	20 657
Turkmenistan	13 257	22 943	47 153	51 270	*53 500
United Arab Emirates	37 070	38 990	38 380	44 940	46 140
Uzbekistan	54 790	55 600	56 400	57 400	*57 400
Vietnam	1 100	1 100	1 600	1 700	2 000
Australia	30 361	30 755	31 165	32 482	32 606
New Zealand	4 767	5 559	5 918	6 253	5 936
Papua New Guinea	138	135	143	142	117
<b>World Total</b>	<b>2 386 000</b>	<b>2 435 000</b>	<b>2 517 000</b>	<b>2 585 000</b>	<b>2 645 000</b>

## 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) Dry gas

(c) Years ended 31 March following that stated

(d) Years ended 30 June of that stated



## Exports of Crude Petroleum

Country	1998	1999	2000	2001	2002
Austria	51 392	52 941	57 085	60 151	...
Azerbaijan	2 149 337	4 268 465	5 511 642	9 142 508	8 021 735
Belarus	381 500	300 000	350 600	450 000	600 000
Belgium-Luxembourg	3 423	56 242	1 417 209	328 893	2 319 755
Czech Republic	103 504	109 319	110 672	118 714	129 275
Denmark	8 061 369	8 873 887	11 393 325	11 645 846	13 073 624
Estonia (a)	*394 000	*465 000	*555 000	*887 000	*534 000
France	400 408	453 634	134 324	55 631	90 903
Georgia (a)	*209 000	*232 000	*437 000	*501 000	*476 000
Germany	156 975	168 289	313 476	907 924	656 861
Greece	740 109	1 216 076	695 163	596 613	...
Italy	208 758	265 456	167 922	250 353	871 391
Latvia (a)	*2 165 000	...	...	...	...
Lithuania	264 790	227 079	311 983	349 491	...
Netherlands	14 164	11 620	17 545	177 964	849
Norway	131 818 902	128 179 516	139 954 502	146 645 926	139 103 257
Poland	...	2	128 931	439 625	450 000
Russia	137 234 000	134 545 000	144 414 000	147 900 000	159 100 000
Slovakia	23 000	...	14 668	16 895	13 013
Ukraine	87 910	1 479 484	272 606	(a) *1 028 000	(a) *1 127 000
United Kingdom	73 428 795	75 473 136	78 022 274	82 057 946	79 227 289
Algeria	25 200 000	19 000 000	21 200 000	20 300 000	18 300 000
Cameroon	...	...	5 383 313	4 895 890	...
Congo	11 268 439	12 637 482	11 224 260	...	...
Egypt	2 791 380	2 819 200	...	2 408 900	...
Libya	55 200 000	47 100 000	47 800 000	46 900 000	43 800 000
Nigeria	90 300 000	84 000 000	97 800 000	102 900 000	88 600 000
Senegal	...	8 833	...	76 048	90 000
Tunisia	2 920 270	3 276 844	3 017 853	2 382 395	...
Barbados	69 304	104 249	77 624	60 146	58 705
Canada	67 517 536	61 450 668	72 703 029	70 960 455	64 880 600
Guatemala	1 218 743	1 080 830	1 116 994	1 058 583	1 285 052
Mexico	90 009 000	80 290 000	85 648 851	88 400 000	86 000 000
Trinidad and Tobago	2 436 048	3 186 000	2 483 262	2 437 507	*2 400 000
USA	6 839 731	5 876 075	2 555 849	1 177 134	430 613
Argentina	17 501 194	14 220 047	14 580 444	14 922 104	14 339 271
Bolivia	338 698	253 961	181 752	243 388	369 440
Brazil	71 689	28 822	964 852	5 721 476	12 135 264
Colombia	23 500 000	26 573 000	20 648 539	15 945 431	14 344 996
Ecuador	11 999 416	11 839 541	12 055 515	12 574 475	11 785 030
Peru	2 100 000	1 400 000	700 000	900 000	1 166 067
Suriname	180 000	270 000	166 000	113 000	90 000
Venezuela	118 388 000	100 676 000	104 890 000	108 125 000	*100 000 000
Brunei	68 616 000	7 997 406	8 026 203	...	...
China	15 600 712	7 167 271	10 437 779	7 550 605	7 208 063
Indonesia	37 097 731	36 049 287	29 225 946	32 857 030	29 054 356
Iran	125 900 000	114 800 000	124 900 000	109 500 000	104 900 000
Iraq	69 800 000	104 900 000	100 400 000	84 200 000	73 600 000
Israel (a)	*98 000	*95 000	...	...	...
Japan	132 283	----	16	75 653	----
Kazakhstan	20 429 000	23 764 000	29 348 808	32 400 362	39 133 765
Kuwait	60 134 435	47 722 869	61 900 000	61 100 000	57 200 000
Malaysia	18 013 000	17 724 800	17 344 570	15 393 955	...
Oman	41 100 000	42 125 000	44 590 000	45 328 762	...
Pakistan (b)	168 579	352 482	295 746	418 783	421 472
Qatar	27 900 000	28 300 000	30 100 000	29 500 000	28 245 000
Saudi Arabia	318 291 013	284 885 017	313 300 000	302 400 000	265 300 000
Syria	16 672 750	17 602 458	16 584 322	22 734 816	22 169 000
Thailand	695 038	819 950	11 134 798	1 672 327	2 464 563
Turkmenistan (a)	*132 000	*529 000	*175 000	*388 000	*583 000
United Arab Emirates	98 100 000	92 700 000	87 700 000	86 300 000	78 000 000
Vietnam	12 145 000	14 882 000	15 500 000	...	...
Yemen, Republic of	13 850 260	16 101 000	17 698 509	16 938 473	...

**Exports of Crude Petroleum**

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Country	1998	1999	2000	2001	2002
Australia	12 238 000	10 122 296	20 424 257	19 021 019	17 093 347
New Zealand	1 635 922	1 219 763	932 552	1 067 027	1 072 252
Papua New Guinea	3 848 126	4 206 754	3 243 542	*3 200 000	*2 500 000

## Note(s):

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

(b) Years ended 30 June of that stated

## Imports of Crude Petroleum

Country	1998	1999	2000	2001	2002
Austria	8 396 114	7 684 052	7 314 935	7 858 165	8 128 843
Azerbaijan	90 561	...	...	...	...
Belarus	10 054 600	9 899 905	11 924 686	11 913 300	14 024 264
Belgium-Luxembourg	33 613 385	31 741 912	32 114 347	38 628 736	37 490 772
Croatia	3 446 481	4 608 832	3 835 167	4 012 709	4 009 452
Cyprus	1 128 541	1 184 607	1 154 746	1 048 256	1 143 649
Czech Republic	6 947 928	5 997 039	5 819 443	6 004 685	5 548 002
Denmark	4 605 084	4 752 381	5 664 799	2 853 538	3 193 530
Finland	11 426 549	11 180 897	11 616 731	10 951 956	11 745 754
France	91 356 469	81 273 805	83 394 974	85 259 764	80 589 846
Germany	108 124 652	103 753 381	105 292 890	104 631 624	104 331 841
Greece	16 532 000	9 269 870	18 301 453	20 112 238	18 653 052
Hungary	6 738 041	5 755 022	...	...	5 029 814
Irish Republic	3 136 654	1 775 747	2 128 504	2 475 545	1 112 511
Italy	85 432 822	79 784 467	83 272 202	83 971 514	81 043 087
Lithuania	6 339 260	4 527 321	4 690 243	6 116 989	...
Macedonia	787 653	495 034	801 768	641 599	...
Netherlands	62 244 603	59 563 859	55 718 885	60 427 836	54 968 223
Norway	1 921 796	2 186 298	915 314	956 019	590 064
Poland	15 367 000	15 272 026	18 039 804	17 558 327	16 400 000
Portugal	13 372 594	13 084 461	11 422 174	12 517 253	11 635 480
Romania	5 973 527	4 294 300	4 641 598	5 543 644	5 690 063
Russia	7 884 624	6 015 437	5 891 728	4 700 000	5 700 000
Serbia and Montenegro	...	518 512	157 823	1 846 787	2 678 238
Slovakia	5 446 000	5 351 444	5 329 492	5 408 523	5 554 324
Slovenia	2 331 808	271 555	128 439	1	0
Spain	59 116 315	52 380 984	57 954 412	56 824 754	57 489 130
Sweden	20 264 108	18 787 590	20 723 480	18 262 971	18 665 040
Switzerland	5 015 516	5 034 861	4 578 217	4 773 040	4 869 479
Turkey	23 791 392	...	...	23 141 640	21 626 643
Ukraine	9 884 000	9 396 434	5 986 426	...	...
United Kingdom	36 135 627	29 923 937	36 552 593	38 542 685	40 828 864
Algeria	...	330 205	...	...	...
Cameroon	1 456 063	1 429 097	1 354 423	1 508 646	...
Egypt	5 816 132	4 851 002	...	...	...
Ghana	4 318 727	9 325 081	1 264 283	1 394 364	...
Kenya	2 157 695	810 782	1 251 637	...	1 500 000
Madagascar	374 330	389 815	460 755	...	...
Morocco	6 004 075	7 183 023	6 852 525	6 621 677	...
Senegal	893 394	778 276	931 353	776 286	900 000
South Africa	20 019 690	19 335 451	18 319 949	18 766 918	16 382 665
Tanzania	375 320	429 489	140	174	...
Tunisia	821 651	1 092 637	1 196 154	1 016 178	...
Canada	48 264 579	41 840 219	45 603 695	48 152 591	41 372 713
Costa Rica	39 677	...	49 343	258 399	517 414
Cuba	800 000	700 000	800 000	800 000	800 000
El Salvador	877 392	977 055	758 191	970 282	1 035 679
Guatemala	779 972	748 252	726 348	785 233	596 390
Jamaica	755 738	466 858	1 101 786	...	...
Martinique	612 249	513 027	261 105	604 407	...
Netherlands Antilles	12 572 075	9 946 620	11 052 368	10 790 921	8 017 699
Nicaragua	913 718	863 426	871 380	987 131	840 900
Panama	2 314 953	2 525 709	2 213 732	2 736 972	1 385 569
Trinidad and Tobago	3 914 587	4 607 841	5 309 036	4 938 380	...
USA	442 208 021	440 214 413	463 553 662	480 600 638	437 579 618
Argentina	1 269 436	948 079	1 568 986	1 457 894	453 896
Brazil	21 970 247	18 207 522	15 123 678	17 070 639	17 918 759
Chile	9 516 634	9 851 644	10 120 519	10 352 030	9 381 000
Colombia	...	145 576	246 990	320 233	169 598
Paraguay	218 921	88 377	37 613	82 946	92 731
Peru	4 767 658	3 097 123	3 110 004	3 817 224	3 753 710
Uruguay	1 090 000	1 705 449	1 761 659	1 775 801	994 203

**Imports of Crude Petroleum**

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Country	1998	1999	2000	2001	2002
China	27 322 633	36 613 687	70 134 276	60 255 355	69 407 720
India (b)	68 904 365	58 384 523	74 120 000	79 420 000	83 677 000
Indonesia	10 507 985	11 497 497	11 473 486	14 174 862	15 880 010
Israel	6 771 000	...	...	...	...
Japan	214 850 343	212 049 133	211 981 493	208 103 752	199 412 982
Jordan	3 555 855	3 497 279	3 763 383	3 875 111	3 869 005
Kazakhstan	2 073 726	714 503	1 009 641	2 336 904	2 631 094
Korea, Dem. P.R. of (c)	*504 000	*584 000	*899 000	*657 000	*575 000
Korea, Republic of	110 606 443	118 024 367	120 651 683	116 156 262	106 876 904
Kyrgyzstan	62 390	64 766	20 672	-----	10 393
Malaysia	1 928 586	...	6 962 773	8 623 424	...
Pakistan (a)	4 048 453	4 476 093	4 453 104	6 854 446	7 140 384
Philippines	15 856 000	16 157 651	15 349 139	15 374 510	...
Singapore	52 014 065	44 434 723	41 831 652	40 817 058	37 091 415
Sri Lanka	2 179 278	10 606 356	2 115 001	1 361 936	1 700 000
Taiwan	34 983 693	36 521 001	38 909 906	37 613 630	38 016 005
Thailand	23 090 320	28 855 806	27 946 040	29 794 610	30 807 688
Australia	22 926 000	24 220 854	19 998 051	21 979 223	19 100 000
New Zealand	4 494 640	4 269 973	4 555 000	4 106 824	4 915 746

Note(s) :-

- (a) Years ended 30 June of that stated
- (b) Years ended 31 March following that stated
- (c) BGS estimates, based on known exports from certain countries

**Production of Phosphate Rock**

Country	1998	1999	2000	2001	2002
Finland	715 705	734 068	751 291	767 020	799 814
Russia	9 480 000	10 560 000	10 540 000	10 488 000	10 763 000
Algeria	1 155 000	1 095 000	877 000	939 000	740 000
Burkina Faso	...	...	...	1 010	2 350
Egypt	1 076 100	1 017 900	1 095 900	971 500	1 550 300
Morocco	22 644 000	22 767 000	19 658 000	20 724 000	21 806 000
Senegal					
Phosphate rock	1 519 210	1 796 900	1 837 000	1 708 000	1 551 900
Aluminium phosphate (a)	21 230	64 356	23 710	20 610	1 557
South Africa	2 739 000	2 956 806	2 796 225	2 419 941	2 912 700
Tanzania	1 437	7 250	5 100	4 000	*4 000
Togo	2 253 400	1 714 500	1 370 100	1 061 600	1 280 600
Tunisia	7 950 800	8 006 300	8 301 200	8 105 900	7 735 100
Zimbabwe	91 433	84 763	77 662	86 611	84 926
Canada	-----	...	330 000	780 000	1 004 400
Mexico	756 349	950 649	1 052 464	787 283	4 764
USA	44 200 000	40 600 000	38 600 000	31 900 000	36 100 000
Brazil (d)	4 437 818	4 343 638	4 725 106	4 800 000	4 900 000
Chile	31 405	20 408	18 524	18 977	19 541
Colombia	43 688	43 148	42 615	*42 000	*42 000
Peru	46 821	9 038	5 581	4 825	45 252
Venezuela	322 000	366 000	389 000	399 000	390 000
China	28 109 000	29 117 700	22 475 800	24 371 100	*26 000 000
Christmas Island (b) (c) (e)	587 000	700 000	612 000	568 000	517 000
India (f)	1 276 269	1 203 282	1 264 035	1 251 553	1 208 657
Iraq	*300 000	*300 000	*200 000	*100 000	*100 000
Israel	2 940 000	3 836 000	3 914 000	3 511 000	3 476 000
Jordan	5 923 000	6 013 610	5 458 260	5 764 307	7 133 887
Kazakhstan	812 000	650 000	610 000	971 700	1 197 800
Korea, Dem. P.R. of	*70 000	*70 000	*100 000	*100 000	*100 000
Pakistan (e)	289	3 456	5 208	-----	1 362
Sri Lanka	37 598	30 258	34 443	35 770	38 775
Syria	2 496 000	2 084 000	2 166 000	2 043 000	2 483 200
Thailand	3 029	3 880	3 260	2 359	...
Uzbekistan	105 500	139 200	169 800	225 000	426 000
Vietnam	576 000	710 000	791 000	683 000	787 800
Australia	813	1 250	2 108 000	1 917 000	2 000 000
Nauru (b) (e)	456 800	648 500	650 791	449 190	161 950
<b>World Total</b>	<b>143 000 000</b>	<b>143 000 000</b>	<b>133 000 000</b>	<b>128 000 000</b>	<b>137 000 000</b>

## Note(s):

(1) In addition to the countries listed, Indonesia is believed to produce phosphate rock

- (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
- (f) Years ended 31 March following that stated

**Exports of Phosphate Rock**

tonnes

Country	1998	1999	2000	2001	2002
Austria	3 086	1 452	1 397	1 320	906
Belgium-Luxembourg	40 624	35 678	39 501	43 858	54 563
France	4 538	8 414	1 523	2 536	1 488
Germany	1 646	890	678	674	302
Italy	2 391	1 411	820	794	513
Macedonia	757	1 734	863	792	...
Netherlands	174 733	71 146	120 824	65 689	181 928
Poland	19 000	20 607	14 989	2 700	2 511
Russia	4 329 320	4 470 414	3 799 360	3 069 640	3 244 019
Spain	78 253	189	22	53	490
United Kingdom	321	261	1 295	317	382
Algeria	1 151 000	1 062 900	879 000	745 000	825 000
Egypt	222 000	206 000	315 800	264 800	613 900
Morocco	11 730 653	11 382 500	10 487 498	10 853 155	11 140 400
Senegal	448 753	523 986	379 201	268 810	314 907
South Africa	830 000	993 587	779 019	555 200	349 658
Togo	2 242 600	1 617 000	1 219 900	1 302 300	1 248 720
Tunisia	937 165	978 676	1 106 745	1 167 858	1 150 300
USA	378 000	272 000	299 000	9 000	39 000
Peru	23 032	15 402	1 800	5 110	22 837
China	2 150 227	2 503 019	3 448 985	4 912 606	3 527 667
Christmas Island (a)	587 000	700 000	612 000	568 000	517 000
Indonesia	175	2 280	9 062	17 264	4 908
Israel	1 546 000	1 546 000	1 165 022	1 002 700	1 022 000
Jordan	4 563 421	3 632 679	3 196 398	3 536 526	4 006 139
Kazakhstan	667 060	430 000	499 544	373 600	414 681
Malaysia	900	9 499	2 973	165	...
Syria	1 838 942	1 298 343	1 225 438	1 180 520	1 662 408
Australia	5 199	7 600	7 790	1 313	1 730
Nauru (a)	456 800	648 500	650 791	449 190	161 950

Note(s):

(a) Years ended 30 June of that stated

## Imports of Phosphate Rock

Country	1998	1999	2000	2001	2002
Austria	295 555	299 372	...	...	...
Belarus	373 677	331 601	256 192	239 400	218 310
Belgium-Luxembourg	1 817 279	1 734 417	1 304 103	1 395 630	1 668 206
Bulgaria	316 800	204 700	341 800	417 700	468 200
Croatia	226 811	173 853	233 427	173 144	177 728
Czech Republic	58 305	47 753	45 473	48 539	27 955
Denmark	72 800	68 361	76 537	44 643	57 813
Finland	101 365	85 396	72 966	46 352	55 716
France	1 471 321	1 356 181	1 072 594	923 926	919 097
Germany	252 950	142 779	140 251	155 278	167 297
Greece	437 066	361 710	264 934	328 110	338 443
Hungary	15 481	8 043	23 144	14 793	14 730
Irish Republic	11 115	1 828	2 227	2 144	9 717
Italy	167 485	197 727	198 434	263 295	278 389
Lithuania	666 384	852 808	836 797	485 429	869 200
Macedonia	84 735	44 100	8 100	64 434	...
Netherlands	1 922 476	1 711 205	1 178 614	822 583	964 035
Norway	628 205	671 668	615 940	638 449	664 834
Poland	1 684 000	1 528 188	1 472 050	1 636 053	1 407 541
Portugal	183 954	156 689	141 161	158 684	134 664
Romania	272 912	340 340	344 152	278 348	249 271
Russia	59 098	106 025	60 332	7 181	25 675
Serbia and Montenegro	164 488	72 259	110 093	89 659	82 216
Slovakia	2 562	1 746	1 439	1 652	1 388
Spain	2 105 369	2 210 185	1 862 774	2 062 062	1 805 229
Sweden	74 048	73 942	67 416	81 983	66 930
Turkey	1 041 910	873 875	667 998	497 120	746 033
Ukraine	704 576	755 133	214 906	207 500	...
United Kingdom	23 410	19 831	13 808	9 223	10 185
Egypt	30 084	33	...	...	...
Ivory Coast	3 170	1 536	2 050	3 000	3 600
Mauritius					
Guano	1 000	1 800	20	...	...
Nigeria	451	1 000	...	...	...
South Africa	424 235	280 807	330 568	172 207	230 597
Canada	1 161 024	612 478	145 454	79 801	40 609
Cuba	*5 000	*6 000	*6 000	...	...
Mexico	2 138 524	1 725 683	2 973 659	1 263 195	1 113 858
USA	807 333	744 739	672 982	856 188	1 324 926
Brazil	780 896	619 379	745 519	743 130	866 826
Chile	13 459	5 942	1 292	8 488	...
Colombia	88 276	71 000	69 400	58 500	109 700
Peru	4 130	9 237	18 043	70 685	94 012
Uruguay	56 587	40 348	45 700	45 300	45 100
Venezuela	72 755	163 320	111 070	76 303	*120 000
Bangladesh	188 900	177 800	185 800	216 000	155 500
India (a)	3 099 453	3 137 653	4 280 824	3 621 612	3 889 220
Indonesia	787 528	731 329	391 102	989 010	939 453
Iran	393 494	409 550	352 560	219 267	312 615
Israel	5 500	12 800	51 500	89 900	59 500
Japan	976 372	932 946	899 269	770 645	844 527
Kazakhstan	7 800	27 710	45	8	23
Korea, Republic of	1 517 860	1 481 853	1 420 228	1 275 037	1 288 282
Lebanon	406 731	377 221	768 444	604 858	659 402
Malaysia	560 200	728 900	635 900	552 100	634 400
Malaysia					
Guano	1 645	1 372	1 056	...	...
Pakistan (b)	143 950	159 346	274 200	271 206	331 295
Philippines	557 645	547 526	482 200	765 462	444 800
Saudi Arabia	6 330	1 007	2 465	3 734	3 069
Sri Lanka	6 653	6 521	5 900	12 250	12 004
Taiwan	235 394	224 137	178 245	170 001	157 116
Thailand	250 347	194 752	216 268	301 760	262 853

## Phosphates

**Imports of Phosphate Rock**

tonnes

Country	1998	1999	2000	2001	2002
Uzbekistan	400 000	430 000	338 000	360 100	196 100
Vietnam	-----	9 100	18 000	17 800	21 700
Australia	1 100 805	673 812	764 385	908 871	844 732
New Zealand	836 591	917 227	1 024 403	1 219 662	982 095

Note(s) :-

(a) Years ended 31 March following that stated

(b) Years ended 30 June of that stated



**Mine Production of Platinum Group Metals**

kilograms (metal content)

Country	1998	1999	2000	2001	2002
Russia					
Platinum (a)	37 300	14 000	35 800	40 400	30 500
Palladium (a)	168 000	171 100	161 700	135 000	60 000
Other platinum metals	*13 500	*13 700	*14 100	*14 500	*14 500
South Africa					
Platinum	116 483	130 745	114 459	129 746	133 796
Palladium	56 608	63 600	55 818	62 142	64 244
Other platinum metals	27 052	*30 300	36 493	36 859	41 545
Zimbabwe					
Platinum	2 730	390	504	435	2 053
Palladium	1 855	278	360	313	1 728
Other platinum metals	189	30	40	35	416
Canada					
Platinum	5 500	5 400	6 000	8 100	8 500
Palladium	8 600	8 500	9 500	12 800	13 600
Other platinum metals	700	700	600	900	900
USA					
Platinum	*3 240	*2 920	*3 110	*3 760	*4 390
Palladium	*10 580	*9 800	*10 260	*12 600	*14 810
Colombia	411	488	339	674	661
Australia					
Platinum	155	90	171	174	122
Palladium	827	816	812	828	811
World Total	454 000	453 000	450 000	459 000	393 000

## 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, Ethiopia, Indonesia and Philippines are believed to produce platinum group metals
- (a) Sales from mine production and stocks

**Exports of Platinum Group Metals**

kilograms

Country	1998	1999	2000	2001	2002
Austria					
Platinum and platinum metals	700	1 200	100	300	...
Azerbaijan					
Waste and scrap (a)	*50	...	...	*89 200	...
Belarus					
Waste and scrap	(a) *3 900	(a) *1 400	16 077	(a) *2 900	...
Belgium-Luxembourg					
Platinum	10 200	4 500	2 800	3 000	3 200
Platinum metals	22 700	18 000	10 000	8 300	7 300
Waste and scrap	£2 655 000	£7 859 000	£16 486 000	£21 569 000	...
Bulgaria					
Waste and scrap (a)	*25 900	*58 400	*34 400	*16 900	...
Croatia					
Platinum and platinum metals	£74 000	£108 000	£78 000	£307 000	£360 000
Czech Republic					
Waste and scrap (a)	*11 500	*12 100	*34 000	*86 900	...
Denmark					
Platinum and platinum metals	330	38	295	751	115
Estonia					
Waste and scrap	154 786	133 252	176 740	216 839	41 383
France					
Platinum	5 500	5 600	5 800	6 900	5 300
Platinum metals	13 900	9 000	14 400	7 000	4 600
Waste and scrap	12 300	18 806	76 100	91 300	107 500
Georgia					
Waste and scrap	(a) *100	(a) *400	54 975	(a) *3 200	(a) *1 000
Germany					
Platinum	21 300	22 000	23 500	28 500	21 400
Palladium	21 000	21 900	19 900	19 600	40 200
Other platinum metals	2 800	3 200	4 300	3 400	4 000
Waste and scrap	620 300	671 500	575 900	1 040 875	1 067 200
Irish Republic					
Platinum and platinum metals	2 719	303	239	74	20
Waste and scrap	2 828	4 572	3 559	12 292	22 983
Italy					
Platinum	739	3 604	3 443	31 775	3 546
Platinum metals	3 107	3 863	6 159	6 133	13 337
Waste and scrap	671	932	2 167	23 155	61 441
Latvia					
Waste and scrap	----	582	550	2	407
Lithuania					
Waste and scrap	45	7 164	6 750	9 867	...
Netherlands					
Platinum	£20 204 000	£21 255 000	£25 074 000	£21 776 000	£17 686 000
Platinum metals	£1 692 000	£2 159 000	£2 069 000	...	£634 000
Waste and scrap	6 200	8 600	46 500	23 800	10 900
Norway					
Platinum and platinum metals	6 049	6 853	5 668	6 659	10 986
Waste and scrap	6	96	851	2 639	76 801
Poland					
Platinum and platinum metals	139	42	795	43	872
Waste and scrap	...	...	7 958	27 622	6 543
Russia					
Platinum and platinum metals	£1 240 000 000	*£1 298 000 000	*£1 979 000 000	...	...
Waste and scrap (a)	*152 000	*17 900	*25 900	*70 200	...
Slovenia					
Platinum and platinum metals	996	382	201	322	919
Spain					
Platinum and platinum metals	5 943	22	4 617	256	285
Waste and scrap	184	471	216	616	253
Sweden					
Platinum and platinum metals	£1 300 000	£1 939 000	£897 000	£952 000	£610 000
Switzerland					
Platinum	73 859	66 473	61 609	63 640	73 384
Palladium	67 180	108 573	100 220	44 317	73 072
Other platinum metals	438	364	257	324	829
Waste and scrap	19 367	17 305	57 207	49 289	122 380

## Exports of Platinum Group Metals

kilograms

Country	1998	1999	2000	2001	2002
Ukraine					
Waste and scrap (a)	*35 200	*66 500	*117 400	*22 800	...
United Kingdom					
Platinum	22 838	24 122	31 660	31 859	44 289
Palladium	59 018	13 388	17 018	22 845	18 241
Other platinum metals	17 057	5 356	7 537	5 604	4 820
Waste and scrap	953 343	924 221	1 156 462	1 124 414	968 437
South Africa					
Platinum	(c) 193 502	(c) 198 713	113 861	116 551	120 150
Palladium	...	...	47 832	50 970	54 979
Other platinum metals	...	...	37 251	25 833	32 508
Waste and scrap (a)	*174 400	*112 500	...	...	...
Canada					
Ores and concentrates (b)	8 884	6 957	12 081	10 831	7 618
Platinum metals	7 112	6 291	5 757	4 540	2 942
USA					
Ores and concentrates (b)	748	240	476	860	1 416
Platinum	27 367	27 710	30 847	40 601	41 434
Palladium	70 841	68 727	76 345	61 031	76 647
Other platinum metals	3 885	4 548	5 439	5 404	5 262
Waste and scrap	19 744	42 803	21 503	27 425	67 187
China					
Platinum and platinum metals	2 911	2 443	6 473	13 455	4 035
Hong Kong					
Platinum and platinum metals	2 733	3 594	2 740	1 940	2 047
Waste and scrap	979	1 942	1 484	1 595	1 943
India					
Platinum and platinum metals (d)	2 910	12 079	18 557	1 794	2 340
Indonesia					
Platinum and platinum metals	110	284	11 279	10 922	1 055
Israel					
Platinum and platinum metals	£73 000	£117 000	£203 000	£122 000	£41 000
Waste and scrap (a)	*7 500	*1 700	*45 200	*174 300	...
Japan					
Platinum	8 492	8 005	8 905	10 201	8 388
Platinum metals	17 967	16 355	20 909	39 249	24 183
Waste and scrap	41 546	4 862	77 168	2 841	67 682
Kazakhstan					
Waste and scrap (a)	*42 800	*8 100	*40 100	*1 100	...
Korea, Republic of					
Platinum and platinum metals	51 746	2 399	1 734	2 901	1 554
Waste and scrap	4 891	95 683	139 669	394 405	160 376
Singapore					
Platinum and platinum metals	2 069	800	344	465	806
Waste and scrap	960	1 894	1 666	106	2 531
Taiwan					
Platinum and platinum metals	167	123	9 521	1 017	1 054
Waste and scrap	1 323	205	0	51 246	33 139
Uzbekistan					
Waste and scrap (a)	*400	*1 400	*600	*900	...
Australia					
Platinum and platinum metals	1 616	...	1 794	446	558
Waste and scrap	9 612	29 464	721	31	122 168
New Zealand					
Platinum and platinum metals	...	17 000	4 935	...	...

## 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) Platinum and platinum metals

(d) Years ended 31 March following that stated

**Imports of Platinum Group Metals**

kilograms

Country	1998	1999	2000	2001	2002
Austria					
Platinum and platinum metals	4 000	4 400	1 600	600	2 900
Belarus					
Platinum and platinum metals (b)	*100	*100	...	...	...
Belgium-Luxembourg					
Platinum	8 400	100	...	500	...
Platinum metals	11 300	...	...	500	200
Waste and scrap	£19 060 000	...	£54 153 000	£129 469 000	...
Croatia					
Platinum and platinum metals	...	415	649	2 989	...
Cyprus					
Platinum and platinum metals	316	513	415	110	40
Czech Republic					
Platinum and platinum metals	(b) *100	(b) *100	...	...	1 147
Denmark					
Platinum and platinum metals	1 325	232	740	381	530
Waste and scrap	1 194	755	4	77	...
Estonia					
Waste and scrap	13 219	...	5 040	8 171	8 790
Finland					
Platinum and platinum metals	175	110	425	248	296
France					
Platinum	12 700	19 500	11 400	12 600	8 500
Platinum metals	26 400	21 000	27 300	22 800	12 100
Waste and scrap	7 500	4 700	28 800	104 000	200 100
Germany					
Platinum	21 700	29 100	38 900	39 800	34 300
Palladium	29 400	22 400	34 400	25 200	45 000
Other platinum metals	4 300	4 200	5 100	4 600	5 600
Waste and scrap	2 687 900	3 185 800	3 957 300	5 274 800	4 500 100
Greece					
Platinum and platinum metals	...	709	372	1 001	449
Hungary					
Platinum and platinum metals	50	87	88	117	140
Irish Republic					
Platinum and platinum metals	46 402	3 192	1 410	3 694	2 342
Italy					
Platinum	7 158	7 594	10 925	9 394	17 518
Platinum metals	32 112	31 738	34 483	30 150	26 602
Waste and scrap	792	938	255	988	5
Netherlands					
Platinum	£9 954 000	£9 329 000	£13 510 000	£16 677 000	£13 377 000
Platinum metals	£1 605 000	£14 225 000	£12 436 000	£7 361 000	£8 134 000
Waste and scrap	400	300	300	4 100	100
Norway					
Platinum and platinum metals	863	1 248	1 138	1 231	984
Waste and scrap	1 376	1 073	1 327	641	840
Poland					
Platinum and platinum metals	3 497	206	1 550	293	208
Waste and scrap	...	17 750	2 609	...	...
Portugal					
Waste and scrap	6	4 301	1 804	13	...
Slovenia					
Platinum and platinum metals	140	646	656	1 411	1 018
Spain					
Platinum and platinum metals	15 986	2 902	4 186	4 830	3 311
Waste and scrap	62	250	2 742	166	32
Sweden					
Platinum and platinum metals	£7 553 000	£5 721 000	£5 196 000	£5 430 000	£6 134 000
Waste and scrap	...	7 000	6 000	1 000	265
Switzerland					
Platinum	61 421	32 678	59 331	68 461	56 039
Palladium	78 486	93 200	87 714	94 074	106 412
Other platinum metals	384	285	521	538	1 063
Waste and scrap	5 628	9 801	34 405	19 435	49 569
Turkey					
Platinum and platinum metals	582	72	259	321	393

## Imports of Platinum Group Metals

kilograms

Country	1998	1999	2000	2001	2002
Ukraine					
Platinum and platinum metals (b)	*600	*500	...	...	...
United Kingdom					
Platinum	17 407	24 785	35 968	17 825	...
Palladium	27 272	21 775	34 022	19 724	...
Other platinum metals	8 829	5 722	9 715	5 602	...
Waste and scrap	384 379	432 493	593 208	729 250	176 083
South Africa					
Platinum and platinum metals	27 683	13 895	...	...	...
Waste and scrap	2 762 116	1 014 431	9 321	800	350 785
Canada					
Platinum and platinum metals (c)	10 357	8 856	...	15 060	11 780
USA					
Platinum	97 013	106 288	77 211	80 170	82 913
Palladium	174 615	197 001	172 796	159 600	116 562
Rhodium	13 281	15 535	13 137	12 400	8 623
Other platinum metals	11 338	13 984	23 611	11 357	12 620
Waste and scrap	5 419	...	7 654	3 960	...
Brazil					
Platinum	2 136	2 717	6 645	13 327	2 850
Palladium	2 286	3 446	3 451	3 047	2 542
Other platinum metals	334	629	854	731	650
China					
Platinum and platinum metals	3 720	6 476	7 041	10 586	21 717
Dubai					
Platinum and platinum metals	749	124	...	...	...
Hong Kong					
Platinum and platinum metals	29 389	42 763	43 200	53 436	64 982
Waste and scrap	535	893	1 036	1 232	1 079
India					
Platinum and platinum metals (a)	1 693	2 607	4 970	2 532	2 220
Indonesia					
Platinum and platinum metals	1 498	257	426	13 644	20 358
Israel					
Platinum and platinum metals	£1 329 000	£1 447 000	£2 933 000	£2 959 000	£2 545 000
Japan					
Platinum	72 323	69 295	56 059	53 031	53 802
Palladium	80 976	87 885	87 189	54 162	48 524
Rhodium	2 431	3 611	6 118	4 759	6 081
Other platinum metals	7 314	7 321	8 174	6 991	8 015
Waste and scrap	538 538	390 992	480 021	345 828	1 859 403
Korea, Republic of					
Platinum and platinum metals	8 939	14 125	17 234	20 178	20 897
Waste and scrap	22	24 234	740	22 099	13 957
Malaysia					
Platinum and platinum metals	5 897	...	...	...	...
Singapore					
Platinum and platinum metals	6 343	10 251	21 114	15 637	15 695
Taiwan					
Platinum and platinum metals	4 172	4 335	4 608	4 277	5 060
Thailand					
Platinum and platinum metals	...	10 068	16 008	7 151	1 472
Australia					
Platinum and platinum metals	8 658	...	2 489	1 388	2 319
Waste and scrap	£36 000	£81 000	£66 000	...	...
New Zealand					
Platinum and platinum metals	133 000	147 000	...	...	...

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) BGS estimates, based on known exports from certain countries

(c) Derived from Canadian ores and concentrates exported for treatment

**Production of Potash**tonnes (K<sub>2</sub>O content)

Country	1998	1999	2000	2001	2002
Belarus	4 481 000	4 553 000	3 786 000	4 495 000	*4 500 000
France					
Potassic salts	417 100	311 300	321 000	244 000	128 000
Germany					
Potassic salts	3 580 347	3 543 360	3 407 467	3 548 665	3 471 763
Russia	3 461 000	4 050 000	3 716 000	4 257 600	4 431 600
Spain					
Chloride	494 166	549 516	521 984	470 933	406 695
Ukraine	...	...	84 700	74 300	*60 000
United Kingdom					
Chloride	608 400	494 700	600 800	531 900	540 100
Canada					
Chloride	9 201 000	8 304 000	9 202 000	8 181 000	8 549 000
USA					
Potassic salts	1 300 000	1 200 000	1 300 000	1 200 000	1 200 000
Brazil					
Chloride	315 606	336 623	351 748	318 585	337 266
Chile					
Chloride	*285 000	*345 000	*360 000	*420 000	...
Nitrate	*47 000	*49 000	*53 000	*57 000	...
China	213 000	218 000	275 000	395 000	*430 000
Israel					
Chloride	1 668 000	1 701 600	1 747 800	1 774 400	1 918 400
Jordan	916 385	1 080 114	1 161 593	1 177 521	1 173 614
World Total	27 000 000	26 800 000	26 900 000	27 100 000	27 600 000

## Exports of Potash

Country	1998	1999	2000	2001	2002
Belarus					
Chloride (a)	2 911 700	3 022 700	2 840 000	3 309 500	3 330 010
Belgium-Luxembourg					
Fertiliser salts	4 989	3 923	7 299	3 172	5 313
Sulphate (b)	*335 000	*297 000	*346 800	*399 600	*444 600
Chloride	177 146	138 232	183 220	184 145	211 383
Other potassic fertilisers	6 503	4 909	4 537	4 561	5 803
Finland					
Sulphate (b)	*47 400	*66 300	*6 900	*14 000	*24 800
France					
Sulphate	1 962	729	576	508	740
Chloride	177 019	138 839	97 419	134 868	95 248
Other potassic fertilisers	1 153	18 196	44 925	988	536
Germany					
Fertiliser salts (a) (c)	2 916 848	2 898 276	2 856 180	2 916 428	5 258 796
Greece					
Potassic fertilisers	...	...	...	451	2 119
Hungary					
Potassic fertilisers	11 832	2 073	2 776	6 617	221
Italy					
Potassic fertilisers	38 095	2 060	1 965	804	1 502
Latvia					
Chloride (b)	*125 000	...	...	...	...
Lithuania					
Potassic fertilisers	35 296	10 993	9 386	9 243	...
Netherlands					
Potassic fertilisers	105 000	74 000	43 552	76 907	244 543
Russia					
Fertiliser salts	5 156	5 622	6 600	7 973	6 557
Sulphate	(b) *58 000	(b) *77 000	(b) *98 000	(b) *74 000	101 787
Chloride	5 031 735	5 496 356	4 690 600	5 888 665	5 502 702
Other potassic fertilisers (b)	*278 000	*213 000	*130 000	*187 000	*119 000
Spain					
Sulphate	74 346	54 473	62 178	57 091	15 635
Chloride	427 674	464 464	542 664	418 155	350 315
Sweden					
Sulphate	92 095	78 326	78 362	141 298	136 917
Ukraine					
Chloride (b)	*201 000	*225 200	*223 800	*142 800	*70 000
Potassic fertilisers	15 165	...	...	...	...
Other potassic fertilisers (b)	*35 000	*8 500	*37 400	*27 000	...
United Kingdom					
Chloride	570 681	*420 000	*630 000	*530 000	*440 000
Other potassic fertilisers	1 200	1 112	1 143	1 141	518
Canada					
Fertiliser salts	8 463	8 451	4 205	10 815	3 946
Chloride	14 252 452	14 322 978	15 109 200	13 570 083	13 789 124
Other potassic fertilisers	16 803	30 207	26 840	19 112	22 030
USA					
Sulphate	746 000	601 000	608 000	577 000	555 000
Chloride	364 000	462 000	296 000	296 000	334 000
Chile					
Fertiliser salts	169 181	130 248	155 921	172 546	226 406
Sulphate	32 221	97 011	153 323	157 438	151 006
Chloride	112 259	202 830	177 502	92 605	58 823
China					
Fertiliser salts	*105 000	*110 000	*110 000	...	...
Sulphate	21 473	1 397	5 709	14 210	32 281
Chloride	452 094	860 051	590 258	330 781	371 287
Israel					
Chloride (a)	1 450 200	1 341 600	1 513 200	1 413 300	1 751 800
Other potassic fertilisers (b)	*128 400	*10 900	*49 000	*6 000	*47 500

**Exports of Potash**

tonnes

Country	1998	1999	2000	2001	2002
Jordan					
Fertiliser salts	1 486 194	1 664 886	1 881 049	1 895 847	1 917 611
Chloride	8 781	6 964	21 443	27 275	28 233
Other potassic fertilisers	1 807	376	3 427	-----	3 804
Korea, Republic of					
Sulphate	53 283	25 835	26 742	21 096	18 256
Saudi Arabia					
Potassic fertilisers	288	266	251	294	86
Singapore					
Chloride	37 193	144 298	...	15 812	10 660
Other potassic fertilisers	3 571	3 707	...	1 639	9 839
Taiwan					
Sulphate	63 939	61 112	74 548	81 019	73 792

Note(s):

- (a) K<sub>2</sub>O content
- (b) BGS estimates, based on known imports into certain countries
- (c) Including sulphate, chloride and other potassic fertilisers



## Imports of Potash

Country	1998	1999	2000	2001	2002
Austria					
Fertiliser salts	20 411	...	20 620	17 357	19 576
Chloride (a)	60 691	64 807	...	...	...
Other potassic fertilisers (a)	1 508	1 418	...	...	...
Azerbaijan					
Potassic fertilisers	804	660	1 281	1 972	507
Belgium-Luxembourg					
Fertiliser salts	33 135	29 987	33 302	22 677	23 295
Sulphate	111 311	138 679	179 570	183 131	203 971
Chloride	1 087 291	1 122 857	1 105 179	1 014 654	1 175 981
Other potassic fertilisers	17 384	17 478	20 398	18 801	19 044
Bulgaria					
Potassic fertilisers	47 502	13 298	20 717	*21 500	*8 500
Croatia					
Chloride	136 730	103 534	168 656	144 977	124 881
Czech Republic					
Potassic fertilisers	93 279	78 380	98 553	92 242	83 492
Denmark					
Sulphate	22 042	15 642	15 981	11 689	7 028
Chloride	152 495	189 877	160 991	135 815	146 234
Other potassic fertilisers	7 062	15 330	11 746	12 535	13 373
Estonia					
Potassic fertilisers	2 857	3 500	16 660	24 891	*18 000
Finland					
Chloride (a)	101 200	91 300	149 400	168 200	156 100
France					
Fertiliser salts	1 045	1 622	1 916	1 660	2 337
Sulphate	90 079	93 584	95 023	80 698	93 051
Chloride	2 028 433	1 778 253	1 682 073	1 444 445	1 463 860
Other potassic fertilisers	30 028	27 100	25 318	25 096	25 410
Germany					
Chloride (a)	66 333	53 632	47 925	52 131	89 067
Other potassic fertilisers (a)	2 237	1 872	2 386	2 561	...
Greece					
Sulphate	102 220	82 587	109 584	25 433	59 315
Chloride	42 680	22 835	23 925	27 415	32 834
Other potassic fertilisers	10 986	11 075	3 880	2 251	3 057
Hungary					
Potassic fertilisers	96 263	70 417	108 643	112 995	124 330
Iceland					
Sulphate	6 877	38	7	392	13
Chloride	6 987	7 267	24	2 979	2 316
Irish Republic					
Chloride	186 347	105 305	76 443	36 186	17 160
Other potassic fertilisers	3 406	1 336	1 485	2 170	2 483
Italy					
Sulphate	94 700	95 951	90 920	87 150	84 724
Chloride	508 389	420 286	448 256	425 575	445 906
Other potassic fertilisers	19 055	21 943	19 572	17 701	21 604
Latvia					
Potassic fertilisers	12 697	13 055	18 747	20 692	17 241
Lithuania					
Fertiliser salts	8 643	10 494	12 989	6 264	...
Chloride	67 304	76 275	77 322	116 995	*131 000
Other potassic fertilisers	3 256	4 516	8 460	450	...
Macedonia					
Potassic fertilisers	12 307	11 660	13 768	9 202	...
Netherlands					
Potassic fertilisers	550 000	462 500	319 100	265 172	215 193
Norway					
Sulphate	234 934	182 419	204 059	211 169	200 407
Chloride	353 059	355 237	335 274	331 063	339 431
Poland					
Chloride (c)	761 000	706 564	770 508	742 114	777 347
Portugal					
Sulphate	2 423	799	6 133	1 950	2 144
Chloride	67 242	72 648	55 774	55 972	73 748

## Imports of Potash

tonnes

Country	1998	1999	2000	2001	2002
Romania					
Potassic fertilisers	60 987	82 029	71 909	76 786	60 558
Russia					
Potassic fertilisers	1 352	878	1 140	1 127	1 256
Serbia and Montenegro					
Potassic fertilisers	58 057	30 693	82 169	45 872	71 245
Slovakia					
Potassic fertilisers	49 900	22 913	30 294	821	39 452
Spain					
Sulphate	20 244	23 631	21 804	32 543	71 719
Chloride	414 794	333 473	313 204	268 306	245 620
Other potassic fertilisers	1 072	8 525	5 378	2 862	9 304
Sweden					
Sulphate	...	20 071	5 380	3 958	4 755
Chloride	10 825	65 185	87 518	54 531	44 086
Other potassic fertilisers	4 676	4 678	5 150	4 651	2 285
Switzerland					
Sulphate	2 240	3 767	2 844	1 815	2 496
Chloride	18 616	17 748	21 100	19 144	23 053
Other potassic fertilisers	2 988	3 204	2 738	1 922	3 983
Turkey					
Sulphate	27 796	23 429	15 152	26 753	31 362
Chloride	125 183	116 065	101 485	82 849	111 780
Ukraine					
Potassic fertilisers	39 868	55 053	39 707	...	...
United Kingdom					
Fertiliser salts	18 325	20 628	18 050	16 154	19 366
Chloride	209 519	232 983	255 572	335 398	374 259
Other potassic fertilisers	12 308	6 236	10 890	14 506	7 906
Algeria					
Potassic fertilisers	58 389	62 841	74 728	...	...
Cameroon					
Potassic fertilisers (a)	5 000	6 900	10 300	8 000	11 500
Congo					
Potassic fertilisers	1 132	670	1 058	1 365	...
Egypt					
Potassic fertilisers (a)	14 200	6 700	12 500	13 900	15 800
Ivory Coast					
Potassic fertilisers	101 464	82 742	41 697	*40 000	*87 000
Kenya					
Potassic fertilisers	25 683	2 789	2 625	...	1 368
Mauritius					
Potassic fertilisers	24 520	27 208	29 830	32 020	24 745
Morocco					
Sulphate	49 526	48 101	45 543	48 592	...
Chloride	64 215	36 130	37 048	50 824	...
Nigeria					
Potassic fertilisers	15 446	1 403	4 344	...	...
Reunion					
Potassic fertilisers (a)	900	1 600	900	1 200	700
Senegal					
Potassic fertilisers	15 542	32 947	12 177	16 573	54 042
South Africa					
Sulphate	29 495	16 163	18 618	25 790	28 185
Chloride	238 069	256 629	299 643	243 524	308 623
Other potassic fertilisers	8 124	6 221	448	2 040	2 184
Tanzania					
Potassic fertilisers	62	129	1 368	6 318	...
Tunisia					
Potassic fertilisers	8 063	8 064	9 565	6 595	...
Zambia					
Potassic fertilisers	...	1 979	6 312	5 368	6 551
Zimbabwe					
Sulphate	...	20 506	26 870	...	12 656
Chloride	...	45 261	7 996	...	14 175

## Imports of Potash

Country	1998	1999	2000	2001	2002
Belize					
Potassic fertilisers	543	100	803	703	2 372
Canada					
Sulphate	78 484	64 728	52 627	47 109	63 791
Chloride	4 854	4 256	6 558	5 702	6 759
Other potassic fertilisers	8 884	10 906	46 528	30 834	26 375
Costa Rica					
Sulphate	9 513	6 526	8 677	9 593	16 395
Chloride	81 474	90 823	67 851	43 063	58 593
Other potassic fertilisers	45 150	50 039	41 385	14 368	...
Cuba					
Sulphate	11 902	38 103	11 202	...	...
Chloride	50 307	93 568	40 736	*80 000	*50 000
Dominican Republic					
Potassic fertilisers	27 500	24 000	24 200	22 800	29 500
El Salvador					
Potassic fertilisers	14 803	14 899	31 540	10 243	5 204
Guatemala					
Potassic fertilisers	66 494	63 405	61 251	67 103	35 873
Honduras					
Potassic fertilisers	27 453	18 521	31 952	36 234	43 849
Jamaica					
Potassic fertilisers	10 675	17 081	13 264	*6 000	*2 000
Martinique					
Potassic fertilisers	17 548	12 188	12 074	14 876	*9 000
Mexico					
Sulphate	65 261	45 686	50 438	37 310	67 601
Chloride	215 751	201 754	171 426	153 965	227 281
Other potassic fertilisers	40 733	22 347	49 287	24 008	24 463
Nicaragua					
Fertiliser salts	11 408	4 886	6 210	4 963	...
Potassic fertilisers	3 591	2 197	1 947	2 565	...
Panama					
Potassic fertilisers	11 308	4 281	5 466	2 477	8 818
USA					
Fertiliser salts	8 820	8 991	6 011	10 820	3 946
Sulphate	94 574	85 986	74 930	113 351	132 304
Chloride	9 139 970	8 816 574	9 215 383	8 717 740	8 569 328
Other potassic fertilisers	42 024	28 436	33 282	23 672	44 392
Argentina					
Sulphate	10 656	5 268	11 219	9 233	8 126
Chloride	27 988	20 263	29 211	26 060	14 935
Other potassic fertilisers	12 100	13 010	15 750	6 053	...
Brazil					
Sulphate	54 907	42 979	29 240	23 980	78 553
Chloride	3 270 975	3 190 826	4 342 672	4 076 997	4 371 994
Chile					
Sulphate	11 603	3 107	360	430	...
Chloride	83 033	61 694	66 958	73 203	...
Other potassic fertilisers	40 572	38 963	28 344	35 706	24 468
Colombia					
Sulphate	30 513	28 337	30 803	37 999	49 572
Chloride	332 912	312 743	334 335	305 822	343 152
Ecuador					
Chloride	69 212	80 153	92 076	84 931	83 770
Other potassic fertilisers	11 320	15 010	24 986	39 213	27 154
Peru					
Chloride	36 448	30 266	23 467	52 407	50 346
Other potassic fertilisers	22 087	22 316	13 086	25 230	27 551
Uruguay					
Potassic fertilisers	17 162	12 838	21 244	14 038	5 460
Venezuela					
Sulphate	22 993	12 729	18 702	36 772	...
Chloride	35 442	69 270	94 122	119 612	*100 000

## Imports of Potash

tonnes

Country	1998	1999	2000	2001	2002
Bangladesh					
Potassic fertilisers (d)	264 000	310 000	...	...	...
China					
Fertiliser salts	*65 000	*50 000	*50 000	...	...
Sulphate	534 354	197 238	190 791	257 243	302 380
Chloride	5 120 377	5 195 481	5 991 550	5 168 203	6 648 136
Dubai					
Chloride	2 814	1 035	...	...	...
India					
Sulphate (b)	20 904	13 632	10 208	13 199	14 896
Chloride (b)	1 946 072	2 686 028	2 000 811	2 076 385	1 957 486
Other potassic fertilisers (b)	392 120	54 344	112 500	125 188	148 501
Indonesia					
Sulphate	5 560	...	4 984	10 030	5 690
Chloride	217 011	...	359 454	426 019	428 621
Other potassic fertilisers	26 296	(e) (f) 563 300	29 540	24 277	54 297
Iran					
Potassic fertilisers (a)	51 700	109 000	47 500	83 000	52 900
Japan					
Sulphate	186 179	154 310	154 262	173 361	186 747
Chloride	794 725	747 781	731 893	677 445	699 262
Other potassic fertilisers	83 926	66 032	67 680	79 247	66 977
Jordan					
Potassic fertilisers	2 000	1 256	3 939	894	1 999
Kazakhstan					
Potassic fertilisers	18 608	34 700	29 105	36 893	25 122
Korea, Republic of					
Chloride	573 396	595 954	622 006	561 165	560 066
Other potassic fertilisers	14 868	32 444	11 604	10 940	15 617
Lebanon					
Potassic fertilisers	4 988	3 566	3 667	2 917	...
Malaysia					
Sulphate	6 206	...	8 499	36 039	...
Other potassic fertilisers	1 161 863	(e) 1 263 200	1 232 510	984 109	*1 230 000
Oman					
Potassic fertilisers	2 895	3 808	6 827	5 352	11 024
Pakistan					
Potassic fertilisers (a)	16 600	12 600	21 400	11 400	13 500
Philippines					
Sulphate	1 398	17	280	...	...
Chloride	201 882	218 974	180 097	205 713	*188 000
Saudi Arabia					
Sulphate	8 266	36 920	24 514	1 927	11 284
Other potassic fertilisers	7 727	9 159	6 601	25 208	14 931
Singapore					
Chloride	33 551	67 355	15 054	13 726	6 015
Other potassic fertilisers	17 379	4 144	3 125	4 846	11 830
Sri Lanka					
Chloride	78 773	53 129	86 552	73 444	41 204
Other potassic fertilisers	11 887	32 363	25 346	12 841	44 723
Taiwan					
Chloride	321 719	278 542	311 033	287 979	278 742
Thailand					
Sulphate	6 819	7 551	6 578	10 312	10 003
Chloride	240 385	289 250	258 519	328 169	316 710
Vietnam					
Potassic fertilisers (a)	135 200	211 700	332 300	247 100	305 000
Australia					
Sulphate	46 969	19 062	33 716	24 367	42 412
Chloride	324 797	339 328	297 548	326 454	351 501
Other potassic fertilisers	10 145	17 873	4 249	9 060	21 308
New Zealand					
Sulphate	21 212	9 573	10 812	28 564	10 095
Chloride	147 620	196 912	257 368	194 245	249 447

Note(s) :-

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

(b) Years ended 31 March following that stated

(c) Including sulphate and fertiliser salts

(d) Years ended 30 June of that stated

(e) Including sulphate

(f) Including chloride

**Production of Rare Earth Minerals**

Country	1998	1999	2000	2001	2002
USA					
Bastnaesite (a)	*5 000	*5 000	*5 000	*5 000	*5 000
China (a)	65 000	70 000	75 500	80 600	75 000
India					
Monazite (b)	3 200	1 698	1 890	2 651	...
Malaysia					
Monazite	517	1 147	818	643	441

## Note(s):

(1) With the exception of the data for USA and China, figures in this table refer to gross tonnage of concentrates

(2) In addition to the countries listed, rare earth minerals are believed to be produced in Brazil, Indonesia, Democratic P.R. of Korea, Republic of Korea, Mozambique, Nigeria, the former Soviet Union and Vietnam

(a) REO content. Assumed to be 60% of concentrates produced

(b) Years ended 31 March following that stated

**Exports of Rare Earths**

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Cerium compounds	416	1 169	1 420	...	...
Other rare earth compounds	1 111	1 767	5 714	...	...
Metals	725	643	558	...	...
Belgium-Luxembourg					
Rare earth compounds	385	97	260	1 060	452
Ferro-cerium and other pyrophoric alloys	17	18	37	9	7
Metals	310	107	264	265	160
Estonia					
Rare earth compounds	(b) *500	2 855	27	784	4 156
France					
Rare earth compounds	1 521	...	1 151	638	314
Ferro-cerium and other pyrophoric alloys	...	164	129	105	94
Metals	201	212	33	26	231
Germany					
Rare earth compounds	112	98	106	225	102
Ferro-cerium and other pyrophoric alloys	0	2	4	0	3
Metals	20	15	31	16	8
Irish Republic					
Rare earth compounds	92	443	87	182	64
Ferro-cerium and other pyrophoric alloys	...	61	100	142	...
Italy					
Metals	31	5	11	18	19
Netherlands					
Metals	89	43	63	15	17
Turkey					
Ferro-cerium and other pyrophoric alloys	184	54	...	0	...
United Kingdom					
Cerium compounds	463	374	317	415	76
Other rare earth compounds	261	254	354	329	1 019
Ferro-cerium and other pyrophoric alloys	15	23	26	9	19
Metals	70	352	60	51	148
USA					
Cerium compounds	4 912	4 169	3 962	4 490	3 173
Other rare earth compounds	1 725	1 684	1 759	1 680	1 516
Metals	737	1 211	1 372	742	1 100
China					
Cerium compounds	16 694	17 534	19 861	20 987	22 823
Other rare earth compounds	48 922	38 129	36 648	28 522	26 890
Ferro-cerium and other pyrophoric alloys	117	523	166	...	186
Metals	6 097	8 293	12 537	8 090	8 982
Hong Kong					
Cerium compounds	356	455	96	158	132
India					
Rare earth compounds (a)	155	5	964	1 728	1 648
Japan					
Cerium compounds	656	1 230	1 429	1 743	2 371
Other rare earth compounds	348	329	1 038	2 507	937
Metals	383	289	199	197	177
Jordan					
Ferro-cerium and other pyrophoric alloys	...	14	82	----	49
Kazakhstan					
Metals	11	1	8	4	7
Korea, Republic of					
Rare earth compounds	202	...	193	191	218
Malaysia					
Ores and concentrates	564	4 245	1 225	700	...
Ferro-cerium and other pyrophoric alloys	365	722	532	844	...
Metals	127	142	89	...	...
Singapore					
Rare earth compounds	98	134	460	460	527
Ferro-cerium and other pyrophoric alloys	116	101	170	107	...
Metals	144	156	156	151	109
Taiwan					
Rare earth compounds	85	304	305	69	142
Metals	2	6	4	0	8

**Exports of Rare Earths**

Country	1998	1999	2000	2001	2002
Thailand					
Ores and concentrates	120	1 311	60	1 196	1 577
Ferro-cerium and other pyrophoric alloys	...	1 687	1 721	2 004	1 966
Australia					
Cerium compounds	89	...	51	57	2

## Note(s):

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

(a) Years ended 31 March following that stated

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

## Imports of Rare Earths

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Cerium compounds	192	1 169	1 781	2 287	2 025
Other rare earth compounds	1 505	1 767	3 188	5 534	3 128
Metals	769	643	929	409	324
Belgium-Luxembourg					
Cerium compounds	574	606	572	831	639
Other rare earth compounds	67	...	78	375	126
Ferro-cerium and other pyrophoric alloys	16	2	55	89	30
Metals	551	353	287	279	225
Estonia					
Rare earth compounds	...	1 866	0	3	609
France					
Cerium compounds	19 647	16 540	18 159	15 049	9 914
Other rare earth compounds	1 369	...	679	1 407	382
Ferro-cerium and other pyrophoric alloys	...	26	8	14	29
Metals	430	281	382	230	169
Germany					
Cerium compounds	2 593	1 928	1 390	1 351	1 208
Other rare earth compounds	463	2 921	4 674	7 555	7 811
Ferro-cerium and other pyrophoric alloys	4	19	6	27	15
Metals	522	625	895	564	218
Hungary					
Rare earth compounds	163	198	188	216	202
Irish Republic					
Metals	2	61	66	66	63
Italy					
Rare earth compounds	518	...	755	669	637
Metals	8	23	27	...	...
Netherlands					
Cerium compounds	78	55	93	138	44
Other rare earth compounds	518	...	2 972	3 793	1 380
Ferro-cerium and other pyrophoric alloys	...	23	490	406	27
Metals	200	79	105	57	25
Norway					
Rare earth compounds	96	...	10	1	2
Metals	506	734	751	775	558
Poland					
Rare earth compounds	82	70	79	70	77
Metals	5	4	23	1	1
Slovenia					
Metals	48	23	55	74	71
Spain					
Rare earth compounds	385	407	456	522	523
Ferro-cerium and other pyrophoric alloys	...	40	27	44	28
Metals	7	34	14	59	92
Sweden					
Metals	61	18	18	28	39
Switzerland					
Rare earth compounds	...	...	...	28	19
Turkey					
Rare earth compounds	225	125	170	104	155
Ferro-cerium and other pyrophoric alloys	140	20	7	1	...
United Kingdom					
Cerium compounds	2 039	2 265	2 388	2 227	3 036
Other rare earth compounds	378	543	466	403	489
Ferro-cerium and other pyrophoric alloys	85	9	14	1	26
Metals	136	107	226	172	63
South Africa					
Rare earth compounds	418	557	497	328	371
Metals	1	43	22	21	41



## Imports of Rare Earths

Country	1998	1999	2000	2001	2002
Canada					
Cerium compounds	418	310	...	437	418
Other rare earth compounds	241	174	...	180	313
USA					
Cerium compounds	6 798	5 984	6 472	5 760	3 842
Other rare earth compounds	13 599	17 935	20 174	19 990	14 717
Ferro-cerium and other pyrophoric alloys	131	136	135	132	101
Metals	794	1 485	2 059	1 183	1 211
Brazil					
Cerium compounds	287	360	355	239	326
Other rare earth compounds	1 190	859	1 537	2 858	1 345
Metals	533	703	958	801	561
China					
Ores and concentrates	4	2 854	...	...	4 856
Rare earth compounds	992	1 415	1 030	706	2 338
Ferro-cerium and other pyrophoric alloys	84	493	71	...	23
Metals	277	162	384	201	30
Hong Kong					
Rare earth compounds	525	608	246	250	264
Metals	340	174	116	164	54
India					
Rare earth compounds (a)	147	86	168	270	290
Metals (a)	46	95	77	106	116
Indonesia					
Rare earth compounds	...	526	338	148	314
Ferro-cerium and other pyrophoric alloys	24	72	92	...	...
Japan					
Cerium compounds	8 207	8 757	10 537	8 266	10 385
Other rare earth compounds	10 424	1 948	9 596	7 741	6 695
Metals	3 727	4 659	7 077	3 346	4 985
Jordan					
Ferro-cerium and other pyrophoric alloys	8	60	89	39	76
Korea, Republic of					
Cerium compounds	731	1 249	2 071	2 413	2 850
Other rare earth compounds	677	...	1 854	1 750	2 069
Metals	7	12	14	11	23
Singapore					
Rare earth compounds	635	914	1 287	1 019	1 513
Ferro-cerium and other pyrophoric alloys	728	906	948	1 170	...
Taiwan					
Ores and concentrates	63	37	19	119	229
Rare earth compounds	2 678	2 751	3 711	4 630	3 864
Ferro-cerium and other pyrophoric alloys	66	11	1	1	1
Metals	1 077	1 288	2 077	616	43
Thailand					
Rare earth compounds	...	209	626	324	511
Metals	6	63	104	36	34
Australia					
Rare earth compounds	103	...	77	92	79
Metals	9	5	2	7	6

Note(s) :-

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

(a) Years ended 31 March following that stated

## Production of Salt

tonnes

Country	1998	1999	2000	2001	2002
Albania					
Sea salt	15 865	24 689	20 596	25 783	22 746
Armenia	24 911	26 955	30 030	28 766	30 330
Austria					
Rock salt	1 343	1 481	1 280	1 384	1 111
Salt in brine	734 000	808 000	939 000	896 000	964 000
Azerbaijan	3 518	2 978	3 801	3 734	5 380
Belarus	...	...	...	1 052 000	1 369 000
Bosnia and Herzegovina	...	...	325 200	439 106	...
Bulgaria	2 400 000	1 300 000	1 700 000	1 931 000	1 800 000
Croatia	24 050	18 373	33 668	32 585	28 692
Denmark	463 000	558 000	586 500	587 000	*590 000
France					
Rock salt	470 000	634 000	536 000	596 000	434 000
Brine salt	1 313 000	1 438 000	1 476 000	1 452 000	1 456 000
Salt in brine	4 482 000	4 051 000	3 306 000	4 023 000	3 960 000
Sea salt	1 262 000	1 115 000	1 294 000	1 536 000	848 000
Other salt	211 000	270 000	----	----	----
Germany					
Rock salt	5 548 000	7 221 000	5 360 000	5 326 000	6 134 000
Brine salt	1 123 000	1 184 000	1 206 000	1 211 000	1 248 000
Salt in brine	5 440 000	5 589 000	6 023 000	6 196 000	6 956 000
Greece	207 060	176 867	244 709	208 776	126 118
Italy					
Rock salt and brine salt	3 413 522	3 338 162	3 339 761	3 281 337	*3 300 000
Netherlands	5 573 000	5 400 000	5 564 000	5 717 000	5 773 000
Poland					
Rock salt	748 100	923 200	841 340	786 609	838 858
Brine salt	2 535 700	2 487 700	2 652 042	2 688 929	2 719 131
Portugal					
Rock salt	597 065	558 807	584 516	625 785	604 969
Sea salt	79 033	90 675	74 027	76 653	40 139
Romania	2 220 114	2 196 915	2 307 806	2 225 052	2 257 194
Russia	2 220 000	3 180 000	3 170 000	*2 800 000	*2 800 000
Serbia and Montenegro					
Rock salt	8 539	8 444	10 182	8 624	13 334
Sea salt	19 305	17 066	32 246	26 383	3 787
Slovakia	100 471	119 000	121 700	123 000	97 400
Slovenia	*5 000	*5 000	5 000	2 000	5 200
Spain					
Rock salt	2 286 230	2 425 338	2 328 464	2 319 800	2 317 234
Sea salt	1 321 059	1 400 152	1 436 345	1 420 000	1 073 000
Other salt	92 408	95 346	105 187	100 000	100 162
Switzerland	374 000	541 000	452 000	384 000	410 000
Turkey					
Rock salt	93 931	89 377	84 080	46 362	55 305
Sea salt	438 864	618 856	592 283	522 364	411 646
Other salt	1 636 831	1 437 894	1 450 008	1 202 025	1 729 686
Ukraine	2 310 970	2 185 300	2 286 500	*2 300 000	*2 300 000
United Kingdom					
Rock salt	*700 000	*1 500 000	*1 700 000	*1 900 000	*1 900 000
Brine salt	*1 200 000	*1 200 000	*1 200 000	*1 200 000	*1 200 000
Salt in brine (a)	*3 500 000	*3 000 000	*3 000 000	*3 000 000	*3 000 000
Algeria					
Brine salt and sea salt	172 025	163 748	183 723	195 000	233 000
Angola	*30 000	*30 000	*30 000	*30 000	*30 000
Benin	----	*15 000	*15 000	*15 000	*15 000
Botswana	199 300	233 069	184 800	178 646	315 259
Burkina Faso	*6 000	*6 000	*6 000	*6 000	*6 000
Cape Verde	...	*2 000	*2 000	*2 000	*2 000
Djibouti	82 876	127 283	135 933	173 099	162 266
Egypt (j)	1 380 000	*1 200 000	*1 200 000	*1 200 000	*1 200 000
Eritrea	114 136	9 368	47 498	77 853	116 268
Ethiopia (d)	70 000	70 000	70 000	...	...
Ghana	*50 000	*50 000	*50 000	68 076	99 593
Guinea	...	*15 000	*15 000	*15 000	*15 000
Kenya (h)	21 742	44 886	16 359	5 664	18 848

## Production of Salt

Country	1998	1999	2000	2001	2002
Libya	*30 000	*30 000	*40 000	*40 000	*40 000
Madagascar	26 746	26 000	26 000	26 000	13 000
Mali	*6 000	*6 000	*6 000	*6 000	*6 000
Mauritania	*6 000	*6 000	*6 000	*6 000	*6 000
Mauritius (c)	6 200	7 435	6 000	*6 000	*6 000
Morocco	126 571	156 158	162 385	233 816	266 064
Mozambique	*88 000	*82 000	*7 000	*10 000	*80 000
Namibia	536 080	503 479	543 218	564 841	411 852
Niger	*2 000	*2 000	*2 000	*2 000	*2 000
Senegal	138 000	145 000	124 000	141 000	*160 000
Sierra Leone	2 325	1 300	4 083	2 889	...
Somalia	*1 000	*1 000	*1 000	*1 000	*1 000
South Africa	352 490	388 380	345 632	356 075	428 887
Sudan	72 211	117 148	86 599	77 783	...
Tanzania	75 000	35 893	70 000	65 000	*65 000
Tunisia (c)	466 000	455 000	620 000	712 400	615 800
Uganda	*5 000	*5 000	*5 000	*5 000	*5 000
Bahamas	1 133 428	1 162 241	1 073 413	987 703	1 074 352
Canada					
Rock salt	10 783 788	9 997 353	9 298 285	11 503 494	10 158 045
Other salt (e)	2 511 758	2 680 416	2 695 422	2 189 514	2 114 417
Costa Rica	*37 000	*37 000	*37 000	*37 000	*37 000
Cuba	134 600	159 100	177 000	*180 000	*180 000
Dominican Republic					
Rock salt	5 672	10 000	12 221	*12 000	29 560
Sea salt	*50 000	*50 000	*50 000	*50 000	*50 000
El Salvador (c)	40 346	33 634	32 444	31 609	31 552
Guatemala (c)	*50 000	*50 000	*50 000	*50 000	*50 000
Honduras	*25 000	*25 000	*25 000	*25 000	*25 000
Mexico	8 412 063	8 235 621	8 884 370	8 501 137	7 801 948
Netherlands Antilles	261 696	405 814	292 867	395 195	380 805
Nicaragua (c)	15 132	15 619	16 100	17 710	23 023
Panama (c)	24 914	6 312	11 392	24 422	15 553
USA					
Rock salt (f)	12 700 000	14 700 000	13 600 000	14 600 000	11 400 000
Salt in brine (f)	21 100 000	22 700 000	22 500 000	20 400 000	19 300 000
Evaporated salt (f)	6 980 000	6 980 000	7 140 000	7 210 000	6 960 000
Argentina	751 695	1 263 423	*1 000 000	*1 000 000	*1 000 000
Brazil					
Rock salt	1 484 257	1 430 041	1 448 000	*1 200 000	*1 300 000
Sea salt	5 288 000	4 528 000	4 626 000	4 370 000	4 835 000
Chile	6 207 266	6 074 426	5 082 911	5 989 416	3 502 613
Colombia					
Rock salt	165 699	156 933	177 687	184 278	191 553
Sea salt	330 404	304 433	282 189	351 046	335 783
Peru	220 310	230 393	247 619	418 954	278 948
Venezuela (c)	*350 000	*350 000	*350 000	*350 000	*350 000
Afghanistan	*13 000	*13 000	*13 000	*13 000	*13 000
Bangladesh (c) (j)	*350 000	*350 000	*350 000	*350 000	*350 000
Cambodia	*40 000	*40 000	*40 000	11 000	72 500
China	25 530 000	31 166 000	35 182 800	34 547 500	32 835 000
India					
Rock salt	2 400	3 000	2 600	2 500	1 900
Sea salt	8 471 100	9 775 700	11 219 100	10 295 000	14 366 400
Other salt	3 390 900	4 674 000	4 429 600	3 986 500	3 510 900
Indonesia	*650 000	*680 000	*680 000	*680 000	*680 000
Iran (g)	1 501 704	1 263 397	1 320 668	1 530 028	*1 500 000
Iraq	*250 000	*300 000	*300 000	*300 000	300 000
Israel					
Rock salt	292 000	...	...	...	...
Sea salt	326 000	(k) 538 000	(k) 526 000	(k) *537 000	(k) *527 000
Japan (i)	1 293 000	1 327 000	1 374 000	1 358 000	1 282 000
Jordan (b)	290 204	291 330	344 094	*321 000	*347 000
Kazakhstan	179 931	36 534	36 283	274 497	173 564
Korea, Dem. P.R. of	*550 000	*500 000	*500 000	*500 000	*500 000

## Production of Salt

tonnes

Country	1998	1999	2000	2001	2002
Korea, Republic of	*780 000	*800 000	*800 000	*800 000	*800 000
Kuwait	41 006	38 745	...	...	...
Laos	3 894	1 759	1 618	2 635	5 410
Lebanon	*4 000	*4 000	*4 000	*4 000	*4 000
Mongolia	...	*100 000	*100 000	*100 000	*100 000
Myanmar (b) (c)	*35 000	*35 000	*35 000	*35 000	*35 000
Oman	13 778	11 230	11 700	13 900	...
Pakistan					
Rock salt (j)	1 037 951	1 019 044	1 359 776	1 261 141	1 423 478
Sea salt (j)	14 712	16 429	12 006	12 750	16 185
Philippines (c)	727 754	704 347	589 528	236 987	...
Saudi Arabia					
Rock salt and brine salt	387 000	484 000	409 000	...	...
Sri Lanka	82 483	96 709	70 107	130 272	73 784
Syria	178 000	104 000	106 000	*106 000	*106 000
Taiwan	201 136	294 284	273 374	252 555	247 895
Tajikistan	*40 000	*40 000	*40 000	*40 000	*40 000
Thailand					
Rock salt	546 096	739 502	792 250	852 565	*850 000
Other salt	*100 000	*100 000	*100 000	*100 000	*100 000
Turkmenistan	220 026	223 095	201 000	218 000	*215 000
Uzbekistan	*60 000	*60 000	*60 000	*60 000	*60 000
Vietnam	867 000	653 000	590 000	575 000	*580 000
Yemen, Republic of	147 000	*149 000	*150 000	*150 000	*150 000
Australia (l)	9 033 000	9 888 000	8 847 000	9 244 000	9 884 000
New Zealand	130 000	29 000	130 350	31 315	130 985
World Total	197 500 000	210 600 000	211 600 000	212 100 000	207 200 000

## 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 7 July of that stated  
(e) Including salt in brine  
(f) Sold or used by producers  
(g) Years ended 20 March following that stated  
(h) Lake salt  
(i) Years ended 31 March following that stated  
(j) Years ended 30 June of that stated  
(k) Salt; all forms  
(l) Excluding Victoria and the Northern Territory

## Exports of Salt

Country	1998	1999	2000	2001	2002
Albania	251	20	273	4 314	7 836
Armenia	2 000	1 515	3 235	(a) *2 100	1 684
Belarus	797 847	529 132	437 400	447 000	707 911
Belgium-Luxembourg	30 165	45 977	40 176	68 728	129 726
Bosnia and Herzegovina (a)	*11 500	*32 100	*35 000	*16 400	*11 800
Bulgaria	1 809	2 121	2 423	1 234	(a) *2 100
Croatia	2 493	2 283	1 508	1 609	4 242
Cyprus	5 699	2 941	530	236	1 729
Czech Republic	16 031	13 967	13 252	7 135	7 768
Denmark	275 254	347 207	367 871	327 344	340 177
France	591 511	693 027	452 653	423 727	437 847
Germany	2 750 863	2 984 868	2 753 620	3 023 135	3 340 569
Greece	29 445	41 469	40 445	34 429	36 450
Hungary	437	236	446	232	629
Iceland	2 437	1 929	4 068	1 238	1 178
Italy	265 377	307 128	168 498	170 027	326 123
Latvia	1 688	1 572	632	730	668
Lithuania	4 928	2 061	1 496	1 822	...
Macedonia	170	823	552	316	...
Netherlands	2 039 700	2 910 915	2 863 204	2 689 600	3 641 444
Norway	9 567	7 929	4 114	1 994	3 687
Poland	337 700	422 351	426 860	375 944	339 140
Portugal	13 048	3 362	1 892	3 656	4 413
Romania	439 530	492 524	465 106	349 112	393 787
Russia	13 108	23 109	23 430	23 981	21 229
Slovakia	52 000	46 826	39 930	50 441	45 612
Slovenia	4 769	4 817	3 957	3 513	4 400
Spain	669 534	732 727	845 033	785 056	617 170
Sweden	1 989	1 829	8 420	1 849	20 208
Switzerland	35 844	22 002	15 388	10 146	28 394
Turkey	17 674	20 778	36 334	31 967	46 398
Ukraine	1 012 089	928 343	1 097 450	(a) *1 131 500	(a) *1 167 800
United Kingdom	485 815	276 402	307 899	299 607	312 181
Algeria	25 803	41 900	28 400	40 900	59 000
Botswana	18 512	171 926	157 270	209 207	...
Djibouti	82 876	127 283	135 933	173 099	162 266
Egypt	294 096	268 218	...	518 492	...
Ghana	28 540	36 960	...	...	...
Kenya	123 796	97 578	161 204	...	59 191
Madagascar	-----	2 136	60	...	...
Morocco	2 737	20 190	37 747	111 401	...
Namibia	62 384	12 074	16 513	42 855	...
Senegal	81 903	119 900	119 914	146 286	157 263
South Africa	1 826	2 138	1 048	1 168	1 972
Tanzania	13 083	7 288	13 909	18 180	...
Tunisia	394 410	391 352	462 853	636 449	...
Uganda	1 806	614	287	671	230
Zimbabwe	...	15 429	24 297	...	37 057
Bahamas	1 122 748	1 227 126	1 021 943	1 267 496	767 679
Canada	4 190 782	3 849 203	3 495 106	4 634 307	3 694 595
Costa Rica	1 703	2 666	1 872	2 026	1 474
Dominican Republic	*42 000	*42 000	108 936	119 396	...
Jamaica	2 139	5 184	4 801	...	...
Mexico	6 442 297	6 864 532	7 564 321	6 797 282	5 925 273
Netherlands Antilles	406 195	399 968	419 212	269 194	250 440
Nicaragua	1 149	2 415	1 157	1 770	2 991
Trinidad and Tobago	6 981	7 000	4 600	4 025	...
USA	728 642	893 571	643 169	1 124 596	697 558
Argentina	40 503	36 676	34 826	27 867	29 644
Brazil	444 608	516 331	760 770	770 615	694 187
Chile	2 059 050	2 828 208	2 560 137	4 195 736	2 794 000
Colombia	76 007	34 672	17 349	59 381	42 292
Peru	294 484	635 103	449 015	728 034	477 435
Venezuela	38 339	4 527	3 139	6 379	...

**Exports of Salt**

tonnes

Country	1998	1999	2000	2001	2002
China	332 649	392 355	552 033	946 517	968 703
Hong Kong	1 495	1 454	2 725	2 594	1 730
India (b)	190 651	315 913	737 997	978 846	625 749
Indonesia	23 252	849	3 218	122 076	1 599
Iran	112 756	97 666	102 300	61 348	61 084
Israel (a)	*133 000	*98 000	*82 700	*62 200	*62 800
Japan	1 925	2 044	1 337	1 250	1 926
Jordan	144 749	256 126	112 226	69 281	183 276
Kazakhstan	19 237	13 149	9 653	6 243	8 110
Korea, Republic of	19 483	16 852	17 313	13 286	10 568
Kuwait	4 264	180	226	...	...
Malaysia	14 600	11 000	18 222	...	...
Pakistan (c)	145 315	60 116	70 760	27 325	29 745
Saudi Arabia	12 294	12 024	11 904	11 996	19 883
Singapore	3 497	2 644	2 872	3 303	2 908
Syria	3 542	186	52	2	...
Thailand	91 016	94 222	83 613	81 200	85 248
Turkmenistan (a)	*36 000	*37 000	*40 300	*23 800	*32 900
Yemen, Republic of	58 139	14 931	24 957	40 013	...
Australia	8 700 065	8 472 082	8 230 814	8 794 320	9 485 468
New Zealand	23 396	27 188	23 946	27 149	31 756

## Note(s):

- (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

## Imports of Salt

Country	1998	1999	2000	2001	2002
Albania	6 028	9 298	8 796	11 322	14 248
Austria	82 949	146 444	122 300	59 742	92 209
Azerbaijan	61 512	58 141	57 213	49 415	51 891
Belarus	54 374	21 196	26 648	19 100	22 983
Belgium-Luxembourg	3 602 237	3 373 286	3 675 526	3 285 692	3 411 148
Bulgaria	145 000	177 500	125 322	...	...
Croatia	79 927	121 907	85 873	84 219	139 989
Cyprus	13 318	9 888	9 002	11 616	10 530
Czech Republic	553	814 794	649 768	602 712	622 455
Denmark	249 388	379 402	245 086	255 671	317 692
Estonia	69 177	76 817	71 313	72 431	78 085
Faeroe Islands	16 284	18 622	22 471	...	...
Finland	404 295	371 534	427 247	366 217	447 703
France	559 453	581 948	533 225	457 520	564 159
Georgia	...	11 587	18 583	34 016	...
Germany	1 583 346	1 514 180	2 062 758	1 824 730	2 391 447
Greece	149 344	102 191	131 417	98 438	102 103
Greenland	3 042	4 188	3 352	3 933	...
Hungary	418 601	551 648	527 154	395 106	468 704
Iceland	94 408	88 912	104 726	95 441	87 535
Irish Republic	90 066	110 287	82 940	107 438	110 654
Italy	656 656	581 887	565 098	771 298	685 681
Latvia	91 179	108 065	88 877	91 525	100 542
Lithuania	168 245	176 715	142 384	157 181	...
Macedonia	26 523	37 628	32 387	27 991	...
Malta	3 132	1 919	1 319	1 722	...
Moldova	39 151	44 054	38 941	34 689	32 835
Netherlands	324 111	502 862	98 806	224 608	432 437
Norway	703 443	753 514	691 422	718 394	725 887
Poland	74 200	116 447	113 806	95 520	156 461
Portugal	105 823	75 053	104 476	116 508	119 892
Romania	644	774	6 242	23 077	59 231
Russia	625 397	479 981	570 447	664 052	751 655
Serbia and Montenegro	217 349	174 945	179 426	151 245	168 617
Slovakia	160 100	186 687	193 174	158 752	200 614
Slovenia	91 314	143 054	98 702	107 755	128 212
Spain	37 542	60 771	44 723	31 179	42 431
Sweden	947 996	1 072 731	910 232	908 355	1 030 471
Switzerland	5 114	16 756	9 040	7 216	7 692
Turkey	7 643	10 706	26 341	12 118	78 204
United Kingdom	237 284	261 434	(a) *200 000	(a) *235 000	300 690
Benin	24 059	23 582	15 650	15 874	...
Botswana	2 167	2 281	3 222	3 460	...
Burkina Faso	39 941	31 207	34 967	41 684	...
Burundi	12 167	16 080	12 359	13 354	...
Cameroon	60 864	61 840	81 196	60 958	...
Central African Republic	*3 300	*3 300	*3 300	...	...
Congo	10 860	2 178	4 442	12 705	...
Egypt	2 860	3 849	*4 000	7 040	...
Ethiopia	118 562	75 709	67 212	149 642	173 658
Gabon	*3 800	*3 800	*3 800	...	...
Ghana	618	522	576	377	...
Ivory Coast	75 403	78 491	71 345	...	...
Kenya	150 200	27 803	36 418	...	1 546
Malawi	21 000	*21 000	*21 000	...	...
Mauritius	1 667	3 292	6 298	5 401	7 065
Morocco	13 873	8 820	4 052	4 279	...
Niger	32 582	32 000	*32 000	10 809	...
Nigeria	375 491	307 042	59 520	...	...
Reunion	*2 900	*2 900	*2 900	...	...
Rwanda	16 388	16 586	...	18 674	...
Sierra Leone	*5 000	*4 000	3 676	6 333	...
South Africa	119 775	60 596	59 777	30 288	30 215
Tanzania	22 260	26 593	10 622	10 235	...
Togo	6 079	2 166	3 283	2 566	2 467
Tunisia	394	533	677	1 187	...

## Imports of Salt

tonnes

Country	1998	1999	2000	2001	2002
Uganda	108 080	80 731	61 719	70 732	68 957
Zambia	...	21 808	33 220	32 496	20 895
Zimbabwe	81 293	79 292	135 983	...	65 257
Barbados	1 848	2 101	1 693	2 105	1 971
Belize	1 261	1 166	1 456	1 592	3 060
Canada	978 145	1 375 423	1 141 593	1 644 123	1 373 261
Costa Rica	23 442	34 581	28 642	29 419	29 636
Dominica	*550	949	545	569	...
El Salvador	3 581	1 429	4 787	5 263	6 085
Guadeloupe	2 577	2 471	2 231	2 461	...
Guatemala	4 902	6 634	4 238	4 664	16 147
Honduras	1 915	3 312	4 200	7 117	5 580
Jamaica	23 201	29 248	28 246	...	...
Martinique	2 196	2 467	2 425	2 349	...
Mexico	64 858	71 880	90 603	106 733	116 627
Netherlands Antilles	424	355	661	...	130
Nicaragua	1 210	7 325	4 076	1 244	1 141
Panama	3 186	3 594	2 687	5 492	8 765
St. Lucia	704	621	649	564	...
St. Pierre and Miquelon	1 141	1 105	1 941	2 173	1 419
Trinidad and Tobago	23 472	26 000	19 663	16 089	...
USA	8 815 490	8 854 293	8 947 914	12 891 621	8 156 099
Brazil	207 418	215 593	191 348	108 097	218 031
Colombia	73 563	57 326	45 413	72 042	28 983
Ecuador	47 029	52 140	7 547	31 429	73 744
French Guiana	*500	568	521	555	...
Paraguay	13 895	9 271	20 135	18 731	34 316
Peru	1 088	2 331	3 125	3 506	6 496
Suriname	2 306	1 607	3 184	...	...
Uruguay	87 424	70 392	73 338	52 156	73 736
Venezuela	211 518	97 836	120 021	84 103	...
Abu Dhabi	3 386	7 360	...	...	...
Bahrain	12 366	22 882	5 263	5 054	6 114
Bangladesh	(b) 17 500	(b) 19 000	(b) *20 000	...	...
China	4 432	3 532	2 660	3 999	170 938
Dubai	12 746	14 348	...	...	...
Hong Kong	60 345	58 640	57 796	54 405	52 438
India (c)	88	13 250	17 754	36 077	13 126
Indonesia	907 997	1 867 271	1 445 967	1 596 167	1 552 658
Japan	7 914 304	8 236 050	7 972 374	7 845 953	7 411 193
Jordan	485	797	1 044	839	1 752
Kazakhstan	9 746	18 019	20 894	11 471	13 849
Korea, Dem. P.R. of (a)	*78 000	*35 000	*35 000	*19 000	*16 000
Korea, Republic of	2 144 680	2 356 280	2 370 352	2 601 484	3 073 916
Kuwait	11 191	10 965	13 194	...	...
Kyrgyzstan	8 602	4 766	9 761	7 156	5 911
Lebanon	25 534	38 383	32 944	31 780	...
Macao	2 385	2 185	2 256	2 061	1 973
Malaysia	341 300	405 000	368 560	...	...
Mongolia	4 509	4 324	8 971	17 432	...
Oman	4 248	14 254	14 596	28 448	43 115
Philippines	110 629	396 684	567 213	423 893	...
Qatar	8 620	7 373	...	6 237	...
Saudi Arabia	18 194	17 119	16 974	16 215	13 285
Singapore	55 711	85 621	114 252	106 894	131 660
Sri Lanka	6 354	6 017	5 595	23 609	9 268
Taiwan	1 301 310	1 129 618	1 733 219	1 801 432	1 868 650
Thailand	1 137	67 978	67 906	161 341	84 349



**Imports of Salt**

Country	1998	1999	2000	2001	2002
Australia	12 310	14 071	14 988	14 869	17 285
Fiji	*5 000	*5 000	4 690	4 976	4 421
New Caledonia	972	1 187	1 085	1 142	1 233
New Zealand	65 071	71 692	118 532	79 357	104 541
Papua New Guinea	6 639	6 000	5 200	...	...
Solomon Islands	*1 500	*1 500	*1 500	*1 500	...

Note(s) :-

- (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

**Production of Sillimanite Minerals**

tonnes

Country	1998	1999	2000	2001	2002
France					
Andalusite	79 000	57 000	63 000	61 000	59 000
Spain					
Andalusite	*250	*240	*260	*250	*250
South Africa					
Andalusite	232 646	136 949	182 674	193 225	*195 000
Zimbabwe					
Kyanite	3 780	5 038	10 970	9 682	*10 000
USA					
Kyanite (b)	90 000	90 000	90 000	90 000	90 000
Brazil					
Kyanite (a)	47	171	...	...	...
China					
Andalusite	...	...	15 000	20 000	...
Kyanite	...	...	50 720	27 700	...
Sillimanite	(b) 113 000	...	20 800	163 100	...
India					
Kyanite (c)	6 134	6 191	4 733	4 225	5 305
Sillimanite (c)	12 123	14 933	15 498	14 720	13 674
Australia					
Sillimanite	26	274	110	70	233

## Note(s):

- (1) A number of other countries produce sillimanite minerals but details of output are not reported  
(2) In addition to the countries listed above as producing sillimanite minerals, synthetic mullite is known to be produced in Denmark, France, Hungary, Japan, former Yugoslavia, United Kingdom and the USA

- (a) Including beneficiated and directly shipped material  
(b) Including related minerals  
(c) Years ended 31 March following that stated

**Exports of Sillimanite Minerals**

Country	1998	1999	2000	2001	2002
Belgium-Luxembourg	2 663	4 357	6 081	6 368	5 783
France	51 279	42 872	48 687	56 510	46 454
Germany	8 081	4 779	7 026	8 092	10 565
Italy	487	147	100	248	240
Netherlands	6 787	12 293	7 318	10 932	5 604
United Kingdom	6 677	6 896	6 742	6 895	4 421
South Africa					
Andalusite	144 277	110 642	129 831	132 983	111 751
Canada					
Mullite	4 332	4 660	5 185	4 891	3 865
USA					
Sillimanite minerals	30 143	29 499	22 619	12 632	30 496
Mullite	37 918	32 000	28 870	32 041	92 041
China	7 687	12 463	14 506	46 649	57 052
India (a)	679	311	682	617	10 402
Japan	2 474	3 347	3 625	2 876	2 929
Taiwan	732	622	481	431	347

## Note(s):

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

(a) Years ended 31 March following that stated

**Imports of Sillimanite Minerals**

tonnes

Country	1998	1999	2000	2001	2002
Austria	11 483	2 447	1 471	3 531	2 499
Belgium-Luxembourg	9 199	10 059	13 899	10 972	10 499
Czech Republic	3 281	2 557	4 049	3 785	2 673
Denmark	3 306	1 250	2 842	3 518	2 726
Finland	62	62	168	298	338
France	3 091	3 339	2 864	2 518	2 685
Germany	58 525	52 924	56 898	56 821	62 654
Irish Republic	3 809	3 820	9 521	14 377	5 795
Italy	70 741	77 567	28 898	15 859	18 193
Netherlands	28 365	17 799	25 485	29 657	37 966
Norway	2 314	2 542	2 609	4 793	2 537
Poland	14 519	8 404	10 173	12 576	16 841
Portugal	716	491	568	566	405
Slovakia	...	2 910	3 668	1 770	2 385
Spain	17 956	16 687	20 724	12 885	13 581
Sweden	7 363	4 334	11 519	14 145	12 308
Switzerland	440	366	456	350	246
Turkey	...	2 622	1 343	3 920	3 386
United Kingdom					
Sillimanite minerals	47 985	37 870	28 081	28 470	19 343
Mullite	8 417	7 432	5 198	5 174	10 048
Zimbabwe	...	3 807	2 553	...	1 429
Canada	22 181	19 057	25 012	30 574	37 006
Mexico					
Sillimanite minerals	2 300	2 003	2 229	1 633	1 549
Mullite	3 785	4 714	5 318	5 170	5 386
USA	15 596	11 877	12 818	9 000	9 323
China	1 096	4 115	1 519	3 106	4 472
Hong Kong	15 770	44 695	45 562	11 873	830
India (a)	1 424	3 342	1 174	4 297	1 231
Indonesia	1 742	379	1 317	1 437	1 199
Japan					
Sillimanite minerals	24 879	12 590	21 407	20 209	16 368
Mullite	4 826	5 041	6 560	10 329	8 499
Korea, Republic of					
Sillimanite minerals	10 784	10 470	10 681	12 273	11 897
Mullite	2 670	3 489	4 191	3 857	8 000
Saudi Arabia	470	1 284	...	1 092	1
Taiwan					
Sillimanite minerals	7 810	5 782	5 996	3 307	3 756
Mullite	538	879	762	920	692
Thailand					
Sillimanite minerals	496	299	728	523	905
Mullite	832	1 370	1 483	895	1 609
Australia	4 406	2 553	3 660	4 453	4 971

Note(s) :-

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

(a) Years ended 31 March following that stated

## Mine Production of Silver

kilograms (metal content)

Country	1998	1999	2000	2001	2002
Bulgaria	23 790	*25 000	*25 000	*25 000	*25 000
France	1 027	1 140	723	929	706
Greece	44 000	38 976	30 644	62 400	74 800
Irish Republic	10 800	10 400	16 700	8 700	7 500
Italy	2 500	*2 000	*1 000	*1 000	*1 000
Macedonia	*10 000	*10 000	*10 000	*10 000	*10 000
Poland	1 143 690	1 160 355	1 164 700	1 232 300	1 343 000
Portugal	31 880	26 450	20 430	23 100	19 500
Romania	*18 000	*18 000	*18 000	*18 000	*18 000
Russia (a)	353 000	380 000	*400 000	*400 000	*400 000
Serbia and Montenegro (a)	34 474	7 643	9 068	5 745	6 838
Spain	99 910	355 758	...	...	...
Sweden	299 051	341 584	328 737	306 029	320 823
Turkey	87 000	*90 000	193 000	188 000	124 000
Algeria	*1 500	*1 500	*1 500	*1 500	*1 500
Ethiopia (b)	*500	689	1 018	3 545	881
Ghana	3 600	4 000	2 100	1 900	6 100
Morocco	307 000	277 900	289 000	280 700	276 800
Namibia	13 980	-----	9 300	32 000	23 600
South Africa	144 482	151 959	144 100	109 384	113 108
Tunisia	2 500	4 000	3 700	3 650	*3 000
Zambia	6 936	6 076	*6 000	*6 000	*6 000
Zimbabwe	6 681	5 396	3 799	3 449	3 219
Canada	1 195 943	1 246 357	1 212 386	1 320 030	1 400 945
Dominican Republic	7 409	3 140	...	...	...
Honduras	42 898	46 473	52 485	46 760	52 796
Mexico	2 686 021	2 466 981	2 620 495	2 759 985	2 746 989
Nicaragua	1 946	1 780	1 589	2 532	2 198
Panama	*2 000	*2 000	*2 000	*2 000	*2 000
USA	2 064 800	1 950 900	1 980 100	1 740 000	1 420 000
Argentina	35 768	73 785	78 271	152 802	125 868
Bolivia	403 961	422 540	433 590	409 720	460 900
Brazil	10 000	10 000	10 000	10 000	10 000
Chile	1 340 199	1 380 711	1 242 194	1 348 667	1 210 473
Colombia	5 218	7 593	7 970	7 242	6 986
Peru	2 024 570	2 231 390	2 437 706	2 673 834	2 686 563
China	1 299 000	1 378 714	1 569 145	2 013 250	*2 500 000
India (c)	55 409	53 641	46 150	57 675	59 502
Indonesia	348 974	292 331	314 032	348 332	289 450
Iran	18 800	21 400	*20 000	*20 000	23 000
Japan	94 472	94 004	103 781	80 397	81 400
Kazakhstan (a)	535 987	645 609	855 000	981 918	892 614
Korea, Dem. P.R. of	*50 000	*50 000	*50 000	*50 000	*50 000
Malaysia	7 285	2 744	4	3	-----
Mongolia	*21 000	*21 000	*21 000	*21 000	*21 000
Myanmar (a) (c)	3 643	2 159	2 019	*700	*700
Philippines	18 220	18 214	23 569	29 591	8 800
Saudi Arabia	13 843	10 472	9 390	15 000	*14 000
Uzbekistan	50 500	61 100	*60 000	*60 000	*60 000
Australia	1 473 000	1 715 000	2 059 000	1 970 000	2 077 000
Fiji	1 787	2 159	1 475	2 109	1 901
New Zealand	22 681	24 308	22 886	27 118	28 725
Papua New Guinea	59 294	66 542	79 197	69 368	63 349
Solomon Islands	1 466	2 138	*700	-----	-----
World Total	16 542 000	17 224 000	18 353 000	19 301 000	19 441 000

Note(s):

(1) Countries producing less than 1000 kg per year include the Republic of Korea and Oman

(a) Smelter and/or refinery production

(b) Years ended 7 July of that stated

(c) Years ended 31 March following that stated

## Exports of Silver

kilograms

Country	1998	1999	2000	2001	2002
Austria					
Metal	57 500	133 700	50 900	116 900	101 000
Belgium-Luxembourg					
Ores and concentrates	239 000	22 500	18 000	...	1 128 700
Metal	773 400	53 900	8 600	27 300	67 500
Bulgaria					
Metal (d)	*18 800	*27 000	...	...	...
Denmark					
Metal	97 904	20 456	12 445	17 229	13 532
Finland					
Metal	7 447	8 300	12 708	20 207	6 886
France					
Metal	725 000	615 700	532 500	658 600	584 600
Waste and scrap	612 503	...	...	...	...
Germany					
Metal	2 022 300	2 252 100	2 306 500	2 446 100	2 638 400
Greece					
Metal	...	2 741	3 047	215	71
Hungary					
Metal	489	457	746	1 204	962
Italy					
Metal	569 198	447 420	478 031	399 772	442 900
Macedonia					
Metal (d)	*9 300	*6 200	...	...	*23 300
Norway					
Metal	92 509	122 387	112 502	74 774	64 962
Poland					
Metal	1 032 000	1 054 000	1 041 874	1 094 153	1 135 000
Portugal					
Metal	416	277	5	...	33
Russia					
Metal (d)	*1 217 100	*420 000	...	...	*843 900
Serbia and Montenegro					
Metal	7 106	661	...	2 180	850
Slovakia					
Metal	(d) *3 100	...	...	...	8 498
Slovenia					
Metal	39 716	38 866	1 020	1 775	1 367
Spain					
Metal	423 041	27 952	369 220	14 145	51 246
Sweden					
Metal	282 000	308 000	315 000	291 000	408 000
Switzerland					
Metal	3 124 694	2 028 365	2 480 600	1 627 403	1 306 187
Turkey					
Metal	647	352	45	75	303
United Kingdom					
Metal	2 053 193	1 405 307	3 461 018	2 282 355	1 499 127
Ethiopia					
Metal (f)	*500	689	1 018	3 545	881
Namibia					
Metal	13 980	----	13 454	20 201	42 943
South Africa (a)					
Metal	130 614	154 349	155 819	122 450	114 143
Zambia					
Metal	...	...	...	...	192 450
Canada					
Ores and concentrates (e)	149 445	108 608	182 634	172 072	95 045
Metal	1 625 501	1 708 630	1 614 447	1 686 484	1 872 851
Dominican Republic					
Metal	7 409	3 140	...	...	...
Honduras					
Concentrates (e)	42 898	46 473	52 485	46 760	52 796
Mexico					
Ores and concentrates	3 496 444	6 406 000	4 796 793	...	...
Metal	2 345 477	3 594 800	2 554 985	5 902 770	2 751 127
USA					
Ores and concentrates (b)	13 917	91 749	70 400	238 691	230 084
Metal	3 055 422	1 074 903	959 469	1 179 000	1 440 062
Waste and scrap	1 064 176	1 314 128	1 661 260	1 833 869	...

## Exports of Silver

Country	1998	1999	2000	2001	2002
Bolivia					
Ores and concentrates	1 641 817	1 737 576	2 175 434	2 123 398	2 819 725
Metal	79 256	73 206	55 692	30 063	32 787
Brazil					
Metal	48 772	35 385	37 249	117 856	223 548
Chile					
Metal	779 744	765 042	550 249	682 316	...
Peru					
Metal	792 233	1 008 168	1 118 221	1 191 300	1 172 600
China					
Metal	88 574	308 335	191 399	1 225 380	2 214 415
Hong Kong					
Metal	345 428	1 399 377	1 449 748	1 382 232	1 301 386
India					
Metal (c)	2 775	67	762	2 234	1 460
Indonesia					
Ores and concentrates	...	58 083	1 400 012	1 054 799	...
Metal	164 350	170 468	213 618	134 402	109 341
Israel					
Metal (d)	*1 600	...	...	...	...
Japan					
Metal	368 422	456 783	844 270	783 771	978 731
Waste and scrap	187 317	252 129	359 419	275 508	279 020
Kazakhstan					
Metal	582 600	636 300	...	905 400	899 441
Korea, Dem. P.R. of					
Metal (d)	*7 300	*19 100	...	...	...
Korea, Republic of					
Metal	454 500	426 346	535 973	829 570	1 040 892
Kyrgyzstan					
Metal	(d) *2 500	2 919	6 014	...	...
Malaysia					
Metal	1 050	3 473	53 430	...	...
Oman					
Metal	617	----	62	...	81
Philippines					
Metal	6 868	...	...	...	...
Singapore					
Metal	827 385	695 506	732 643	1 030 649	784 987
Taiwan					
Metal	2 867	6 008	6 897	28 657	41 903
Thailand					
Metal	...	8 800	...	9 041	64 362
Uzbekistan					
Metal (d)	*1 300	...	...	...	*88 400
Australia					
Metal (g)	374 792	428 000	427 000	535 000	540 000
Fiji					
Metal	...	...	...	...	1 901
New Zealand					
Metal	...	...	...	3 772	1 214
Papua New Guinea					
Metal	65 247	64 500	79 197	69 368	52 417

## 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) Refined metal, matte, Ag in copper and lead concentrates, anode slimes, in blister copper
- (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) Years ended 7 July of that stated
- (g) Silver content of refined bullion and welding or brazing rods

## Imports of Silver

kilograms

Country	1998	1999	2000	2001	2002
Austria					
Metal	125 200	254 500	136 700	138 500	100 900
Belgium-Luxembourg					
Ores and concentrates	16 900	1 188 000	1 970 200	...	...
Metal	2 366 500	1 558 500	928 500	875 300	652 200
Bulgaria					
Metal (c)	*900	...	...	...	...
Croatia					
Metal	...	2 560	4 292	4 573	4 000
Cyprus					
Metal	11 168	8 312	11 631	9 624	8 614
Czech Republic					
Metal	(c) *80 700	(c) *86 700	...	...	173 805
Denmark					
Metal	109 846	18 075	23 506	19 137	13 512
Estonia					
Metal	(c) *4 000	7 513	8 175	8 089	9 575
Faeroe Islands					
Metal	275	243	328	...	...
Finland					
Metal	72 799	74 314	87 460	89 015	87 543
France					
Metal	1 326 300	1 223 400	1 439 100	1 421 400	954 400
Waste and scrap	682 847	...	...	...	...
Germany					
Ores and concentrates	5 027 600	4 540 700	2 005 800	...	...
Metal	1 728 800	1 481 600	1 584 400	1 894 000	1 844 300
Greece					
Metal	...	52 252	39 023	25 686	38 516
Hungary					
Metal	8 132	12 908	17 843	19 541	15 444
Iceland					
Metal	700	400	700	500	300
Irish Republic					
Metal	15 907	3 307	3 115	2 940	2 960
Italy					
Metal	1 171 220	1 453 167	2 226 980	2 030 362	1 705 431
Lithuania					
Metal	£128 000	£109 000	£129 000	£163 000	...
Malta					
Metal	...	...	...	£131 000	...
Netherlands					
Metal	£18 131 000	£25 764 000	£13 873 000	£12 117 066	£15 277 000
Norway					
Metal	128 173	147 328	128 551	84 784	60 995
Poland					
Metal	1 000	1 000	22 562	22 372	18 297
Portugal					
Metal	81 514	540	...	599	64
Slovakia					
Metal	22 226	11 349	13 002	...	13 268
Slovenia					
Metal	61 000	58 000	36 769	32 378	35 827
Spain					
Ores and concentrates	33 340	35 452	31 406	43 638	75 862
Metal	813 653	187 098	941 883	175 430	307 864
Sweden					
Metal	176 000	239 000	148 000	153 000	116 000
Switzerland					
Metal	1 569 782	1 972 530	2 748 848	1 476 601	1 028 138
Turkey					
Metal	53 677	52 101	136 321	90 014	169 098
Ukraine					
Metal (c)	*1 100	...	...	...	...
United Kingdom					
Metal	6 772 335	2 589 012	2 541 673	3 471 871	3 779 179



## Imports of Silver

Country	1998	1999	2000	2001	2002
South Africa					
Metal	17 737	19 986	47 487	48 922	42 326
Tunisia					
Metal	12 772	15 932	...	...	29 331
Canada					
Ores and concentrates (b)	242 298	339 075	421 860	329 897	391 223
Metal	235 852	138 654	...	158 610	211 618
Costa Rica					
Metal	1 920	281	392	3 218	222
Jamaica					
Metal	856	112	...	...	...
Mexico					
Ores and concentrates	...	1 879 689	3 780 235	...	...
Metal	53 034	191 470	138 105	231 422	...
Panama					
Metal	2 318	1 603	7 501	2 472	2 748
USA					
Ores and concentrates (b)	425 900	254 929	184 249	...	...
Metal	3 630 615	3 524 227	4 595 230	3 517 800	4 674 101
Waste and scrap	1 783 572	1 650 424	1 122 018	1 110 323	815 773
Argentina					
Metal	...	54 454	70 103	62 035	62 629
Brazil					
Metal	176 853	193 437	218 466	300 980	418 944
Chile					
Metal	1 059	...	595	...	...
Uruguay					
Metal	8 100	7 900	...	...	3 714
Abu Dhabi					
Metal	----	403	...	...	...
China					
Ores and concentrates	1 513 479	551 020	290 645	1 442 835	2 108 565
Metal	156 479	299 830	283 739	315 523	407 288
Dubai					
Metal	986 627	775 524	...	...	...
Hong Kong					
Metal	204 899	406 976	464 657	1 710 307	1 585 135
India					
Metal (a)	3 586 416	3 553 069	3 717 485	3 030 652	3 069 120
Indonesia					
Metal	...	7 408	43 557	10 251	20 060
Israel					
Metal (c)	*85 300	...	...	...	...
Japan					
Ores and concentrates	12 401 000	14 076 000	14 189 000	14 872 000	10 152 000
Metal	1 098 083	1 427 911	2 051 348	1 874 511	1 467 832
Waste and scrap	17 679 525	11 692 212	10 977 147	11 012 030	9 784 649
Jordan					
Metal	403	1 740	248	462	----
Kazakhstan					
Metal	14 100	2 400	...	...	161
Korea, Republic of					
Metal	73 322	217 691	264 421	217 444	267 505
Kuwait					
Metal	225 000	...	...	...	...
Malaysia					
Metal	321 964	344 178	...	...	...
Oman					
Metal	478 219	767 388	1 043 264	...	21 554
Pakistan					
Metal	£200 000	£206 000	£149 000	£2 542 000	...
Philippines					
Metal	2 251	...	...	...	...
Saudi Arabia					
Metal	2 067	4 655	6 000	...	12 587

## Silver

**Imports of Silver**

kilograms

Country	1998	1999	2000	2001	2002
Singapore Metal	450 818	349 299	637 232	475 383	565 975
Sri Lanka Metal	...	1 960	21 381	1 196	2 122
Taiwan Metal	262 574	315 240	480 119	393 251	529 949
Thailand Metal	...	893 520	1 911 529	851 527	998 844
Australia Metal	£15 603 000	£19 834 000	£1 503 000	£4 673 000	£1 344 000
New Zealand Metal	96 000	933 000	...	23 996	49 604

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) Ag content of all ores and concentrates  
(c) BGS estimates, based on known exports from certain countries

## Production of Sulphur and Pyrites

tonnes (sulphur content)

Country	1998	1999	2000	2001	2002
Austria					
Recovered (d)	52 862	49 753	50 377	50 135	54 926
Belarus					
Recovered (d)	11 406	12 944	19 142	21 653	28 162
Belgium					
Recovered (c) (d)	428 000	408 000	410 000	368 000	359 000
Bulgaria					
Pyrites	30 000	20 000	-----	-----	-----
Recovered (c)	134 000	131 000	209 000	203 000	203 000
Recovered (d)	25 000	30 000	30 000	30 000	30 000
Croatia					
Recovered (d)	15 000	15 000	9 000	7 000	7 000
Czech Republic					
Recovered (d)	45 000	45 000	45 000	40 000	40 000
Denmark					
Recovered (d)	3 312	3 729	4 041	3 981	4 386
Finland					
Pyrites	340 000	370 000	360 000	260 000	235 000
Recovered (c)	296 000	299 000	283 000	227 000	308 000
Recovered (d)	45 000	42 000	46 000	46 000	55 000
France					
Recovered (d)	868 800	825 000	801 600	837 700	795 600
Recovered (e)	261 000	*250 000	*260 000	*260 000	*230 000
Germany					
Recovered (c)	90 191	84 400	80 128	80 000	46 000
Recovered (d)	1 612 143	1 696 353	1 611 792	1 640 000	1 657 200
Recovered (e)	48 528	42 440	42 518	40 000	41 900
Greece					
Recovered (d)	150 000	148 000	150 000	153 000	157 000
Hungary					
Recovered (d)	38 332	36 383	34 082	43 000	52 000
Italy					
Recovered (d)	425 000	485 000	490 000	540 000	560 000
Lithuania					
Recovered (d)	...	25 000	28 000	47 000	49 000
Macedonia					
Recovered (c)	20 000	29 000	26 000	26 000	26 000
Netherlands					
Recovered (c)	131 000	129 000	123 000	126 000	124 000
Recovered (d)	432 000	445 000	428 000	384 000	373 000
Norway					
Recovered (c)	*90 000	*95 000	*90 000	*95 000	95 000
Recovered (d)	14 000	12 000	18 000	18 000	19 000
Poland					
Frasch	1 348 000	1 175 000	1 369 259	942 252	760 320
Recovered (c)	*260 000	277 800	*278 600	*280 000	*280 000
Recovered (d)	56 600	73 500	16 483	27 602	22 777
Portugal					
Pyrites	*5 000	...	...	...	...
Recovered	*30 000	32 000	28 000	35 000	28 000
Romania					
Pyrites	50 073	48 127	9 883	1 835	-----
Recovered	46 000	41 000	35 000	41 000	29 000
Russia					
Pyrites	254 000	307 000	404 000	324 000	261 000
Recovered (d)	3 972 852	4 443 284	4 948 298	5 239 515	5 615 000
Recovered (e)	411 000	510 000	438 000	458 000	458 000
Sulphur ore	...	6 151	9 630	13 216	...
Serbia and Montenegro					
Recovered (c)	46 000	46 000	46 000	75 000	78 000
Slovakia					
Recovered (c)	6 000	5 000	5 000	5 000	5 000
Recovered (d)	21 000	24 000	51 000	57 000	61 000
Spain					
Pyrites	405 373	391 130	94 222	89 796	-----
Recovered (c)	461 000	455 000	454 000	461 000	544 000
Recovered (d)	100 000	110 000	115 000	135 000	140 000

**Production of Sulphur and Pyrites**

tonnes (sulphur content)

Country	1998	1999	2000	2001	2002
Sweden					
Recovered (c)	73 000	65 000	*95 000	*160 000	*180 000
Recovered (d)	57 551	56 989	58 521	54 530	51 065
Turkey					
Pyrites	...	91 000	45 000	26 000	34 000
Recovered (d) (e)	145 000	122 000	118 000	126 000	123 000
Ukraine					
Sulphur ore	96 949	79 979	88 000	126 000	124 000
United Kingdom					
Recovered (c)	40 500	26 600	51 400	62 400	66 400
Recovered (d)	184 000	136 000	140 000	111 000	125 000
Algeria					
Recovered (d)	20 000	16 000	12 000	7 000	19 000
Egypt					
Recovered (d)	...	...	60 000	78 000	78 000
Libya					
Recovered (d)	*13 000	*13 000	*13 000	*15 000	...
Namibia					
Pyrites	14 100	----	6 000	34 491	1 874
South Africa					
Pyrites	152 379	141 427	145 650	150 189	183 004
Recovered (a) (c) (d)	299 514	264 209	302 819	388 316	*390 000
Zambia					
Pyrites	29 000	26 000	21 000	25 000	...
Recovered (c)	52 000	52 000	52 000	52 000	52 000
Zimbabwe					
Pyrites	22 200	23 300	29 000	21 700	6 800
Canada					
Recovered (c)	1 152 726	1 159 812	1 159 162	*1 100 000	*1 100 000
Recovered (d)	8 541 291	8 812 609	8 679 770	8 223 000	8 182 000
Cuba					
Recovered (d)	*5 000	*5 000	*5 000	*5 000	*5 000
Mexico					
Recovered (c)	474 000	474 000	474 000	572 000	588 000
Recovered (d)	912 000	856 000	851 000	878 000	887 000
Netherlands Antilles					
Recovered (d)	35 000	34 000	38 000	36 000	25 000
Trinidad and Tobago					
Recovered (d)	*15 000	8 400	14 900	24 400	...
USA					
Frasch	*1 800 000	1 780 000	900 000	----	----
Recovered (c)	1 610 000	1 320 000	1 030 000	982 000	*980 000
Recovered (d)	8 220 000	8 220 000	8 380 000	8 270 000	8 500 000
Argentina					
Recovered (c)	23 000	23 000	23 000	23 000	23 000
Brazil					
Pyrites	25 719	23 232	23 720	24 468	22 620
Recovered (c)	186 806	217 119	217 238	280 079	284 184
Recovered (d)	36 973	57 962	81 762	80 125	77 185
Chile					
Recovered (c)	899 000	1 037 000	1 096 000	1 160 000	1 275 000
Colombia					
Recovered (d)	*15 000	*16 000	*16 000	15 465	16 000
Sulphur ore	52 727	89 024	91 996	69 344	60 162
Ecuador					
Recovered (d)	18 900	17 200	20 800	*20 700	...
Sulphur ore	*4 000	*4 000	*4 000	*4 000	...
Peru					
Recovered (c)	*60 000	*60 000	*60 000	*60 000	*60 000
Venezuela					
Recovered (d)	425 000	350 000	320 000	340 000	540 000

## Production of Sulphur and Pyrites

tonnes (sulphur content)

Country	1998	1999	2000	2001	2002
Abu Dhabi					
Recovered (d)	967 000	1 089 000	1 122 000	1 488 000	1 900 000
Bahrain					
Recovered (d)	61 873	67 230	73 060	70 884	71 000
China					
Pyrites	3 654 490	3 130 000	4 010 000	3 678 000	3 240 000
Recovered	1 556 000	1 716 000	1 797 000	2 391 000	2 400 000
Sulphur ore	228 000	240 000	250 000	260 000	450 000
India					
Pyrites (f)	19 500	2 100	----	...	...
Recovered (c)	196 000	261 000	359 000	458 000	458 000
Recovered (d) (e)	60 000	101 000	376 000	526 000	326 000
Indonesia					
Recovered (c)	----	154 000	212 000	212 000	196 000
Recovered (d)	5 000	10 000	60 000	70 000	70 000
Sulphur ore	*3 400	3 450	*3 500	*3 600	...
Iran					
Recovered (d)	889 000	963 000	963 000	880 000	1 200 000
Iraq					
Recovered (d)	325 000	300 000	300 000	300 000	300 000
Israel					
Recovered (d)	32 000	31 000	38 000	35 000	36 000
Japan					
Pyrites	23 000	41 000	----	----	----
Recovered (c) (g)	1 410 000	1 513 000	1 567 000	1 519 000	1 592 000
Recovered (d)	2 083 000	2 060 000	2 072 000	2 424 389	1 865 424
Kazakhstan					
Recovered (c)	212 000	245 000	294 000	310 000	310 000
Recovered (d)	935 500	1 111 000	1 244 700	1 469 400	1 600 000
Korea, Dem. P.R. of					
Pyrites	40 000	21 000	18 000	18 000	18 000
Recovered (c)	20 000	16 000	16 000	16 000	16 000
Korea, Republic of					
Recovered (c)	476 000	528 000	572 000	665 000	753 000
Recovered (d)	656 000	630 000	679 000	690 000	687 000
Kuwait					
Recovered (d)	665 000	639 000	512 000	524 000	634 000
Oman					
Recovered (d)	*30 000	*30 000	*30 000	*30 000	...
Pakistan					
Recovered (b)	22 458	21 166	22 812	17 428	22 580
Philippines					
Recovered (c)	132 000	133 000	134 000	145 000	154 000
Recovered (d)	20 000	20 000	20 000	25 000	30 000
Qatar					
Recovered (d)	146 000	155 000	190 868	220 624	250 000
Saudi Arabia					
Recovered (d)	1 880 105	1 939 758	2 101 391	2 345 000	2 230 000
Singapore					
Recovered (d)	180 000	261 000	265 000	230 000	180 000
Syria					
Recovered (d)	30 000	30 000	30 000	30 000	30 000
Taiwan					
Recovered	184 325	194 811	205 588	223 659	212 343
Thailand					
Recovered (c)	46 000	46 000	46 000	46 000	46 000
Recovered (d)	180 000	180 000	180 000	195 000	170 000
Turkmenistan					
Sulphur ore	11 937	5 405	3 709	5 628	...
Uzbekistan					
Recovered (c)	163 000	163 000	163 000	163 000	163 000
Recovered (d)	270 000	283 000	285 000	310 000	360 000

**Production of Sulphur and Pyrites**

tonnes (sulphur content)

Country	1998	1999	2000	2001	2002
Australia					
Recovered (c)	507 000	441 000	654 000	817 000	899 000
Recovered (d)	22 000	25 000	30 000	45 000	60 000
Total Pyrites	5 200 000	4 600 000	5 200 000	4 700 000	4 000 000
Total Frasch	3 100 000	3 000 000	2 300 000	900 000	800 000
Total Recovered	48 600 000	50 200 000	51 700 000	54 100 000	55 500 000
Total Sulphur Ore	400 000	400 000	500 000	500 000	700 000

## Note(s):

- (a) Including production from synthetic fuels
- (b) Years ended 30 June of that stated
- (c) From metal sulphide processing
- (d) From petroleum refining and/or natural gas
- (e) Other
- (f) Years ended 31 March following that stated
- (g) Including S content of sulphur ore

## Exports of Sulphur and Pyrites

Country	1998	1999	2000	2001	2002
Austria					
Sulphur, sublimed and precipitated	3 012	4 907	5 998	6 707	14 596
Belgium-Luxembourg					
Pyrites	1 880	1 832	2 392	55	37
Sulphur	13 424	8 493	12 427	41 761	44 882
Sulphur, sublimed and precipitated	208	171	240	239	291
Croatia					
Sulphur, crude	3 322	3 375	7 152	6 386	7 150
Czech Republic					
Sulphur	2 549	1 835	4 294	2 398	7 410
Sulphur, sublimed and precipitated	6 465	1 546	5 875	3 069	118
Denmark					
Sulphur	3 517	4 717	2 406	1 044	1 182
Finland					
Pyrites (c)	*501 900	*337 200	*288 100	*250 700	*266 200
France					
Sulphur, crude	503 616	475 879	444 447	559 527	385 326
Sulphur, refined	10 792	3 082	4 959	1 354	10 988
Sulphur, sublimed and precipitated	694	3 060	818	753	764
Germany					
Pyrites	375	480	457	511	483
Sulphur, crude	1 059 498	1 113 801	1 013 806	976 781	943 122
Sulphur, refined	22 936	18 278	31 354	36 859	35 614
Sulphur, sublimed and precipitated	367	342	18 962	14 862	5 184
Hungary					
Sulphur, sublimed and precipitated	18 742	...	25	...	2
Italy					
Pyrites	9 237	6 616	22 810	9 455	9 547
Sulphur	50 376	69 344	107 740	179 324	155 173
Sulphur, sublimed and precipitated	278	136	176	352	251
Lithuania					
Sulphur	8 985	2 158	354	5 660	...
Netherlands					
Pyrites	64 161	85 665	119 675	93 095	16 401
Sulphur, crude	132 707	150 612	52 565	186 059	118 053
Sulphur, refined	80 293	69 659	84 609	105 723	143 272
Sulphur, sublimed and precipitated	181	50	46	26	38
Norway					
Sulphur, sublimed and precipitated	10 355	10 827	10 694	11 504	11 630
Poland					
Sulphur	832 700	801 354	1 023 400	773 373	597 905
Portugal					
Sulphur	11 349	16 837	7 367	14 009	20 172
Romania					
Sulphur	2 388	3 350	320	79	5 505
Russia					
Pyrites	28 044	16 221	14 113	12 080	12 010
Sulphur	1 773 308	2 642 574	3 110 639	1 544 925	3 253 346
Sulphur, sublimed and precipitated	1	...	71	62	6
Serbia and Montenegro					
Pyrites	18 228	752	----	9 544	51
Slovakia					
Sulphur	17 100	...	259	121	259
Spain					
Pyrites	51 795	57	25	47	21
Sulphur, crude	43 139	45 887	40 984	49 385	39 389
Sulphur, refined	9 295	12 640	20 960	19 318	13 476
Sulphur, sublimed and precipitated	366	465	474	52	69
Sweden					
Sulphur	3 938	934	2 056	1 453	493
Sulphur, sublimed and precipitated	85	73	----	2	2
Turkey					
Sulphur, crude	41	115	1 604	2 722	2 530
Sulphur, sublimed and precipitated	2 673	1 108	434	880	1 641
Ukraine					
Sulphur	24 879	23 163	37 385	(c) *21 100	(c) *31 400

**Exports of Sulphur and Pyrites**

tonnes

Country	1998	1999	2000	2001	2002
United Kingdom					
Sulphur, crude	51 809	50 897	10 824	...	...
Sulphur, sublimed and precipitated	140	277	379	386	656
Egypt					
Sulphur, crude	1 312	1 552	*1 600	1 428	...
Namibia					
Pyrites	73	----	----	8 427	1 280
South Africa					
Sulphur	46 717	57 844	37 075	...	27 430
Canada					
Sulphur	5 145 955	5 024 568	4 841 305	3 361 501	2 919 219
Mexico					
Sulphur	586 645	513 301	507 270	463 874	445 861
Netherlands Antilles					
Sulphur	35 000	33 000	38 000	35 600	36 800
USA					
Pyrites	2 160	55 904	48 646	3 548	3 206
Sulphur, crude	853 250	656 372	692 791	675 223	686 894
Sulphur, refined	52 898	58 808	62 827	(a) ...	(a) ...
Sulphur, sublimed and precipitated	36 887	26 042	24 986	36 586	22 018
Colombia					
Sulphur	2 181	977	1 107	1 161	1 611
Venezuela					
Sulphur	3 105	...	...	...	...
Bahrain					
Sulphur	55 796	60 069	57 487	81 046	71 312
China					
Pyrites	36 759	6 229	9 107	15 850	11 116
Sulphur	5 206	3 120	5 065	7 329	3 305
Sulphur, sublimed and precipitated	1 156	935	1 713	1 994	3 337
India					
Sulphur, sublimed and precipitated (b)	2 837	3 045	3 137	2 516	3 444
Indonesia					
Sulphur	25	301	2 115	12 362	27 523
Sulphur, sublimed and precipitated	...	100	2 156	64	249
Iran					
Sulphur	634 700	634 000	651 100	535 200	576 100
Japan					
Sulphur, crude	1 080 709	1 057 959	1 053 536	1 217 739	1 091 242
Sulphur, sublimed and precipitated	915	812	468	308	949
Jordan					
Sulphur, crude	157 254	249 135	49 755	88 450	224 141
Kazakhstan					
Sulphur	222 315	146 818	150 000	2 812	44 616
Korea, Republic of					
Sulphur, crude	255 023	253 900	280 846	240 956	162 009
Sulphur, sublimed and precipitated	1 275	1 338	1 562	1 879	2 900
Kuwait					
Sulphur	596 000	613 000	539 200	531 000	650 000
Qatar					
Sulphur	146 300	145 000	190 000	226 300	175 043
Saudi Arabia					
Sulphur	1 854 400	2 025 600	2 189 300	2 057 200	2 179 600
Singapore					
Sulphur, crude	80 464	66 939	92 517	81 949	84 044
Sulphur, sublimed and precipitated	52 194	65 459	54 703	23 033	59 781
Taiwan					
Sulphur	573	3 199	537	527	81 777
Sulphur, sublimed and precipitated	625	616	583	489	6 622
Thailand					
Sulphur	295	444	623	489	640
Sulphur, sublimed and precipitated	16	404	481	346	141
United Arab Emirates					
Sulphur	910 000	1 132 200	1 056 000	1 439 700	1 857 000



**Exports of Sulphur and Pyrites**

Country	1998	1999	2000	2001	2002
Australia					
Sulphur	1 663	1 219	...	728	60 227
Sulphur, sublimed and precipitated	342	125	140	200	103
New Zealand					
Sulphur, crude	3 298	1 228	2 059	945	1 306

## Note(s):

- (a) Included with crude
- (b) Years ended 31 March following that stated
- (c) BGS estimates, based on known imports into certain countries

## Imports of Sulphur and Pyrites

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Pyrites	1 096	373	731	1 040	1 064
Sulphur, crude	60 091	45 155	...	...	...
Sulphur, refined	5 157	8 328	15 346	22 055	44 365
Sulphur, sublimed and precipitated	5 306	4 477	3 642	314	237
Azerbaijan					
Sulphur	8 474	7 914	18 500	6 851	8 028
Belarus					
Sulphur	196 705	183 680	168 304	135 177	136 896
Belgium-Luxembourg					
Sulphur, crude	186 424	213 641	182 044	162 134	155 665
Sulphur, refined	192 737	214 285	207 656	277 195	218 830
Sulphur, sublimed and precipitated	1 974	5 699	16 252	178	25
Bulgaria					
Sulphur	2 400	109	159	...	...
Croatia					
Sulphur, crude	49 409	41 367	65 234	53 025	39 190
Sulphur, sublimed and precipitated	173	141	278	299	1 738
Cyprus					
Sulphur	1 728	1 583	1 300	1 222	939
Czech Republic					
Sulphur	75 514	57 111	68 252	56 621	51 922
Sulphur, sublimed and precipitated	26 279	53 084	46 615	45 665	39 772
Denmark					
Sulphur	9 564	10 963	8 000	9 358	8 616
Finland					
Sulphur	27 597	22 605	38 785	35 387	26 123
France					
Pyrites	2 474	3 260	12 396	4 229	7 314
Sulphur, crude	117 946	113 106	97 992	55 620	42 855
Sulphur, refined	16 355	12 456	75 859	68 001	74 225
Sulphur, sublimed and precipitated	11 152	18 845	25 216	8 194	2 622
Germany					
Pyrites	163 625	87 902	84 043	77 260	51 479
Sulphur	46 141	8 626	21 207	31 498	31 481
Sulphur, sublimed and precipitated	1 639	2 248	2 133	1 837	1 121
Greece					
Sulphur, crude	153 871	196 341	127 790	90 126	90 577
Hungary					
Sulphur	2 479	1 208	7 270	4 339	1 853
Sulphur, sublimed and precipitated	129	97	289	287	134
Irish Republic					
Sulphur, sublimed and precipitated	654	7	274	1 281	194
Italy					
Pyrites	18 791	5 022	13 177	9 174	15 021
Sulphur, crude	194 008	56 043	123 667	43 335	53 623
Sulphur, refined	4 524	9 565	5 887	8 086	8 330
Sulphur, sublimed and precipitated	2 316	355	770	3 939	820
Lithuania					
Sulphur	178 045	227 009	263 058	66 675	287 000
Moldova					
Sulphur, sublimed and precipitated	533	412	300	183	51
Netherlands					
Pyrites	69 520	41 736	73 366	...	...
Sulphur	24 989	52 231	21 193	30 101	58 270
Sulphur, sublimed and precipitated	16 712	5 094	27 801	34 161	55 027
Norway					
Pyrites	254 119	213 347	216 882	151 438	225 139
Sulphur	911	927	-----	1 542	1 567
Sulphur, sublimed and precipitated	68	1	2	2	16
Poland					
Sulphur	8 300	46 014	49 273	70 246	98 279
Sulphur, sublimed and precipitated	...	505	560	239	120
Portugal					
Sulphur	2 469	2 378	2 302	3 306	5 981
Sulphur, sublimed and precipitated	4 576	1 709	7	103	5

## Imports of Sulphur and Pyrites

Country	1998	1999	2000	2001	2002
Romania					
Sulphur, crude	43 195	27 314	54 047	22 311	...
Sulphur, sublimed and precipitated	824	80	69	146	13
Russia					
Sulphur	159 698	147 694	9 870	10 178	62 214
Sulphur, sublimed and precipitated	271	186	221	56	82
Serbia and Montenegro					
Sulphur, crude	1 429	703	1 534	504	346
Slovakia					
Sulphur	39 078	18 057	15 022	21 142	18 738
Slovenia					
Pyrites	331	256	294	379	426
Sulphur	49 628	44 682	47 621	51 734	49 560
Spain					
Sulphur, crude	41 258	39 836	174 499	221 786	205 049
Sulphur, refined	4 359	1 654	8 261	5 869	8 219
Sulphur, sublimed and precipitated	167	186	209	220	238
Sweden					
Pyrites	3 526	376	389	482	386
Sulphur	91 838	92 577	70 113	69 293	63 948
Sulphur, sublimed and precipitated	1 855	2 224	5 600	7 141	5 010
Switzerland					
Pyrites	301	304	220	217	239
Sulphur	40 601	39 081	40 195	40 754	30 140
Sulphur, sublimed and precipitated	52	46	67	24	93
Turkey					
Pyrites	17 437	87	12	36	52
Sulphur, crude	126 446	133 554	107 173	67 396	127 779
Sulphur, sublimed and precipitated	93	71	96	73	2 008
Ukraine					
Sulphur	371 493	348 423	239 265	247 000	256 000
United Kingdom					
Sulphur, crude	196 327	190 439	211 888	170 055	87 147
Sulphur, sublimed and precipitated	2 420	213	94	390	355
Algeria					
Sulphur	2 759	3 243	4 125	2 700	2 500
Cameroon					
Sulphur, sublimed and precipitated	100	590	201	6	...
Egypt					
Sulphur	211 856	91 682	92 000	97 000	208 500
Sulphur, sublimed and precipitated	540	404	...	973	...
Ethiopia					
Sulphur	8	852	88	2 264	599
Sulphur, sublimed and precipitated	32	70	...	17	7
Gabon					
Sulphur	1 500	1 300	----	...	...
Kenya					
Sulphur	840	8 069	11 575	...	2 684
Sulphur, sublimed and precipitated	429	639	621	...	264
Morocco					
Sulphur	2 639 586	2 854 275	2 860 921	2 854 126	2 997 100
Namibia					
Sulphur	57 200	45 000	----	...	...
Niger					
Sulphur	14 483	15 414	10 930	15 719	7 600
Nigeria					
Sulphur	10 000	20 300	16 700	10 800	----
Sulphur, sublimed and precipitated	9 120	173	366	...	...
Senegal					
Sulphur	378 068	246 769	207 425	502 355	500 020
South Africa					
Sulphur, crude	531 432	696 552	699 867	678 004	568 758
Sulphur, sublimed and precipitated	291	244	228	151	...
Tanzania					
Sulphur, sublimed and precipitated	2 031	1 505	8 349	2 033	...

## Imports of Sulphur and Pyrites

tonnes

Country	1998	1999	2000	2001	2002
Tunisia					
Sulphur	1 529 990	1 570 351	1 651 734	1 581 289	1 643 300
Sulphur, sublimed and precipitated	1 001	1 339	1 184	972	...
Zambia					
Pyrites	...	...	12 734	47 313	31 761
Sulphur	...	...	40 936	36 476	42 995
Sulphur, sublimed and precipitated	...	36 684	5 028	11 950	9 873
Zimbabwe					
Sulphur	14 568	32 480	*33 000	...	...
Canada					
Pyrites	28 452	25 434	30 339	25 424	26 379
Sulphur, crude	51 368	48 554	48 099	53 362	50 306
Sulphur, sublimed and precipitated	1 207	610	813	660	773
Cuba					
Sulphur	177 989	154 798	162 312	164 400	150 200
El Salvador					
Sulphur	2 849	2 357	6 952	5 142	5 124
Guatemala					
Sulphur	3 194	2 394	4 157	1 991	4 140
Jamaica					
Sulphur	6 271	6 566	6 600	...	...
Mexico					
Sulphur, crude	645 476	632 950	660 321	388 420	210 540
Sulphur, sublimed and precipitated	1 044	1 225	289	659	628
USA					
Sulphur, crude	1 292 188	1 249 239	1 004 545	740 250	1 011 092
Sulphur, sublimed and precipitated	2 198	4 182	502	694	1 066
Argentina					
Sulphur	86 711	95 759	112 850	77 769	91 828
Brazil					
Sulphur	1 325 069	1 419 409	1 583 840	1 482 888	1 692 738
Chile					
Sulphur	16 719	13 554	8 956	14 645	14 468
Colombia					
Sulphur	81 531	65 293	67 406	70 032	71 642
Ecuador					
Sulphur	2 401	2 120	4 403	4 171	4 317
Paraguay					
Sulphur	3 000	2 000	1 702	...	...
Peru					
Sulphur	4 838	4 789	11 189	8 768	5 815
Uruguay					
Sulphur	19 471	19 565	14 018	17 018	21 680
Bangladesh					
Sulphur (b)	30 000	35 000	*35 000	...	...
China					
Sulphur	941 076	1 979 401	2 732 944	3 370 050	4 092 151
Sulphur, sublimed and precipitated	241 132	154 811	89 474	9 542	2 646
Hong Kong					
Sulphur, sublimed and precipitated	529	204	500	464	758
India					
Sulphur, crude (a)	1 583 023	2 024 090	1 802 402	1 638 941	1 387 602
Sulphur, sublimed and precipitated (a)	1 098	841	959	1 169	615
Indonesia					
Sulphur, crude	356 042	286 160	257 110	344 104	256 389
Sulphur, sublimed and precipitated	11 315	44 230	27 169	32 987	30 585
Israel					
Sulphur	595 000	575 500	561 100	629 000	428 000
Japan					
Pyrites	44 477	4 166	6 243	9 773	6 989
Sulphur	389	34	535	488	888
Sulphur, sublimed and precipitated	1 225	1 133	1 298	1 198	1 245
Jordan					
Sulphur, crude	410 723	799 577	533 003	399 973	622 001

**Imports of Sulphur and Pyrites**

Country	1998	1999	2000	2001	2002
Korea, Republic of					
Pyrites	36 762	14 086	639	3 362	527
Sulphur	243 888	225 321	217 491	203 320	153 163
Sulphur, sublimed and precipitated	171	117	130	150	131
Kuwait					
Pyrites	10 503	38 192	24 693	...	...
Lebanon					
Sulphur	121 724	101 244	142 229	152 100	185 680
Sulphur, sublimed and precipitated	210	482	498	108	...
Malaysia					
Sulphur, crude	84 900	87 200	46 294	42 249	...
Sulphur, sublimed and precipitated	9 214	...	10 845	15 288	...
Pakistan					
Sulphur (b)	20 071	16 107	41 471	43 150	11 920
Philippines					
Sulphur, crude	111 550	137 350	165 019	138 059	196 800
Sulphur, sublimed and precipitated	56	288	2 318	376	...
Saudi Arabia					
Pyrites	----	2 346	44	16 745	22 115
Singapore					
Sulphur, crude	1 311	71	92	82	66
Sulphur, sublimed and precipitated	24	28	5	112	340
Sri Lanka					
Sulphur, crude	1 352	1 331	1 430	1 343	1 662
Sulphur, sublimed and precipitated	86	137	204	144	99
Syria					
Sulphur, crude	10 306	33 716	41 444	61 367	...
Taiwan					
Sulphur	407	450	151	477	652
Sulphur, sublimed and precipitated	144 490	132 529	152 530	63 210	181
Thailand					
Sulphur, refined	95 994	73 210	144 482	111 891	139 081
Sulphur, sublimed and precipitated	157	5 674	4 837	520	369
Vietnam					
Sulphur	88 700	87 600	97 600	103 800	133 900
Australia					
Pyrites	1 828	168	194	272	453
Sulphur	230 408	244 825	326 526	480 347	748 245
Sulphur, sublimed and precipitated	283	599	1 418	663	529
New Zealand					
Sulphur, crude	180 091	178 045	255 211	236 776	206 002
Sulphur, sublimed and precipitated	554	510	529	342	606

Note(s) :-

(a) Years ended 31 March following that stated

(b) Years ended 30 June of that stated

## Production of Talc

tonnes

Country	1998	1999	2000	2001	2002
Austria	137 114	129 576	133 060	137 776	138 195
Finland	495 000	509 000	502 000	477 000	477 000
France	391 200	405 300	409 000	417 000	359 000
Germany	15 473	*15 000	*15 000	...	...
Greece	150	2 860	2 300	2 073	...
Italy	133 557	123 503	121 068	126 868	*130 000
Macedonia	*1 000	*1 000	*1 000	*1 000	*1 000
Norway	*26 000	26 758	26 660	24 626	23 564
Portugal	9 882	9 554	9 895	8 362	8 916
Romania	8 134	8 229	7 850	7 270	7 292
Russia	78 956	107 690	105 549	111 645	*100 000
Slovakia	2 820	1 900	1 800	2 600	2 290
Spain	110 150	117 581	115 154	119 000	108 312
Sweden	24 000	19 000	20 000	14 000	20 000
Turkey					
Pyrophyllite	37 000	48 358	54 278	*50 000	*50 000
United Kingdom	4 937	6 256	4 832	4 947	6 194
Egypt (d)	35 119	*35 000	*35 000	*35 000	*35 000
Morocco					
Talc	3 324	2 975	4 069	5 844	5 926
Pyrophyllite	22 565	11 680	24 359	21 042	26 606
South Africa					
Talc	11 328	7 873	5 600	3 030	2 511
Pyrophyllite	11 500	13 277	11 989	14 047	15 587
Zimbabwe	1 039	1 081	989	1 273	1 024
Canada	71 000	78 000	86 000	45 000	98 000
Mexico	18 843	18 981	20 569	77 650	82 076
USA	971 000	925 000	851 000	863 000	775 000
Argentina					
Talc	14 585	8 971	*8 000	*8 000	*8 000
Pyrophyllite	3 450	3 400	*3 400	*3 400	*3 400
Brazil					
Talc (b)	258 695	216 454	309 963	*300 000	...
Agalmatolite (b)	98 445	105 306	131 784	*130 000	...
Pyrophyllite (b)	11 173	11 451	*10 000	*10 000	...
Chile	3 772	2 231	2 421	4 177	3 537
Colombia	*15 000	*15 000	*15 000	*15 000	*15 000
Peru					
Talc	11 165	12 085	9 668	11 165	10 685
Pyrophyllite	*8 000	*8 000	*8 000	8 069	9 514
Uruguay	972	2 905	2 093	1 695	816
Venezuela	*32 000	*32 000	*32 000	*32 000	*32 000
Bhutan	*3 200	*3 400	*3 700	*3 800	*3 800
China	1 745 000	1 136 000	1 975 070	2 555 500	...
India					
Pyrophyllite (e)	91 924	106 268	148 346	150 345	152 904
Steatite (e)	481 554	557 112	595 724	578 857	675 789
Indonesia					
Pyrophyllite	22 611	...	...	...	...
Iran (a)	30 100	44 136	58 971	65 779	...
Japan					
Talc	*50 000	*50 000	*50 000	*45 000	*45 000
Pyrophyllite	496 605	437 834	433 411	403 137	*400 000
Korea, Dem. P.R. of	*150 000	*120 000	*120 000	*120 000	*120 000
Korea, Republic of					
Talc	24 411	15 313	11 344	47 712	37 863
Pyrophyllite	843 609	754 657	917 972	1 101 825	889 961
Nepal (c)	5 553	6 257	5 852	3 923	2 621
Pakistan (d)	48 927	42 339	47 977	50 733	46 753
Taiwan	73	1 816	----	130	27
Thailand					
Talc	2 172	4 960	7 390	6 838	...
Pyrophyllite	40 241	38 053	46 011	59 602	...

**Production of Talc**

Country	1998	1999	2000	2001	2002
Australia					
Talc (d)	199 315	190 037	178 545	173 446	160 000
Pyrophyllite (d)	702	347	1 727	----	868
World Total	7 300 000	6 600 000	7 700 000	8 500 000	8 300 000

## Note(s):

- (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) Years ended 31 March following that stated

## Exports of Talc

tonnes

Country	1998	1999	2000	2001	2002
Austria	157 732	159 206	129 226	162 302	142 879
Belgium-Luxembourg	77 276	79 086	86 536	81 767	86 924
Finland (a)	*145 000	*182 000	*213 000	*135 000	*108 000
France	216 966	213 881	229 681	191 750	222 699
Germany	6 273	4 215	5 216	6 048	7 088
Greece	972	1 597	1 413	31 989	1 853
Italy	80 228	87 787	98 344	89 839	108 467
Macedonia	612	695	562	557	...
Netherlands	70 522	87 984	162 006	145 951	164 515
Norway	35 488	33 688	31 249	30 480	32 894
Russia	257	732	1 002	1 380	948
Slovakia	2 600	1 777	1 510	1 549	1 322
Spain	43 887	55 137	58 247	63 657	67 921
Sweden	18 351	17 964	10 884	5 138	14 370
Switzerland	721	606	1 048	1 070	847
Turkey	208	122	56	120	249
United Kingdom	4 574	3 175	3 812	4 034	4 081
Egypt	8 481	4 233	...	17 185	...
South Africa					
Talc	104	96	40	16	----
Pyrophyllite	*7 000	*8 000	*8 000	*7 000	*6 000
Zambia	...	...	...	330	3 188
Canada	29 661	44 447	58 506	45 791	69 330
USA	158 872	150 654	163 472	141 986	171 160
Brazil	3 925	6 028	7 074	6 299	5 617
Peru	5 670	5 665	6 052	5 004	5 259
China	766 019	732 480	804 431	799 297	739 219
Hong Kong	9 650	7 311	6 501	2 436	5 352
India (b)	32 224	12 378	24 285	21 008	29 383
Indonesia	...	20	111	3 247	2 878
Japan	5 222	6 830	8 920	11 640	6 615
Korea, Republic of					
Talc	1 099	445	1 429	2 761	4 810
Pyrophyllite	152 290	175 757	151 463	129 941	...
Singapore	1 563	2 184	1 561	1 709	1 451
Taiwan	6 377	6 984	9 026	10 851	15 763
Thailand	2 589	3 621	2 945	3 232	3 192
Australia	2 796	111 610	134 188	163 804	131 273

Note(s):

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

(b) Years ended 31 March following that stated



## Imports of Talc

Country	1998	1999	2000	2001	2002
Austria	15 748	42 804	25 441	50 199	46 833
Belarus	1 567	1 252	1 346	1 672	1 576
Belgium-Luxembourg	98 211	92 906	104 074	105 971	115 112
Croatia	1 007	1 094	1 055	1 395	0
Cyprus	233	255	186	181	202
Czech Republic	6 313	7 802	8 659	9 082	9 299
Denmark	12 991	13 668	13 476	13 156	16 577
Finland	5 927	4 934	4 881	4 027	3 251
France	49 837	36 144	41 304	41 095	43 342
Germany	213 254	212 333	258 529	244 678	263 988
Greece	7 014	5 129	10 325	6 528	4 206
Hungary	9 077	9 245	10 224	9 698	9 576
Irish Republic	1 083	1 210	1 783	1 848	2 224
Italy	94 832	101 338	99 879	133 646	117 688
Netherlands	116 447	181 949	167 896	89 378	95 121
Norway	16 776	11 795	12 722	8 762	11 557
Poland	14 900	15 061	13 450	14 274	17 989
Portugal	14 432	15 284	14 873	14 354	16 685
Romania	520	678	804	1 038	...
Russia	5 091	6 961	9 521	12 453	14 109
Serbia and Montenegro	1 049	819	1 040	1 250	1 251
Slovakia	500	382	433	711	382
Slovenia	4 417	3 382	3 639	3 990	4 706
Spain	49 177	60 767	60 728	63 627	65 691
Sweden	30 967	31 823	42 571	34 297	42 307
Switzerland	14 183	15 836	15 159	15 385	12 916
Turkey	8 576	8 443	12 809	7 026	10 937
United Kingdom	76 744	57 439	61 975	66 737	65 608
Algeria	2 169	2 029	2 801	...	...
Egypt	2 705	3 149	...	1 593	...
Ethiopia	73	144	409	95	313
Ghana	826	956	23 815	897	...
Kenya	3 565	4 998	3 267	...	4 844
Morocco	2 698	3 596	2 725	2 895	...
Nigeria	3 050	3 508	3 900	...	...
Senegal	265	449	1 023	1 115	1 201
South Africa	6 670	5 021	4 213	4 114	5 522
Tunisia	2 668	4 103	3 604	4 503	...
Canada	47 459	57 960	61 786	69 118	85 675
Costa Rica	2 593	1 800	2 146	1 975	2 344
El Salvador	793	643	569	791	961
Guatemala	575	549	666	962	1 179
Honduras	494	609	449	455	550
Jamaica	334	446	329	...	...
Mexico	114 554	118 834	110 244	163 909	97 013
Panama	913	908	1 376	948	1 550
Trinidad and Tobago	556	...	485	498	...
USA	157 564	194 812	255 761	167 936	211 746
Argentina	4 684	7 932	5 156	4 972	2 369
Brazil	10 591	10 763	10 096	8 065	4 599
Chile	6 732	12 816	11 336	9 431	8 148
Colombia	5 763	3 616	4 790	5 001	5 986
Ecuador	2 254	1 395	2 016	2 943	1 598
Peru	897	1 023	1 206	980	1 226
Venezuela	4 320	9 768	5 136	12 908	...
China	8 971	10 274	14 171	9 833	12 725
Dubai	3 273	3 443	...	...	...
Hong Kong	3 331	7 832	12 653	8 497	6 281
Indonesia	50 920	48 382	81 486	65 852	56 913
Japan	453 587	404 581	403 286	362 623	323 592
Jordan	2 278	2 210	1 877	2 339	2 176
Korea, Republic of					
Talc	143 386	78 119	94 013	71 609	79 132
Pyrophyllite	7 293	11 651	23 951	24 198	27 066

**Imports of Talc**

tonnes

Country	1998	1999	2000	2001	2002
Lebanon	1 488	1 520	1 334	1 549	...
Malaysia	50 479	...	46 150	...	...
Pakistan (a)	12 155	2 476	3 159	1 990	2 158
Philippines	18 937	23 746	26 902	23 985	...
Saudi Arabia	5 285	9 156	6 514	10 096	9 445
Singapore	12 057	14 079	14 713	14 056	17 374
Sri Lanka	2 195	2 323	2 362	2 367	2 511
Syria	12 378	4 171	4 307	3 030	2 963
Taiwan	133 462	136 148	138 474	102 316	111 996
Thailand	51 503	60 451	67 763	69 082	73 541
Australia	668	1 277	1 103	988	1 540
New Zealand	2 685	3 146	2 620	2 956	3 376

Note(s) :-

(a) Years ended 30 June of that stated

**Production of Tantalum and Niobium Minerals**

Country	1998	1999	2000	2001	2002
Burundi					
Columbite-tantalite	30	42	31	123	72
Ethiopia					
Tantalite (a)	80	50	66	47	55
Mozambique					
Tantalite	...	...	----	27	47
Nigeria					
Tantalite	*25	*25	*25	*25	*25
Columbite	9	...	...	...	...
Rwanda					
Columbite-tantalite	378	147	561	241	96
Uganda					
Columbite-tantalite	----	----	3	11	6
Zimbabwe					
Columbite-tantalite	6	3	4	23	26
Canada					
Pyrochlore	5 600	5 800	6 000	7 800	...
Tantalite	190	173	190	277	177
Brazil					
Pyrochlore	(b) 51 000	(b) 42 100	63 117	*70 000	*70 000
Columbite-tantalite	*3 100	*2 400	4 012	*4 200	*3 900
Djalmaite	14	23	84	...	...
China					
Columbite-tantalite	175	201	217	357	...
Malaysia					
Struverite	521	675	969	8 430	2 298
Australia					
Tantalite	1 150	1 300	1 800	2 700	4 200
World total concentrates	62 300	52 900	77 100	94 300	89 200
Nb content	*24 600	*20 700	*30 100	*33 700	*33 600
Ta content	*1 720	*1 540	*2 410	*3 620	*3 500

## Note(s):

- (1) Niobium and tantalum minerals are believed to be produced in Democratic Republic of the Congo, French Guiana, Ivory Coast, Russia and Zambia. Minor quantities are produced in Bolivia.
- (2) The figures in this table refer to gross tonnage of tantalum and niobium concentrates
- (3) Niobium and tantalum are also recovered from tin slags. This source is particularly important in the case of tantalum and in recent years is believed to have accounted for over 60% of all tantalum recovered
- (4) No detailed information on the production of tantalum bearing tin slags is available but the major producer is Thailand and small amounts from Australia, Brazil, Nigeria, Portugal, and D R Congo

(a) Years ended 7 July of that stated

(b) Data for Minas Gerais only

**Exports of Tantalum and Niobium**

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Tantalum	47	66	118	98	43
Czech Republic					
Tantalum	551	417	276	106	40
France					
Tantalum	5	31	59	32	207
Germany					
Niobium and tantalum ores	191	308	739	379	545
Tantalum	154	246	336	258	719
Italy					
Tantalum	1	2	14	3	50
Portugal					
Tantalum	----	19	33	24	...
Russia					
Tantalum	10	6	12	15	2
Turkey					
Tantalum	12	15	1	----	...
United Kingdom					
Tantalum	290	354	569	395	272
Ethiopia					
Tantalum (b)	80	50	66	47	55
Mozambique					
Tantalum concentrates	...	...	----	27	45
Rwanda					
Columbite and tantalite	239	...	...	...	...
Zimbabwe					
Tantalum	15	15	...	...	...
Canada					
Niobium and tantalum ores (a)	8	172	207	345	...
USA					
Tantalum ores and concentrates	391	403	328	530	551
Tantalum	486	553	572	647	460
Brazil					
Columbite-tantalite	217	75	148	437	220
China					
Tantalum	176	239	308	211	149
Japan					
Tantalum	242	302	385	348	277
Kazakhstan					
Tantalum	97	197	93	...	...
Korea, Republic of					
Tantalum	16	19	69	49	9
Malaysia					
Columbite and tantalite	160	499	202	...	...
Singapore					
Tantalum	251	49	411	111	74
Taiwan					
Tantalum	19	2	5	4	15
Thailand					
Tantalum ores and concentrates	...	341	450	----	----
Tantalum	46	85	156	81	265
Tin slags	816	290	...	----	----
Australia					
Tantalum	290	128	166	312	14

Note(s):

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

(a) May include vanadium ores

(b) Years ended 7 July of that stated

**Imports of Tantalum and Niobium**

Country	1998	1999	2000	2001	2002
Austria					
Tantalum	4	1	2	12	3
Czech Republic					
Tantalum	155	170	250	147	128
France					
Tantalum	27	15	16	20	42
Germany					
Tantalum	183	203	298	259	274
Irish Republic					
Tantalum	23	22	23	7	2
Netherlands					
Tantalum	...	41	72	63	15
Poland					
Tantalum	2	22	5	14	...
United Kingdom					
Tantalum	1 375	1 119	979	1 610	...
USA					
Tantalum concentrates	1 218	992	2 068	2 241	2 396
Niobium concentrates	70	95	151	126	22
Tantalum	829	945	1 108	1 281	551
Niobium	563	468	606	1 051	675
China					
Tantalum	203	257	356	219	58
Hong Kong					
Tantalum	8	61	95	12	11
India					
Niobium and tantalum ores (a)	143	133	2	----	----
Japan					
Niobium ores and concentrates	57	56	64	...	42
Tantalum	154	287	409	251	132
Korea, Republic of					
Tantalum	35	38	65	46	18
Taiwan					
Tantalum	2	6	50	6	152
Thailand					
Tantalum	13	23	29	23	27
Australia					
Tantalum	11	2	10	4	3

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

**Mine Production of Tin**

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Portugal	2 958	2 163	1 246	1 201	345
Russia	7 000	5 200	6 600	5 500	7 200
United Kingdom	448	-----	-----	-----	-----
Nigeria	1 900	*1 500	*2 000	1 300	900
Rwanda	440	359	400	169	197
Bolivia	11 308	12 417	12 503	12 039	13 210
Brazil	14 607	13 200	13 773	13 048	11 584
Peru (a)	25 907	30 618	37 410	38 182	38 815
China	70 100	80 100	99 400	93 000	61 800
Indonesia	53 959	47 754	49 400	56 250	79 770
Kazakhstan	*500	*500	*500	23	24
Laos	595	404	578	816	610
Malaysia	5 754	7 339	6 307	4 972	4 215
Myanmar	*90	*130	*180	*80	...
Thailand	1 460	2 450	1 700	1 720	970
Vietnam	*4 500	*4 500	*4 500	*4 500	*4 500
Australia	10 306	10 040	9 106	9 983	7 018
World Total	212 000	219 000	246 000	243 000	231 000

Note(s):

(a) Recoverable

**Smelter Production of Tin**

tonnes

Country	1998	1999	2000	2001	2002
Russia	4 100	4 000	5 200	5 069	5 115
Nigeria	*100	*100	*100	*600	*600
Mexico	1 083	1 262	1 204	1 789	1 756
Bolivia (a)	11 102	11 166	9 353	11 292	*12 000
Brazil	14 342	12 787	13 823	12 109	11 537
Peru	13 928	17 342	17 357	25 070	32 953
China	79 300	90 800	110 200	104 900	75 100
India	3 700	*3 600	*3 600	*3 600	*3 600
Indonesia	53 997	48 340	46 432	53 470	66 620
Malaysia	27 201	28 913	26 228	30 417	30 900
Thailand	15 353	17 306	17 076	22 387	17 500
Vietnam	2 320	1 693	1 803	1 700	2 200
Australia	684	586	733	1 022	791
World Total	227 000	238 000	253 000	273 000	261 000

Note(s):

(a) Refined, including alloys

## Exports of Tin

Country	1998	1999	2000	2001	2002
Austria					
Unwrought (a)	78	106	51	80	115
Scrap	241	294	167	206	363
Belgium-Luxembourg					
Unwrought	7 518	7 097	8 031	7 897	8 883
Unwrought alloys	309	206	433	338	138
Scrap	81	167	108	116	28
Czech Republic					
Unwrought (a)	15	109	20	38	20
Denmark					
Scrap	153	114	113	94	90
Estonia					
Scrap	172	336	592	54	18
Finland					
Unwrought alloys	90	63	17	91	33
Scrap	148	101	173	83	104
France					
Unwrought	233	283	282	350	354
Unwrought alloys	651	359	378	627	659
Scrap	3 165	2 274	1 612	1 484	618
Germany					
Unwrought	395	854	575	1 089	1 137
Unwrought alloys	1 065	826	1 108	1 178	1 077
Scrap	568	509	309	507	719
Irish Republic					
Scrap	154	78	207	304	109
Italy					
Unwrought (a)	543	200	248	268	497
Scrap	243	140	195	222	191
Netherlands					
Unwrought	7 466	6 818	2 976	1 845	4 138
Unwrought alloys	568	816	449	102	205
Scrap	1 308	563	483	511	643
Portugal					
Concentrates	6 257	4 155	2 332	2 395	537
Russia					
Concentrates	2 303	4 315	3 241	727	...
Unwrought (a)	2 103	792	1 747	1 736	1 786
Spain					
Unwrought (a)	1 544	257	669	218	738
Scrap	169	91	94	111	1 169
Sweden					
Unwrought (a)	361	282	390	329	313
Scrap	415	462	305	125	178
Switzerland					
Unwrought (a)	80	95	64	84	25
Scrap	127	136	97	105	60
United Kingdom					
Concentrates	1 292	173	121	59	26
Unwrought	3 396	88	146	426	337
Unwrought alloys	2 100	2 239	2 993	2 485	2 097
Scrap	1 356	3 631	1 322	2 256	2 503
Burundi					
Concentrates	-----	18 408	9 978	5 398	...
Nigeria					
Unwrought	*100	*100	*100	...	...
Rwanda					
Concentrates	219	...	...	553	...
South Africa					
Scrap	197	7 355	14 516	26 365	1 180
Canada					
Unwrought (a)	467	577	557	438	569
Scrap	2 946	1 340	929	2 849	174
USA					
Unwrought (a)	6 284	8 075	8 721	5 188	5 527
Scrap	9 504	8 544	5 977	3 356	5 951

## Exports of Tin

tonnes

Country	1998	1999	2000	2001	2002
Bolivia					
Concentrates	2 617	1 842	3 553	2 008	4 026
Unwrought	10 382	11 770	12 063	11 072	11 859
Brazil					
Unwrought (a)	6 988	6 469	7 544	6 417	6 027
Peru					
Concentrates	20 900	21 855	27 619	18 428	5 448
Unwrought	6 599	3 241	21 703	1 294	27 198
China					
Unwrought	45 489	54 159	62 418	45 803	32 181
Unwrought alloys	8 084	10 424	15 314	11 446	10 419
Dubai					
Unwrought	100	346	...	...	...
Hong Kong					
Concentrates	132	----	250	5	36
Unwrought (a)	11 730	6 520	8 297	6 782	4 238
Scrap	270	15	21	2	1
India					
Unwrought (a) (b)	483	423	94	376	71
Indonesia					
Unwrought (a)	52 100	46 435	44 427	43 449	55 736
Scrap	198	791	911	395	643
Japan					
Unwrought (a)	289	310	341	267	396
Scrap	760	697	975	568	601
Korea, Republic of					
Unwrought (a)	3 730	276	276	292	310
Scrap	37	50	173	223	162
Laos					
Concentrates (c)	551	332	584	490	...
Malaysia					
Unwrought (a)	27 093	27 280	24 042	...	...
Scrap	704	652	128	...	...
Philippines					
Unwrought	227	81	...	179	...
Singapore					
Concentrates	2 057	5 909	3 706	16 427	3 834
Unwrought	40 655	43 768	37 145	41 168	46 180
Scrap	261	351	319	303	513
Taiwan					
Unwrought (a)	386	364	606	693	733
Scrap	1 529	2 314	2 868	1 023	420
Thailand					
Unwrought (a)	11 163	12 267	13 036	18 945	12 758
Scrap	148	169	51	168	76
Vietnam					
Unwrought	2 320	1 693	1 803	1 700	...
Australia					
Concentrates	15 590	16 651	14 254	15 179	11 537
Unwrought (a)	542	508	277	98	13
Scrap	1 492	681	1 510	3 650	2 415

## Note(s):

(1) In this table the term 'unwrought' tin corresponds to item 8001 of the Harmonised System and comprises ingots, pigs, unwrought bars, sticks, etc.

(a) Including alloys

(b) Years ended 31 March following that stated

(c) Sn content



## Imports of Tin

Country	1998	1999	2000	2001	2002
Austria					
Unwrought (a)	641	820	875	838	906
Scrap	86	114	136	186	208
Belarus					
Unwrought (a)	101	168	150	120	128
Belgium-Luxembourg					
Unwrought	1 579	1 063	983	1 050	1 223
Unwrought alloys	1 062	1 227	2 128	2 208	2 464
Scrap	3 953	3 006	4 186	3 312	4 756
Croatia					
Unwrought (a)	74	73	74	114	89
Czech Republic					
Unwrought (a)	436	483	556	592	531
Estonia					
Unwrought	...	...	83	301	...
Finland					
Unwrought (a)	377	111	127	199	149
France					
Concentrates	1 008	203	37	65	0
Unwrought	8 505	7 596	7 722	8 637	9 044
Unwrought alloys	905	686	614	409	169
Scrap	1 957	1 163	1 236	1 555	541
Germany					
Unwrought	21 195	18 620	21 519	23 984	20 524
Unwrought alloys	768	473	528	847	744
Scrap	416	572	758	681	400
Greece					
Unwrought (a)	296	153	307	503	382
Hungary					
Unwrought (a)	314	443	562	292	219
Irish Republic					
Unwrought (a)	288	869	435	655	271
Italy					
Unwrought	6 335	5 726	6 068	6 171	6 507
Unwrought alloys	437	313	185	204	190
Netherlands					
Unwrought	13 345	10 042	5 603	4 346	7 008
Unwrought alloys	1 116	1 094	888	1 007	1 162
Scrap	793	508	1 008	609	388
Norway					
Unwrought	402	387	457	560	458
Unwrought alloys	104	130	96	111	176
Poland					
Unwrought (a)	1 090	957	1 194	1 010	1 344
Portugal					
Unwrought	940	834	1 505	780	1 223
Unwrought alloys	411	92	246	210	29
Romania					
Unwrought (a)	412	204	191	333	245
Russia					
Concentrates	310	390	1 236	797	753
Unwrought (a)	410	1 538	2 833	2 166	1 227
Scrap	...	102	491	0	...
Serbia and Montenegro					
Unwrought (a)	123	28	106	131	159
Slovakia					
Unwrought	746	836	651	624	800
Spain					
Concentrates	2	358	436	399	225
Unwrought	4 109	3 458	4 875	6 313	6 967
Unwrought alloys	497	435	600	175	58
Scrap	42	47	2 242	2 830	4 842
Sweden					
Unwrought	663	634	807	608	596
Unwrought alloys	308	271	358	364	400
Scrap	164	95	62	130	57
Switzerland					
Unwrought (a)	864	814	824	1 017	893

## Imports of Tin

tonnes

Country	1998	1999	2000	2001	2002
Turkey					
Unwrought (a)	1 335	1 267	1 864	1 275	1 801
Ukraine					
Unwrought	48	33	408	...	...
United Kingdom					
Unwrought	10 753	9 120	9 190	6 857	7 204
Unwrought alloys	1 220	952	1 760	2 442	1 527
Scrap	477	393	388	179	198
Egypt					
Unwrought	380	232	*240	...	...
Ethiopia					
Unwrought	1 400	...	...	...	5
Morocco					
Unwrought (a)	113	76	92	57	...
South Africa					
Unwrought (a)	1 823	2 316	2 327	2 310	4 168
Zimbabwe					
Unwrought	*110	111	...	...	...
Canada					
Unwrought	4 223	7 663	5 397	3 650	3 662
Scrap	451	576	431	418	456
Mexico					
Concentrates	1 541	1 798	1 658	907	2 416
Unwrought	2 772	2 647	3 035	2 545	2 497
Scrap	55	227	137	50	20
USA					
Unwrought	44 105	48 012	44 937	43 253	39 481
Unwrought alloys	1 319	3 090	4 372	3 828	3 533
Scrap	4 187	2 736	2 341	3 698	561
Argentina					
Unwrought	1 159	1 100	979	854	819
Bolivia					
Concentrates	----	26	----	----	599
Chile					
Unwrought	552	439	690	709	...
Colombia					
Unwrought (a)	336	234	231	407	328
Peru					
Unwrought (a)	147	88	5	...	0
Venezuela					
Unwrought (a)	738	323	263	396	...
China					
Concentrates	692	871	2 077	3 475	3 155
Unwrought	1 040	1 291	1 629	2 812	3 627
Unwrought alloys	1 948	2 498	3 306	3 674	4 405
Scrap	...	...	...	229	547
Dubai					
Concentrates	40	----	...	...	...
Unwrought	938	505	...	...	...
Scrap	...	682	...	...	...
Hong Kong					
Concentrates	82	----	----	23	14
Unwrought	8 991	4 765	4 872	3 422	4 132
Unwrought alloys	6 240	5 308	6 104	4 372	3 073
Scrap	226	144	35	18	8
India					
Concentrates (b)	144	----	8	0	6
Unwrought (a) (b)	3 655	3 366	3 276	3 931	3 173
Scrap (b)	76	----	182	639	108
Iran					
Unwrought (c)	231	574	726	...	*1 100
Israel					
Unwrought (a)	*320	*230	130	...	...

## Imports of Tin

Country	1998	1999	2000	2001	2002
Japan					
Unwrought	23 624	25 993	28 131	21 498	24 938
Unwrought alloys	2 480	2 901	4 355	2 662	1 581
Scrap	143	89	196	36	88
Kazakhstan					
Unwrought	912	1 082	1 674	1 805	1 523
Korea, Republic of					
Unwrought	11 771	12 125	14 936	13 043	17 029
Unwrought alloys	257	390	777	395	683
Malaysia					
Concentrates (d)	21 961	20 110	19 052	31 074	23 327
Unwrought	2 608	2 618	2 263	1 649	...
Unwrought alloys	6 627	3 699	4 196	...	...
Pakistan					
Scrap	341	173	99	...	...
Philippines					
Unwrought (a)	557	1 388	538	100	...
Saudi Arabia					
Unwrought	51	207	190	82	212
Singapore					
Concentrates	289	578	1 278	618	9
Unwrought	1 879	5 007	6 775	12 828	20 137
Scrap	589	540	128	428	381
Taiwan					
Unwrought	9 088	11 052	11 255	9 397	10 240
Unwrought alloys	3 026	2 489	2 766	1 966	2 082
Scrap	551	229	309	125	148
Thailand					
Concentrates	26 451	30 675	31 059	40 147	26 578
Unwrought (a)	69	195	439	199	544
Australia					
Unwrought (a)	2 750	2 544	1 849	2 017	991
New Zealand					
Unwrought (a)	99	107	72	99	128

## Note(s) :-

(1) In this table the term 'unwrought' tin corresponds to item 8001 of the Harmonised System and comprises ingots, pigs, unwrought bars, sticks, etc.

(a) Including alloys

(b) Years ended 31 March following that stated

(c) Years ended 20 March following that stated

(d) Sn content

**Production of Titanium Minerals**

tonnes

Country	1998	1999	2000	2001	2002
Norway					
Ilmenite	589 534	579 623	690 900	777 000	837 000
Ukraine					
Ilmenite	507 435	536 542	576 749	...	...
Rutile	...	110 951	132 517	...	...
Egypt					
Ilmenite	57 500	...	66 000	66 000	69 000
South Africa					
Ilmenite (b)	*1 836 000	*1 870 000	*1 853 000	*1 751 000	*1 649 000
Rutile	*115 000	*123 000	*123 000	*122 000	*140 000
Canada					
Ilmenite (a) (b)	*2 700 000	*2 500 000	*2 400 000	*2 700 000	*2 400 000
USA	*800 000	*600 000	*600 000	*600 000	*600 000
Brazil					
Ilmenite	115 444	234 209	284 983	...	...
Rutile	2 323	3 388	3 139	1 791	2 645
China					
Ilmenite	58 200	57 708	116 200	120 843	...
India					
Ilmenite (c)	377 907	387 756	429 707	433 658	*500 000
Rutile (c)	16 039	17 471	18 974	17 402	...
Korea, Republic of					
Ilmenite	241 865	203 413	168 664	161 988	142 726
Malaysia					
Ilmenite	124 689	127 695	124 801	129 750	106 198
Rutile	...	...	...	...	7 059
Sri Lanka					
Ilmenite	37 148	----	----	----	----
Rutile	1 930	----	----	----	----
Vietnam					
Ilmenite	130 000	*120 000	*130 000	*170 000	*170 000
Australia					
Ilmenite	2 413 000	1 936 000	2 146 000	2 027 000	1 912 000
Rutile	244 000	179 000	207 000	203 000	218 000
Leucoxene	32 000	33 000	37 000	30 000	38 000
World Total					
Ilmenite (wt of concs)	10 000 000	9 200 000	9 600 000	9 800 000	9 400 000
Rutile (wt of concs)	490 000	434 000	485 000	477 000	518 000
All forms (TiO <sub>2</sub> content)	*5 100 000	*4 700 000	*4 900 000	*5 000 000	*4 900 000

## 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 2002 South Africa produced an estimated 970000 tonnes (85% TiO<sub>2</sub>) and Canada produced 869000 tonnes (80-95% TiO<sub>2</sub>)

(c) Years ended 31 March following that stated

## Exports of Titanium

Country	1998	1999	2000	2001	2002
Austria					
Metal	121	194	204	298	300
Oxides	2 195	2 904	2 487	2 876	3 000
Belarus					
Oxides	3 332	1 458	46	7	66
Belgium-Luxembourg					
Metal	870	885	986	1 348	1 296
Oxides	259 406	265 178	312 795	286 659	314 469
Czech Republic					
Oxides	23 423	26 505	29 376	26 626	34 258
Denmark					
Oxides	695	648	569	1 128	1 000
Estonia					
Metal	39	75	83	145	316
Finland					
Metal	87	164	311	109	26
Oxides (b)	*63 800	*84 400	*83 900	*128 700	*127 000
France					
Metal	4 510	4 341	5 081	5 636	4 180
Oxides	184 689	171 636	198 541	180 271	199 744
Georgia					
Metal	205	539	151	75	4
Germany					
Titanium minerals	11 251	670	164	475	541
Metal	3 570	5 007	6 578	6 257	6 581
Oxides	267 996	287 789	299 268	290 191	323 059
Greece					
Oxides	820	1 159	1 281	1 380	1 412
Italy					
Metal	4 595	4 090	4 676	5 102	3 727
Oxides	39 792	34 989	26 858	24 393	28 434
Latvia					
Metal	75	11	28	180	16
Netherlands					
Titanium minerals	2 209	3 669	1 806	1 935	1 093
Metal	1 309	1 809	1 482	1 532	2 344
Oxides	71 717	(b) *54 900	(b) *73 000	(b) *68 100	80 663
Norway					
Titanium minerals	447 000	375 000	455 450	429 000	443 833
Metal	130	135	176	117	103
Oxides (b)	*27 100	*21 800	*25 900	*28 300	*27 100
Poland					
Oxides	47 600	21 406	21 280	24 215	30 457
Russia					
Metal	27 854	14 518	15 031	19 805	15 919
Slovenia					
Oxides	31 848	35 928	42 369	32 782	38 484
Spain					
Metal	350	327	308	434	376
Oxides	51 446	66 156	74 071	79 643	73 320
Sweden					
Metal	1 392	1 182	1 295	1 494	1 256
Oxides	7 150	7 983	8 401	13 653	11 058
Switzerland					
Metal	311	305	332	465	400
Oxides	443	385	1 723	525	666
Turkey					
Metal	788	295	245	92	2
Ukraine					
Titanium minerals	231 419	279 580	340 389	(b) *388 100	(b) *286 200
Metal	1 785	5 093	6 822	(b) *5 400	(b) *6 500
Oxides	39 543	57 896	75 996	(b) *67 800	(b) *62 400
United Kingdom					
Metal	11 443	9 328	14 152	13 597	11 286
Oxides	165 635	190 440	209 583	207 483	239 229

## Exports of Titanium

tonnes

Country	1998	1999	2000	2001	2002
Sierra Leone					
Ilmenite	----	2 614	----	...	...
Rutile	----	4 757	----	...	...
South Africa					
Titanium minerals (b)	*322 800	*224 200	*299 800	*330 700	*340 200
Titanium slag (b)	*549 900	*523 000	*470 000	...	...
Oxides (b)	*15 200	*11 100	*12 400	*15 400	*16 100
Canada					
Titanium minerals and slag	*1 000 000	*900 000	*1 000 000	*1 000 000	*900 000
Metal	930	1 038	1 015	1 433	1 165
Oxides	88 167	85 949	73 380	65 402	70 135
Mexico					
Oxides	3 600	2 800	40 306	99 069	...
USA					
Titanium minerals	60 374	13 127	19 945	8 399	4 591
Metal	17 449	17 275	18 176	21 235	17 971
Oxides	400 614	385 709	463 472	417 065	548 317
Brazil					
Oxides	13 320	8 095	8 332	7 128	10 899
China					
Titanium minerals	1 828	12 144	31 028	16 193	19 959
Metal	1 721	1 399	1 045	1 317	1 169
Oxides	34 572	44 772	62 072	65 507	85 817
Hong Kong					
Oxides	23 703	23 430	26 632	24 749	28 723
India					
Ilmenite (a)	64 955	55 168	50 171	36 195	101 083
Other titanium minerals (a)	6 744	13 390	8 581	9 060	6 469
Oxides (a)	4 173	1 154	1 246	3 348	9 107
Israel					
Metal (b)	*200	*300	*400	*400	*300
Japan					
Metal	19 418	16 802	16 856	24 057	18 436
Oxides	97 371	108 388	92 410	82 344	103 343
Kazakhstan					
Metal	17 571	8 817	8 136	14 145	14 935
Korea, Republic of					
Titanium minerals	24 320	18 430	59 970	53 246	36 338
Metal	33	80	187	160	592
Oxides	20 885	21 510	29 096	29 964	31 501
Kyrgyzstan					
Metal	45	----	...	...	...
Malaysia					
Ilmenite	67 260	103 630	102 473	155 606	...
Oxides	50 500	48 300	47 520	...	...
Saudi Arabia					
Titanium minerals	2 493	3 548	2 087	4 040	3 060
Oxides	25 118	11 478	57 486	54 404	86 320
Singapore					
Metal	84	143	535	420	152
Oxides	39 268	43 071	38 291	38 571	55 886
Sri Lanka					
Ilmenite	20	...	...	...	...
Rutile	80	(c) 160	...	(c) 3 373	(c) 898
Taiwan					
Metal	767	1 106	831	1 261	1 888
Oxides	72 876	81 366	92 894	96 893	98 560
Thailand					
Ilmenite	----	6 708	5 520	145	23
Vietnam					
Titanium minerals	99 000	*110 000	*120 000	*137 000	...

**Exports of Titanium**

Country	1998	1999	2000	2001	2002
Australia					
Ilmenite	1 285 873	1 051 000	1 147 000	912 000	969 000
Rutile	217 863	171 000	*189 000	*189 000	*224 000
Leucoxene	21 094	31 000	54 000	49 000	54 000
Oxides	133 619	142 585	139 780	132 104	155 517

## 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 Harmonised System items 2823 and 3206.10
  - (3) 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) Including ilmenite

## Imports of Titanium

tonnes

Country	1998	1999	2000	2001	2002
Austria					
Metal	608	454	683	1 594	1 062
Oxides	18 986	16 942	18 838	19 343	19 478
Belarus					
Oxides	9 231	5 271	4 887	4 880	5 068
Belgium-Luxembourg					
Ilmenite	413	635	18 612	71	9 889
Other titanium minerals	82 705	83 099	115 497	56 785	132 921
Titanium slag	36 414	43 252	29 418	44 909	41 594
Metal	1 363	1 666	1 341	1 791	1 516
Oxides	179 944	170 623	224 621	224 507	271 627
Bulgaria					
Titanium minerals	942	671	690	...	...
Croatia					
Oxides	2 269	2 453	1 922	2 142	2 081
Cyprus					
Oxides	963	867	881	859	1 032
Czech Republic					
Titanium minerals	61 093	67 855	75 502	78 515	60 976
Metal	136	453	189	111	372
Oxides	3 002	3 191	3 970	4 394	4 307
Denmark					
Metal	785	323	823	891	737
Oxides	16 203	18 273	20 517	20 799	23 967
Estonia					
Metal	77	87	47	57	302
Oxides	1 412	888	1 085	1 273	1 090
Finland					
Titanium minerals	*108 500	*95 000	*140 000	...	...
Metal	165	82	250	112	84
Oxides	9 082	9 617	8 808	9 007	10 335
France					
Ilmenite	81 127	53 667	182 583	112 466	151 799
Other titanium minerals	141 575	92 682	17 288	41 040	12 291
Titanium slag	...	116 357	48 117	256 420	123 144
Metal	7 472	6 638	7 757	8 459	6 461
Oxides	124 028	127 084	143 436	127 843	138 316
Germany					
Ilmenite	345 057	315 818	387 707	272 849	307 791
Other titanium minerals	277 325	275 515	170 381	132 952	131 844
Titanium slag	...	134 790	130 353	137 542	...
Metal	8 560	9 430	9 595	9 774	10 532
Oxides	182 501	169 879	196 901	189 674	192 414
Greece					
Titanium minerals	774	689	742	529	816
Oxides	22 639	20 946	20 719	18 389	17 646
Hungary					
Metal	234	181	345	49	215
Oxides	6 200	6 800	7 605	6 976	7 941
Irish Republic					
Oxides	3 411	3 947	4 101	3 931	5 070
Italy					
Titanium minerals	5 145	3 973	85 910	112 828	99 830
Titanium slag	...	69 236	16 764	...	...
Metal	6 254	5 794	5 904	6 126	5 052
Oxides	141 229	141 100	163 705	149 841	157 476
Latvia					
Oxides	1 128	766	873	998	1 132
Netherlands					
Ilmenite	6 085	31 567	55 587	33 524	40 286
Other titanium minerals	28 515	28 239	42 479	70 438	64 024
Titanium slag	...	17 509	9 877	9 848	...
Metal	2 397	3 505	4 101	3 099	2 806
Oxides	73 719	59 198	52 786	47 008	44 525
Norway					
Metal	1 139	670	407	623	386
Oxides	8 948	8 807	8 626	9 617	7 931



## Imports of Titanium

Country	1998	1999	2000	2001	2002
Poland					
Titanium minerals	87 200	74 439	87 393	95 674	73 655
Metal	...	182	186	182	163
Oxides	15 700	21 414	26 324	24 027	30 029
Portugal					
Oxides	18 995	18 018	17 227	17 341	20 230
Romania					
Titanium minerals	3 281	1 517	3 017	2 544	1 993
Oxides	3 633	3 684	3 992	4 621	4 742
Russia					
Titanium minerals	93 599	63 408	75 478	103 986	71 466
Metal	2 615	1 449	665	1 495	1 120
Oxides	28 319	43 036	51 958	54 029	56 890
Serbia and Montenegro					
Oxides	2 100	1 387	792	2 580	2 341
Slovakia					
Metal	...	164	335	142	103
Oxides	2 500	1 606	2 047	530	429
Slovenia					
Titanium minerals	11 565	11 533	12 462	18 676	7 805
Oxides	1 976	2 107	2 444	2 282	2 936
Spain					
Ilmenite	122 165	129 460	170 723	130 991	153 688
Other titanium minerals	2 181	1 958	2 020	1 844	2 315
Metal	1 957	2 301	1 498	3 407	3 241
Oxides	79 856	73 963	87 837	99 887	107 418
Sweden					
Titanium minerals	700	548	225	610	439
Metal	585	1 540	1 604	1 929	2 000
Oxides	35 384	39 550	40 747	45 034	43 260
Switzerland					
Metal	521	391	503	641	621
Oxides	19 737	19 090	21 423	17 678	18 265
Turkey					
Titanium minerals	5 824	5 464	6 077	2 953	5 876
Oxides	53 710	51 135	59 446	38 734	61 927
United Kingdom					
Ilmenite	100 765	95 473	134 861	112 447	106 177
Other titanium minerals	181 420	84 841	70 348	110 526	82 302
Titanium slag	119 386	120 890	160 738	110 697	157 020
Metal	30 712	26 883	27 331	30 752	25 900
Oxides	102 697	74 434	80 087	82 852	96 498
Algeria					
Oxides	8 636	7 588	8 376	...	...
Cameroon					
Oxides	758	593	699	709	...
Egypt					
Titanium minerals	1 324	1 775	...	1 477	...
Oxides	14 856	12 487	...	936	...
Ethiopia					
Oxides	853	596	367	812	762
Kenya					
Oxides	1 978	2 001	1 883	...	2 239
Mauritius					
Oxides	821	811	907	851	924
Morocco					
Oxides	8 110	7 767	8 400	8 180	...
Nigeria					
Oxides	4 056	23 806	5 174	...	...
South Africa					
Metal	133	172	307	567	498
Oxides	9 803	8 209	9 962	11 796	13 754
Sudan					
Oxides	6 650	...	...	942	1 265
Tunisia					
Oxides	4 344	5 554	5 248	5 532	...

## Imports of Titanium

tonnes

Country	1998	1999	2000	2001	2002
Canada					
Titanium minerals	4 737	4 923	6 542	8 858	15 883
Metal	1 908	1 371	3 480	1 618	1 098
Oxides	117 814	111 959	98 625	89 187	99 232
Mexico					
Ilmenite	174 418	167 767	235 941	94 091	150 052
Rutile sand	1 088	743	295	85	651
Titanium slag	20 001	...	8 395	...	30 001
Metal	250	287	777	1 309	...
Oxides	55 984	39 808	46 812	47 485	...
USA					
Ilmenite	402 961	402 129	473 766	523 000	432 000
Rutile (c)	386 983	343 840	438 143	324 000	390 000
Titanium slag	626 258	677 723	532 744	594 000	445 000
Metal	27 772	17 843	19 321	31 521	22 203
Oxides	199 913	224 810	218 128	208 761	231 450
Argentina					
Titanium minerals	2 321	1 804	1 543	1 323	1 106
Oxides	31 625	30 564	31 389	26 022	21 265
Brazil					
Titanium minerals	1 062	220	1 508	...	2 886
Oxides	70 433	74 482	70 754	73 652	68 593
Chile					
Oxides	10 154	8 448	10 888	11 522	10 503
Colombia					
Oxides	13 812	13 284	16 449	14 639	16 043
Uruguay					
Oxides	2 771	2 763	2 977	2 963	1 835
Venezuela					
Oxides	11 293	11 786	15 026	13 859	...
China					
Titanium minerals	20 520	15 540	39 647	59 210	47 238
Metal	3 201	2 269	2 297	5 148	5 206
Oxides	89 782	120 037	157 013	177 065	216 157
Dubai					
Metal	241	371	...	...	...
Oxides	12 647	10 498	...	...	...
Hong Kong					
Metal	268	129	193	271	462
Oxides	34 287	33 388	34 619	28 003	34 903
India					
Titanium minerals (d)	35	0	138	42	103
Metal (d)	94	129	299	419	229
Oxides (d)	21 083	29 871	22 976	32 136	49 474
Indonesia					
Titanium minerals	2 575	1 637	2 777	3 095	3 235
Metal	138	120	195	358	188
Oxides	23 106	11 147	43 831	38 354	40 395
Iran					
Titanium minerals	5 024	3 680	2 045	7 193	7 324
Oxides	14 130	16 719	14 487	21 569	28 448
Israel					
Oxides	10 424	12 125	...	...	...
Japan					
Titanium minerals	468 445	461 267	416 718	485 829	385 221
Metal	11 694	4 096	7 527	10 332	11 074
Oxides	82 817	79 034	80 164	75 485	67 304
Jordan					
Oxides	3 776	4 615	3 588	4 365	5 479
Kazakhstan					
Titanium minerals	34 341	23 104	15 366	25 949	44 151
Korea, Republic of					
Rutile sand	9 383	10 081	...	...	...
Titanium minerals	149 357	133 383	129 144	107 059	110 313
Metal	2 712	3 838	4 042	3 834	4 290
Oxides	65 826	94 641	100 290	104 683	119 443

## Imports of Titanium

Country	1998	1999	2000	2001	2002
Lebanon					
Oxides	3 124	3 274	2 947	3 423	...
Malaysia					
Titanium minerals	72 872	106 328	111 429	...	...
Oxides	16 200	11 531	22 064	...	...
Oman					
Oxides	1 063	960	1 332	961	1 229
Pakistan					
Oxides (a)	9 611	916	2 140	2 919	3 065
Philippines					
Titanium minerals	920	1 346	1 921	1 338	...
Oxides	19 222	27 123	28 950	25 875	...
Saudi Arabia					
Titanium minerals	50 157	85 253	30 090	275 129	131 345
Oxides	2 814	5 372	6 148	5 756	27 358
Singapore					
Titanium minerals	32 307	49 842	44 723	45 838	36 286
Metal	143	503	74	146	86
Oxides	18 774	23 969	22 952	29 506	36 858
Sri Lanka					
Oxides	2 451	1 490	2 025	2 422	2 891
Syria					
Oxides	4 170	659	1 021	3 842	6 547
Taiwan					
Titanium minerals	103 828	99 337	114 089	113 526	142 131
Metal	2 419	2 375	3 127	4 649	4 866
Oxides	60 625	67 275	66 338	59 617	68 109
Thailand					
Rutile	(b) 4 787	3 289	2 703	7 885	2 261
Other titanium minerals	...	1 900	4 579	5 384	5 340
Metal	56	109	109	129	190
Oxides	26 244	33 610	42 512	41 569	54 496
Australia					
Titanium minerals	15 620	22	85	37	25 034
Metal	555	597	474	563	586
Oxides	1 082	12 104	17 733	17 894	14 177
New Zealand					
Oxides	7 699	9 849	8 457	8 638	8 729

## 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 Harmonised System items 2823 and 3206.10
- (3) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

- (a) Years ended 30 June of that stated
- (b) Including ilmenite
- (c) Including synthetic rutile
- (d) Years ended 31 March following that stated

**Mine Production of Tungsten**

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Austria	1 077	1 218	1 237	1 384	1 332
Portugal (c)	821	435	743	700	550
Russia (c)	*3 000	*3 000	*3 000	*3 000	*3 000
Rwanda	30	54	144	142	153
Uganda	8	0	----	17	16
Canada	----	----	----	----	2 550
Mexico	130	10	----	----	----
Bolivia	497	334	393	532	376
Brazil (a)	...	13	18	22	24
Peru	60	----	----	----	----
China	23 845	20 200	23 453	27 473	33 500
Korea, Dem. P.R. of	*800	*700	*700	*700	*700
Kyrgyzstan	*100	*100	*100	*100	*100
Malaysia	...	...	----	268	----
Mongolia	46	27	52	63	35
Myanmar (b)	178	87	74	71	*70
Thailand (c)	31	28	28	47	----
Uzbekistan	*200	*200	192	260	...
Vietnam	----	----	----	----	...
<b>World Total</b>	<b>30 800</b>	<b>26 400</b>	<b>30 100</b>	<b>34 800</b>	<b>42 700</b>

Note(s):

- (a) Mainly scheelite
- (b) Including tungsten content of tin-wolframite concentrates
- (c) Wolframite and scheelite

## Exports of Tungsten

Country	1998	1999	2000	2001	2002
Albania					
Ore	...	1 009	171	...	...
Austria					
Metal	830	1 399	1 062	967	813
Belgium-Luxembourg					
Metal	157	213	255	448	259
Carbide	128	28	31	26	21
Czech Republic					
Ore	106	128	61	...	0
Metal	174	133	372	413	251
Denmark					
Metal	41	9	29	10	37
Estonia					
Ore	711	278	224	71	2
Metal	...	309	287	307	4
Finland					
Metal	26	12	11	28	49
France					
Metal	449	420	2 755	911	624
Carbide	...	357	394	366	348
Germany					
Metal	1 426	1 469	1 942	2 418	1 735
Irish Republic					
Metal	59	83	194	96	38
Italy					
Metal	446	196	171	245	129
Netherlands					
Ore	388	97	10	55	16
Metal	417	237	182	380	469
Poland					
Ores and concentrates	342	461	----	----	28
Metal	33	10	147	113	1
Portugal					
Ore	1 269	601	715	914	588
Metal	59	86	546	415	693
Russia					
Ore	5 446	4 639	4 906	3 064	3 176
Metal (c)	*770	*1 350	*930	*520	*60
Spain					
Metal	71	68	185	56	109
Sweden					
Metal	53	50	14	32	364
Carbide	...	227	444	561	385
Switzerland					
Metal	171	206	154	121	185
United Kingdom					
Metal	2 300	1 335	4 647	1 874	1 681
Carbide	291	481	8	20	5
South Africa					
Metal	229	241	291	334	298
Uganda					
Ore	51	35	25	75	60
Mexico					
Ores and concentrates	198	39	0	2	----
USA					
Metal	2 693	2 639	2 337	2 774	2 390
Ammonium paratungstate (a)	287	103	53	257	69
Carbide	1 210	701	983	1 971	1 270
Bolivia					
Ore	882	589	692	937	703
Peru					
Ores and concentrates	56	109	90	46	89

## Exports of Tungsten

tonnes

Country	1998	1999	2000	2001	2002
China					
Ores and concentrates	190	80	0	----	13
Metal	1 561	1 946	2 738	4 379	2 398
Ammonium paratungstate	12 675	10 507	9 276	...	6 078
Hong Kong					
Ore	245	104	63	404	41
Metal	36	165	5	70	176
India					
Metal (b)	83	172	23	126	133
Israel					
Metal (c)	*480	*390	*470	*560	*260
Japan					
Metal	1 586	1 362	1 538	2 021	1 826
Korea, Republic of					
Metal	700	607	895	903	624
Carbide	1 158	...	1 133	...	...
Myanmar					
Ores and concentrates	85	----	----	...	...
Singapore					
Ore	297	242	175	217	38
Metal	177	267	258	470	288
Taiwan					
Ore	...	...	...	481	42
Metal	319	143	95	139	533
Thailand					
Ore	65	107	40	129	55
Australia					
Ores and concentrates	20	20	22	20	...
Metal	34	2	2	40	34

## 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) BGS estimates, based on known imports into certain countries

## Imports of Tungsten

Country	1998	1999	2000	2001	2002
Austria					
Ore	1 500	1 000	1 000	...	...
Metal	459	380	358	399	235
Carbide	...	278	449	703	399
Belgium-Luxembourg					
Metal	378	284	384	405	279
Carbide	122	39	36	39	70
Czech Republic					
Metal	89	52	184	136	65
Denmark					
Metal	5	41	109	5	15
Estonia					
Ore	198	296	132	68	----
Metal	58	327	277	408	2
Finland					
Metal	76	61	100	119	113
France					
Metal	685	877	744	889	422
Carbide	...	462	534	628	604
Germany					
Ore	479	805	77	378	129
Metal	3 131	3 792	4 392	4 914	3 024
Carbide	1 091	874	1 182	1 664	1 103
Irish Republic					
Metal	335	235	79	45	152
Italy					
Metal	278	363	292	301	236
Carbide	...	313	360	363	324
Netherlands					
Ore	405	215	397	144	195
Metal	270	169	247	584	80
Carbide	...	218	74	77	44
Poland					
Ores and concentrates	97	137	1	----	3
Metal	28	28	178	276	68
Portugal					
Carbide	...	96	75	82	79
Russia					
Ore	...	...	229	740	142
Metal	158	116	87	293	201
Spain					
Metal	52	51	556	68	83
Sweden					
Metal	338	461	356	990	136
Carbide	...	933	1 036	1 239	688
Switzerland					
Metal	112	122	113	220	152
United Kingdom					
Metal	2 055	1 819	2 176	2 538	2 057
Carbide	2 293	752	829	1 381	742
Nigeria					
Metal	2	35	5	...	...
South Africa					
Metal	155	127	159	66	115
Canada					
Metal	201	150	215	186	188
USA					
Ore	8 606	4 696	3 632	4 295	6 274
Metal	2 485	2 128	2 002	2 432	2 067
Ammonium paratungstate (a)	1 920	1 920	2 270	2 720	2 400
Carbide	999	863	1 064	1 002	960

**Imports of Tungsten**

tonnes

Country	1998	1999	2000	2001	2002
China					
Ore	1 474	1 950	563	791	1 853
Metal	127	312	404	411	598
Hong Kong					
Ore	1	1	62	269	41
Metal	109	349	67	142	141
India					
Ore (b)	210	130	44	145	241
Metal (b)	387	161	315	693	518
Indonesia					
Metal	128	83	128	100	47
Japan					
Ore	1 881	1 794	1 514	951	887
Metal	750	629	1 578	1 418	1 057
Korea, Republic of					
Metal	170	176	266	275	243
Kyrgyzstan					
Metal	12	14	25	22	18
Malaysia					
Metal	273	...	260	...	...
Singapore					
Ore	66	17	29	211	3
Metal	147	168	229	349	194
Taiwan					
Metal	264	374	340	519	691
Thailand					
Metal	38	140	234	80	97
Australia					
Metal	96	68	115	97	97

## 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



**Mine Production of Vanadium**

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Hungary	*100	----	----	----	----
Russia	*7 000	*7 000	*7 000	*8 000	*8 000
South Africa	18 868	17 612	18 021	18 184	*18 000
USA	*2 400	...	----	----	----
China	*15 500	*26 000	*30 000	*30 000	*30 000
Kazakhstan	*1 000	*1 000	*1 000	*1 000	*1 000
Australia	...	----	1 510	2 494	3 146
<b>World Total</b>	<b>44 900</b>	<b>51 600</b>	<b>57 500</b>	<b>59 700</b>	<b>60 100</b>

## 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**

tonnes

Country	1998	1999	2000	2001	2002
Belgium-Luxembourg					
Vanadiferous residues	6 803	6 395	5 281	4 408	3 414
Pentoxide	28	8	49	26	46
Denmark					
Vanadium-titanium pig iron	67	108	125	134	193
France					
Pentoxide	86	322	13	10	8
Metal	2	22	16	0	0
Germany					
Vanadiferous residues	189	282	358	630	...
Pentoxide	163	183	91	83	81
Metal	581	133	336	359	351
Italy					
Vanadiferous residues	1 735	1 748	3 502	...	...
Ores and concentrates	...	...	774	3 964	2 401
Netherlands					
Vanadiferous residues	...	687	291	207	...
Pentoxide	258	214	222	253	87
Metal	...	...	339	179	71
Russia					
Pentoxide	2 430	7 638	8 431	7 276	7 384
Metal	51	35	52	37	37
South Africa					
Pentoxide (a)	17 531	15 871	15 865	17 262	19 954
Mexico					
Vanadiferous residues	4 298	2 186	4 112	3 740	954
USA					
Pentoxide	1 165	647	996	1 055	1 497
Metal	346	322	106	33	49
China					
Pentoxide	7 586	6 167	6 872	5 077	5 881
Korea, Republic of					
Vanadiferous residues	2 925	4 728	3 095	6 616	...
Taiwan					
Pentoxide	21	80	23	66	115
Australia					
Pentoxide	...	...	1 674	5 088	5 460

## 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) Includes vanadium content of pentoxide and vanadiferous residues

## Imports of Vanadium

Country	1998	1999	2000	2001	2002
Austria					
Vanadiferous residues	*27 000	*29 000	*27 000	*26 000	*25 000
Ores and concentrates	50	873	506	527	488
Pentoxide	2 030	2 752	2 206	1 477	1 042
Metal	88	6	12	0	7
Belgium-Luxembourg					
Vanadiferous residues	...	314	911	1 286	...
Pentoxide	1 389	1 707	3 142	2 142	2 981
Czech Republic					
Pentoxide	360	3 641	5 495	5 172	4 162
Metal	26	70	40	...	0
France					
Ores and concentrates	374	156	162	...	126
Pentoxide	476	362	461	328	382
Metal	114	264	130	54	54
Germany					
Vanadiferous residues	133	903	127	...	...
Pentoxide	918	828	614	657	538
Metal	47	18	20	60	88
Italy					
Pentoxide	447	166	74	199	153
Netherlands					
Vanadiferous residues	345	225	127	251	...
Pentoxide	2 983	1 198	1 312	653	815
Norway					
Metal	17	39	58	51	41
Russia					
Pentoxide	232	1 718	1 139	1 964	814
Metal	316	132	69	29	76
Spain					
Vanadiferous residues	181	...	----	----	...
Sweden					
Metal	96	59	49	77	49
United Kingdom					
Pentoxide	156	306	277	319	962
Metal	690	373	272	381	181
South Africa					
Pentoxide	116	34	22	1 008	1 603
Tunisia					
Pentoxide	92	181	161	132	...
Canada					
Pentoxide	2 332	1 308	689	504	745
USA					
Vanadiferous residues	24 069	13 840	20 250	*30 000	*33 000
Pentoxide	1 381	351	1 323	861	521
Metal	11	22	47	50	32
Brazil					
Pentoxide	58	84	200	105	177
China					
Vanadiferous residues	10 123	7 002	6 152	5 160	...
Pentoxide	35	143	457	1 950	1 983
Metal	1	37	41	83	300
Japan					
Pentoxide	5 043	3 700	4 539	3 618	3 981
Metal	190	103	238	230	217
Korea, Republic of					
Vanadiferous residues	...	400	1 100	135	...
Pentoxide	1 705	2 535	2 852	2 151	2 408
Taiwan					
Vanadiferous residues	336	444	376	306	387
Metal	27	8	3	0	21

## Vanadium

**Imports of Vanadium**

tonnes

Country	1998	1999	2000	2001	2002
Australia					
Pentoxide	31	31	30	21	4
Metal	10	...	11	70	95
New Zealand					
Metal	...	12	...	63	72

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	1998	1999	2000	2001	2002
Bulgaria	17 500	10 600	10 100	10 600	12 900
Finland	30 700	19 600	16 100	20 100	34 100
Georgia	*1 000	*1 000	*1 000	*1 000	*1 000
Greece	19 851	17 943	16 834	31 737	35 000
Irish Republic	180 400	200 200	263 000	298 100	276 700
Italy	2 500	-----	-----	-----	-----
Macedonia	24 000	21 000	25 000	20 000	20 000
Norway	960	-----	-----	-----	-----
Poland	157 874	154 800	156 900	152 700	152 100
Romania	25 650	26 536	27 452	29 786	25 400
Russia	114 000	132 000	136 000	157 000	174 000
Serbia and Montenegro	14 967	3 615	3 266	5 988	6 273
Spain	138 014	154 062	202 360	165 568	69 926
Sweden	164 711	174 448	176 788	156 334	148 620
Turkey	57 700	57 000	48 000	36 000	43 000
Algeria	4 600	5 200	5 500	5 700	4 500
Congo, Democratic Republic	1 234	*1 000	200	*700	...
Morocco	112 000	111 703	105 082	89 631	90 514
Namibia	42 142	37 140	32 937	37 622	41 042
South Africa	69 630	69 733	62 703	61 221	64 173
Tunisia	31 200	48 900	41 200	40 098	35 692
Canada	1 061 645	1 020 982	1 002 242	1 064 744	915 746
Honduras	36 639	40 996	43 064	48 485	46 339
Mexico	395 391	362 807	392 791	428 828	446 104
USA	755 000	852 200	851 900	842 100	874 300
Argentina	35 560	34 192	34 858	39 703	37 325
Bolivia	152 110	146 144	149 134	141 983	141 708
Brazil	87 475	98 590	100 254	111 432	136 430
Chile	15 943	32 263	31 403	32 762	36 161
Peru	868 757	899 524	910 303	1 056 629	1 221 830
China	1 273 200	1 476 000	1 780 300	1 692 000	1 499 200
India	194 500	185 000	208 000	222 000	234 300
Iran	86 000	98 000	102 000	105 000	121 000
Japan	67 670	64 263	63 601	44 519	42 900
Kazakhstan	225 600	270 300	322 100	344 700	392 400
Korea, Dem. P.R. of	*44 000	*37 000	*34 000	*28 000	*28 000
Korea, Republic of	10 489	9 800	11 500	5 100	100
Laos	-----	-----	-----	28 745	1 345
Myanmar	500	300	400	500	500
Saudi Arabia	3 550	3 161	3 047	*3 000	*3 000
Thailand	19 500	18 600	15 900	8 900	15 200
Vietnam	*26 000	*18 000	22 000	32 000	36 000
Australia	1 063 000	1 162 000	1 419 000	1 517 000	1 469 000
World Total	7 600 000	8 100 000	8 800 000	9 100 000	8 900 000

**Production of Slab Zinc**

tonnes

Country	1998	1999	2000	2001	2002
Belgium	205 000	232 400	263 800	256 400	238 700
Bulgaria	86 136	84 000	84 000	84 000	90 000
Finland	198 940	225 200	222 900	248 800	235 300
France	320 400	318 400	318 100	328 900	333 300
Germany	333 968	332 852	319 157	313 230	344 348
Italy	231 600	145 300	170 300	178 600	175 800
Macedonia	57 162	49 608	62 922	15 093	*15 100
Netherlands	218 731	222 552	216 768	204 794	203 460
Norway	137 925	143 976	138 390	144 620	145 000
Poland	174 800	178 900	173 000	174 700	158 900
Portugal	*4 000	*4 000	*4 000	*4 000	*4 000
Romania	29 326	28 695	51 929	47 200	48 000
Russia	196 000	231 310	241 025	249 000	257 000
Serbia and Montenegro	13 600	700	8 300	13 500	1 500
Spain	385 000	383 000	391 000	443 000	512 000
Turkey	35 800	27 000	-----	-----	-----
United Kingdom	99 600	132 800	99 600	99 600	99 600
Algeria	30 842	31 709	26 335	26 000	33 900
South Africa	106 662	108 000	103 250	109 000	111 000
Zambia	-----	-----	-----	-----	2 000
Canada	745 131	776 927	779 892	661 172	793 475
Mexico	230 325	218 913	235 073	303 810	302 122
USA	367 600	371 300	370 700	310 700	294 400
Argentina	41 777	43 443	39 269	42 907	41 797
Brazil	183 806	194 010	198 777	204 037	256 400
Peru	174 654	196 978	199 813	201 498	171 200
China	1 486 300	1 703 200	1 957 000	2 037 600	2 105 800
India	180 000	189 000	204 000	234 000	246 000
Iran (a)	17 000	29 724	53 000	73 000	*82 000
Japan	607 899	633 383	654 384	644 358	639 925
Kazakhstan	240 728	248 754	262 570	277 073	286 454
Korea, Dem. P.R. of	*43 000	*40 000	*37 000	*31 000	*30 000
Korea, Republic of	388 584	425 965	474 829	503 315	600 027
Thailand	90 980	97 292	101 142	104 300	105 100
Uzbekistan	52 000	53 000	72 500	80 100	78 900
Australia	319 000	349 000	498 000	561 000	572 000
<b>World Total</b>	<b>8 000 000</b>	<b>8 500 000</b>	<b>9 000 000</b>	<b>9 200 000</b>	<b>9 600 000</b>

Note(s):

(a) Years ended 20 March following that stated

## Exports of Zinc

Country	1998	1999	2000	2001	2002
Austria					
Unwrought (a)	14 955	18 948	20 746	15 461	34 705
Scrap	3 537	2 360	3 345	2 089	3 763
Belgium-Luxembourg					
Ore	607 159	686 666	531 616	332 101	101 157
Unwrought	105 298	229 685	102 816	89 817	114 430
Scrap	26 148	23 481	18 849	22 938	28 597
Bulgaria					
Unwrought (a)	71 319	71 700	(b) *89 700	(b) *53 700	(b) *52 200
Czech Republic					
Unwrought (a)	758	1 861	2 865	1 619	1 253
Scrap	2 509	2 607	2 750	2 267	2 325
Denmark					
Scrap	6 069	6 804	7 351	7 178	9 263
Estonia					
Scrap	1 768	1 845	1 426	1 429	1 408
Finland					
Unwrought	155 494	186 944	176 366	175 402	186 916
Unwrought alloys	4 250	2 316	360	206	105
Scrap	8 363	7 016	6 668	8 159	7 324
France					
Ore	19 655	21 623	44 107	18 305	17 775
Unwrought	143 683	127 893	111 730	127 252	143 307
Unwrought alloys	15 376	25 970	29 963	30 971	31 535
Scrap	37 834	34 189	41 599	42 470	33 611
Germany					
Ore	56 509	64 299	58 100	62 741	43 050
Unwrought	53 350	58 110	66 002	71 859	95 493
Unwrought alloys	37 150	38 577	40 377	38 250	40 259
Scrap	35 691	45 412	45 218	47 388	40 684
Greece					
Ores and concentrates	42 878	29 500	32 670	57 166	65 084
Unwrought (a)	1 211	2 000	885	82 848	671
Scrap	700	527	173	120	172
Hungary					
Unwrought	841	928	948	1 032	997
Scrap	2 574	2 423	3 153	2 837	2 202
Irish Republic					
Ores and concentrates	315 099	338 609	331 533	381 072	161 452
Scrap	456	699	632	296	235
Italy					
Ore	24 546	24 972	30 670	37 107	21 429
Unwrought	8 731	5 633	5 731	6 624	2 250
Unwrought alloys	10 739	5 883	6 328	5 002	6 520
Scrap	6 915	10 211	10 845	9 793	12 762
Macedonia					
Ore	2 099	2 052	...	22 021	...
Unwrought (a)	53 067	47 159	59 242	57 206	54 000
Netherlands					
Unwrought	254 995	240 868	223 418	252 993	187 416
Unwrought alloys	45 738	2 406	98	90	4 234
Scrap	21 793	19 267	18 842	21 496	16 093
Norway					
Unwrought	116 805	121 857	116 999	113 170	133 006
Unwrought alloys	9 168	10 239	12 067	13 990	6 704
Poland					
Ore	19 900	26 329	21 200	29 223	61 378
Unwrought	67 900	91 700	75 489	86 067	78 497
Unwrought alloys	3 766	2 295	2 488	2 391	1 844
Scrap	440	237	897	2 497	1 463
Portugal					
Scrap	2 380	857	729	682	1 001
Romania					
Ore	11 302	23 737	46 410	60 681	59 456
Unwrought	18 625	18 617	46 355	44 984	34 261

## Exports of Zinc

tonnes

Country	1998	1999	2000	2001	2002
Russia					
Ores and concentrates	38 436	46 092	52 180	52 151	62 762
Unwrought (a)	117 167	118 192	117 168	113 034	112 840
Scrap (b)	*2 300	*3 000	*1 900	*500	*1 000
Serbia and Montenegro					
Unwrought (a)	1 038	845	4 041	26 693	1 964
Slovakia					
Unwrought	400	1 352	286	199	104
Scrap	400	580	791	732	1 337
Slovenia					
Scrap	581	582	663	791	767
Spain					
Ore	121 884	150 074	232 781	296 040	29 661
Unwrought	122 746	142 447	84 575	93 738	79 286
Unwrought alloys	25 988	29 440	38 900	36 413	42 647
Scrap	1 402	2 785	5 451	5 861	4 577
Sweden					
Ore	293 053	329 282	341 193	261 909	283 701
Unwrought (a)	3 172	710	609	494	629
Scrap	6 224	27 393	20 396	13 546	23 833
Switzerland					
Scrap	2 894	4 030	3 832	2 405	2 358
Turkey					
Ores and concentrates	101 840	100 503	128 187	85 661	100 445
Unwrought	15 702	4 838	49	2 367	2 579
Ukraine					
Unwrought (a)	281	1 113	1 236	(b) *300	(b) *1 300
United Kingdom					
Unwrought	10 879	15 924	12 231	15 455	15 524
Unwrought alloys	23 840	22 656	19 940	21 971	22 463
Scrap	21 877	43 025	45 202	19 157	15 257
Algeria					
Unwrought (a)	24 446	21 209	18 595	...	...
Kenya					
Scrap	1 030	905	1 043	...	715
Morocco					
Ore	242 270	230 540	190 333	187 381	...
Scrap	328	914	3 724	3 277	...
Namibia					
Concentrates (c)	36 096	32 589	32 245	30 383	30 056
South Africa					
Unwrought	12 134	27 648	11 625	17 864	10 703
Sudan					
Scrap	...	...	179	256	105
Tunisia					
Ore	31 070	74 159	91 531	80 034	...
Unwrought	16 635	9 050	36	7 817	...
Canada					
Ores and concentrates (c)	425 340	326 925	319 150	471 656	398 886
Unwrought	576 926	610 811	603 460	495 349	598 251
Unwrought alloys	381	574	1 734	1 823	503
Scrap	27 111	25 567	36 408	40 350	30 271
Honduras					
Ores and concentrates (c)	36 639	40 996	43 064	48 485	46 339
Mexico					
Ores and concentrates	336 269	282 514	275 502	233 696	262 365
Unwrought	65 154	73 987	89 752	151 456	161 246
Unwrought alloys	4 519	12 142	18 553	13 799	16 495
Scrap	2 131	4 498	8 242	5 441	5 425
USA					
Ore (c)	571 373	531 307	523 071	696 236	821 996
Unwrought (a)	13 844	21 962	17 066	13 364	16 626
Scrap	26 676	23 581	26 472	26 744	19 831



## Exports of Zinc

Country	1998	1999	2000	2001	2002
Argentina					
Ores and concentrates	309	286	150	232	58
Unwrought	9 307	7 505	8 124	8 029	15 905
Bolivia					
Ore	311 792	294 519	301 096	269 470	289 160
Brazil					
Unwrought	14 765	26 244	24 325	23 339	50 492
Chile					
Concentrates	45 420	51 389	69 083	57 068	72 263
Peru					
Concentrates	1 010 549	1 170 245	1 015 489	1 423 928	1 905 379
Unwrought	121 712	124 174	125 000	119 300	128 047
China					
Ores and concentrates	201 325	233 150	138 891	13 366	3 515
Unwrought	370 612	507 501	574 630	543 856	472 769
Unwrought alloys	12 282	19 641	18 766	20 108	23 218
Scrap	5 108	5 955	2 098	1 865	2 588
Dubai					
Unwrought	613	1 018	...	...	...
Hong Kong					
Unwrought (a)	109 077	110 351	130 064	136 784	153 041
Scrap	15 307	27 800	31 318	12 461	5 879
India					
Ore (e)	30 921	32 315	11 580	21 316	327 676
Unwrought (a) (e)	16 555	51	155	1 344	828
Indonesia					
Ore	39 103	39 432	38	46	192
Unwrought (a)	421	345	794	815	318
Iran					
Ores and concentrates	(d) 47 658	(d) 118 769	(d) *100 000	...	126 049
Unwrought	492	5 076	5 529	14 321	43 549
Japan					
Unwrought	46 683	70 834	51 100	72 792	94 973
Unwrought alloys	12 837	8 547	4 557	4 831	12 031
Scrap	5 876	6 487	6 599	5 291	4 514
Jordan					
Scrap	458	551	246	513	529
Kazakhstan					
Ore	74 538	78 300	139 766	231 691	337 886
Unwrought (a)	218 024	207 044	232 186	(b) *181 700	(b) *240 600
Korea, Dem. P.R. of					
Unwrought (a) (b)	*2 700	*500	*200	*1 600	*1 200
Korea, Republic of					
Unwrought	159 056	153 523	196 345	209 825	262 907
Unwrought alloys	8 151	9 321	19 113	20 963	30 495
Scrap	671	68	----	315	341
Laos					
Ores and concentrates	...	...	----	28 744	...
Malaysia					
Scrap	6 600	*9 000	7 785	5 520	...
Myanmar					
Concentrates (e)	2 014	373	----	...	...
Philippines					
Scrap	3 153	1 319	2 810	4 752	...
Saudi Arabia					
Unwrought	5 696	5 343	6 168	243	4 414
Scrap	2 138	3 505	2 888	2 503	3 085
Singapore					
Unwrought	135 404	110 009	111 030	74 508	44 822
Scrap	2 509	2 622	2 090	2 574	1 952
Taiwan					
Unwrought (a)	9 342	10 764	12 516	18 831	20 078
Scrap	3 788	1 911	1 980	5 267	3 158
Thailand					
Unwrought	41 174	21 959	18 660	60 369	9 170
Unwrought alloys	6 993	8 699	7 305	5 823	11 163
Scrap	1 345	873	448	510	1 077

**Exports of Zinc**

tonnes

Country	1998	1999	2000	2001	2002
Uzbekistan					
Unwrought (b)	*29 800	*16 400	*41 900	*35 800	*32 600
Vietnam					
Ores and concentrates	85 000	...	...	...	...
Australia					
Ores and concentrates	1 565 066	1 697 017	1 710 075	1 926 385	1 899 622
Unwrought	227 836	280 367	427 187	311 895	522 501
Scrap	1 312	1 191	4 217	2 088	1 737

## Note(s):

(1) In this table the term 'unwrought' zinc corresponds to item 7901 of the Harmonised System and comprises blocks, pigs, slabs, etc.

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

## Imports of Zinc

Country	1998	1999	2000	2001	2002
Austria					
Unwrought	58 890	47 261	45 015	54 380	51 331
Unwrought alloys	18 882	16 079	16 126	22 617	23 414
Scrap	947	721	891	1 233	1 774
Belarus					
Unwrought (a)	1 313	2 031	2 906	2 791	2 105
Belgium-Luxembourg					
Ore	1 048 756	1 018 447	879 412	824 825	864 008
Unwrought	232 249	192 761	233 203	233 322	236 971
Unwrought alloys	13 567	3 474	2 049	910	4 767
Scrap	48 518	50 113	55 556	50 156	60 893
Bulgaria					
Ore	113 511	145 263	145 588	(b) *131 300	(b) *72 500
Croatia					
Unwrought (a)	3 039	2 186	2 340	2 816	3 006
Czech Republic					
Unwrought (a)	22 394	21 387	27 724	27 142	26 929
Denmark					
Unwrought	14 305	9 983	12 244	10 537	11 031
Unwrought alloys	828	707	2 428	5 070	3 030
Scrap	390	328	363	203	80
Estonia					
Scrap	6 135	6 147	5 449	6 568	5 245
Finland					
Ore	376 747	411 447	448 698	422 274	433 196
Scrap	4 046	3 235	2 424	1 882	2 030
France					
Ore	563 460	601 964	637 021	574 312	558 771
Unwrought	116 935	128 500	129 061	126 795	98 355
Unwrought alloys	46 526	35 640	49 384	39 967	32 740
Scrap	12 966	17 242	12 758	13 265	11 144
Germany					
Ore	378 135	208 729	282 566	316 009	319 996
Unwrought	258 576	252 203	251 227	261 517	231 495
Unwrought alloys	75 088	77 944	86 245	79 743	77 600
Scrap	5 826	15 262	18 021	21 487	34 083
Greece					
Unwrought (a)	22 637	20 894	24 617	31 737	26 052
Hungary					
Unwrought (a)	20 456	19 047	23 997	23 615	23 295
Irish Republic					
Unwrought (a)	3 788	2 512	3 232	3 668	5 699
Italy					
Ore	495 111	252 306	316 968	311 767	283 804
Unwrought	148 873	198 080	212 920	175 658	201 905
Unwrought alloys	40 263	53 550	38 457	42 197	31 361
Scrap	17 571	19 236	23 204	21 985	15 509
Latvia					
Unwrought	236	419	378	747	753
Lithuania					
Unwrought	301	304	328	268	...
Macedonia					
Ores and concentrates	...	1 290	9 314	8 217	...
Unwrought (a)	487	723	602	869	...
Netherlands					
Ore	412 481	404 839	427 101	299 374	375 646
Unwrought	159 018	125 505	171 866	152 500	126 816
Unwrought alloys	4 959	5 863	603	1 536	7 633
Scrap	5 470	7 265	8 849	11 413	10 368
Norway					
Ore	221 918	216 338	209 118	233 797	220 879
Unwrought (a)	3 819	2 264	1 577	190	1 240
Scrap	660	888	429	421	675
Poland					
Ore	94 400	100 582	95 443	118 106	112 193
Unwrought (a)	6 900	8 703	10 493	10 113	14 789

## Imports of Zinc

tonnes

Country	1998	1999	2000	2001	2002
Portugal					
Unwrought	11 718	13 560	12 146	12 701	13 649
Unwrought alloys	9 590	6 631	7 413	6 907	10 678
Romania					
Ores and concentrates	46 016	75 015	148 679	87 597	...
Unwrought (a)	7 899	4 976	6 075	11 747	15 482
Russia					
Ore	206 605	226 951	228 886	208 228	197 679
Unwrought (a)	40 129	5 577	11 343	8 848	6 958
Serbia and Montenegro					
Concentrates	20 216	1	22 162	11 967	1
Unwrought	4 149	3 744	42	1 702	7 858
Slovakia					
Unwrought (a)	26 172	20 545	24 062	...	31 953
Slovenia					
Unwrought (a)	20 927	18 960	23 136	20 516	18 031
Spain					
Ore	509 558	599 672	562 965	687 733	901 359
Unwrought	822	2 082	2 507	4 529	4 939
Unwrought alloys	10 497	12 907	9 059	9 499	10 398
Scrap	2 446	2 536	3 314	2 850	2 506
Sweden					
Unwrought	37 829	28 570	22 536	27 156	25 562
Unwrought alloys	8 804	8 869	11 313	11 170	12 145
Switzerland					
Unwrought	20 126	19 243	16 257	20 567	21 073
Unwrought alloys	3 065	3 106	3 758	3 735	3 796
Turkey					
Ore	83 377	59 099	333	416	910
Unwrought (a)	67 404	65 380	95 229	84 091	110 773
Scrap	235	942	327	----	467
Ukraine					
Unwrought	15 470	13 562	20 774	25 471	...
United Kingdom					
Ores and concentrates	139 806	91 613	177 332	215 342	229 042
Unwrought	162 046	111 382	119 052	110 157	105 661
Unwrought alloys	10 908	6 293	7 133	6 363	5 751
Scrap	3 806	3 507	4 983	3 219	262
Egypt					
Unwrought (a)	16 141	17 212	*17 000	...	...
Kenya					
Unwrought (a)	8 729	10 360	8 733	...	14 399
Morocco					
Unwrought (a)	7 815	8 463	11 134	12 674	...
Nigeria					
Unwrought (a)	7 696	7 364	16 368	...	...
South Africa					
Ore	...	...	...	*57 000	*39 600
Unwrought (a)	2 217	1 096	22 178	19 048	35 106
Scrap	307	86	756	1 615	2 628
Tanzania					
Unwrought	2 505	2 447	3 848	4 570	...
Togo					
Unwrought	2 648	1 738	1 620	2 057	1 590
Tunisia					
Unwrought (a)	6 848	4 834	2 857	3 979	...
Uganda					
Unwrought (a)	1 394	1 944	1 396	1 691	78
Canada					
Ores and concentrates (c)	224 943	305 416	231 714	154 011	278 692
Unwrought	13 749	12 370	14 511	11 302	9 470
Scrap	680	831	408	302	342
Costa Rica					
Unwrought (a)	6 643	8 206	9 864	9 526	9 062
El Salvador					
Unwrought (a)	398	656	941	740	887

## Imports of Zinc

Country	1998	1999	2000	2001	2002
Guatemala					
Unwrought (a)	4 206	3 953	3 808	6 982	8 734
Honduras					
Unwrought (a)	864	775	566	1 183	1 029
Mexico					
Unwrought	24 829	46 603	35 106	797	414
USA					
Ore (c)	46 250	78 092	58 573	84 035	122 234
Unwrought (a)	872 056	1 068 120	928 008	927 777	1 054 580
Scrap	29 239	26 569	36 488	39 324	31 185
Argentina					
Ores and concentrates	8 170	8 093	15 219	9 367	12 501
Unwrought	9 161	5 485	6 967	3 096	11 665
Brazil					
Ores and concentrates	213 281	216 288	186 877	183 792	236 735
Unwrought (a)	8 389	17 853	23 228	34 310	17 611
Chile					
Unwrought (a)	8 670	8 633	11 039	12 691	...
Colombia					
Unwrought (a)	21 001	16 830	21 316	20 134	20 774
Ecuador					
Unwrought (a)	4 839	3 298	4 803	4 317	5 623
Uruguay					
Unwrought	1 764	1 418	1 138	1 011	...
Venezuela					
Unwrought	13 958	10 081	11 878	11 230	11 800
Unwrought alloys	7 803	4 037	5 971	5 259	...
Bangladesh					
Unwrought	28 000	*35 000	*56 000	...	...
China					
Ores and concentrates	52 508	44 003	77 942	652 996	785 425
Unwrought	12 090	16 091	19 496	18 513	68 898
Unwrought alloys	75 385	91 347	110 477	122 614	143 303
Scrap	25 667	42 127	47 784	35 395	51 041
Dubai					
Unwrought	5 326	4 113	...	...	...
Hong Kong					
Unwrought	38 344	27 250	21 370	19 638	17 461
Unwrought alloys	92 287	102 650	124 705	139 529	155 812
Scrap	12 701	13 629	21 100	7 277	2 683
India					
Ores and concentrates (d)	62 668	49 460	34 537	68 149	37 550
Unwrought (d)	60 830	62 023	46 054	74 106	82 604
Unwrought alloys (d)	1 699	3 433	2 760	5 528	6 649
Scrap (d)	41 344	45 480	44 592	49 643	31 598
Indonesia					
Unwrought	59 987	55 065	86 848	89 096	85 682
Unwrought alloys	5 667	3 748	7 480	6 959	7 250
Iran					
Unwrought (e)	6 734	6 575	3 725	...	645
Israel					
Unwrought (a)	*18 700	*17 000	(b) *11 900	(b) *9 300	(b) *8 500
Japan					
Ores and concentrates	945 295	1 123 071	1 063 555	1 165 064	1 008 406
Unwrought	113 370	55 335	80 762	63 582	21 432
Unwrought alloys	8 012	7 559	4 856	2 926	1 680
Jordan					
Unwrought (a)	1 272	1 792	1 249	2 762	1 987
Kazakhstan					
Ores and concentrates	14 495	1 434	...	...	...
Korea, Dem. P.R. of					
Ores and concentrates (b)	*17 000	*28 000	*24 000	*27 300	*13 300
Korea, Republic of					
Ores and concentrates	800 136	881 885	959 645	1 073 850	1 167 827
Unwrought (a)	71 019	111 374	128 635	97 779	116 087

**Imports of Zinc**

tonnes

Country	1998	1999	2000	2001	2002
Macao					
Unwrought	619	228	----	1	----
Malaysia					
Unwrought (a)	68 670	119 800	502 436	...	...
Pakistan					
Unwrought (a) (f)	15 029	597	1 048	1 224	637
Philippines					
Unwrought (a)	39 771	50 017	35 552	...	...
Saudi Arabia					
Unwrought	13 792	14 187	19 775	17 775	18 271
Singapore					
Unwrought	168 951	132 465	160 554	205 832	143 343
Scrap	2 181	1 857	1 455	1	312
Sri Lanka					
Unwrought (a)	1 836	3 231	675	688	1 750
Syria					
Unwrought	4 185	----	1 886	2 208	3 791
Taiwan					
Unwrought	240 737	272 973	294 142	276 531	303 611
Unwrought alloys	14 827	17 956	16 241	17 395	15 600
Scrap	50 027	51 656	49 125	14 430	4 213
Thailand					
Ores and concentrates	135 863	143 269	173 930	210 345	153 129
Unwrought	14 445	10 210	15 304	15 698	24 477
Unwrought alloys	7 233	8 480	8 528	8 351	11 503
Australia					
Ores and concentrates	10 275	54 223	107 535	106 704	115 496
Unwrought (a)	1 785	3 477	2 278	143	41
New Zealand					
Unwrought (a)	16 568	16 786	...	16 761	16 991

Note(s) :-

(1) In this table the term 'unwrought' zinc corresponds to item 7901 of the Harmonised System and comprises blocks, pigs, slabs, etc.

- (a) Including alloys
- (b) BGS estimates, based on known exports from certain countries
- (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

**Production of Zirconium Minerals**

Country	1998	1999	2000	2001	2002
Russia (a)	6 293	6 200	6 300	*6 500	*6 500
Ukraine	*25 000	*25 000	*30 000	*33 600	*34 300
South Africa	*290 000	*320 000	*325 000	*347 000	*420 000
USA	*150 000	*190 000	*180 000	*170 000	*130 000
Brazil (a)	21 483	27 048	28 335	20 553	*20 000
China	134	1 850	29 898	25 594	*20 000
India	*19 000	*19 000	*19 000	*19 000	*19 000
Indonesia	231	*250	*250	*250	*250
Malaysia	3 057	1 763	3 642	3 768	5 293
Sri Lanka	8 814	-----	-----	-----	-----
Vietnam	...	...	5 000	5 400	...
Australia	385 000	360 000	365 000	398 000	412 000
World Total	914 000	956 000	992 000	1 030 000	1 073 000

## Note(s):

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

(a) Including caldasite rock containing zircon and baddeleyite

**Exports of Zirconium**

tonnes

Country	1998	1999	2000	2001	2002
Belgium-Luxembourg					
Concentrates	1 587	2 119	13 216	14 979	18 253
Metal	167	142	365	193	233
Estonia					
Metal	...	17	65	...	----
France					
Concentrates	458	679	754	657	1 126
Germany					
Concentrates	6 174	5 704	5 428	4 161	2 539
Metal	229	254	241	265	343
Italy					
Concentrates	20 831	22 988	22 582	15 906	20 510
Metal	330	386	721	1 604	775
Netherlands					
Concentrates	7 568	6 038	1 978	1 430	5 361
Norway					
Concentrates	170	10	----	...	...
Portugal					
Metal	----	180	472	0	1
Russia					
Concentrates	4 877	3 969	5 316	6 898	5 007
Metal	170	40	343	219	187
Spain					
Concentrates	3 399	5 605	6 951	7 449	7 852
Ukraine					
Concentrates	15 746	36 282	32 083	...	...
United Kingdom					
Concentrates	3 039	333	567	1 776	4 954
Metal	247	382	317	380	266
South Africa					
Concentrates	252 705	295 247	288 641	280 143	364 568
Canada					
Metal	205	333	220	184	329
USA					
Concentrates	41 200	69 542	73 641	68 439	51 589
Metal	1 169	1 020	1 251	1 413	1 668
Brazil					
Concentrates	276	230	362	121	340
China					
Concentrates	1 419	330	158	1 084	1 113
Metal	140	94	22	5	5
Hong Kong					
Concentrates	22 019	23 831	18 708	17 764	20 746
Japan					
Metal	58	41	159	51	44
Malaysia					
Concentrates	6 627	8 342	9 660	...	...
Sri Lanka					
Concentrates	...	...	...	1 100	19 108
Taiwan					
Concentrates	572	881	1 322	1 659	1 617
Metal	621	850	782	41	12
Thailand					
Concentrates	1 740	419	1 666	1 620	2 210
Australia					
Concentrates	398 761	290 051	82 211	164 725	76 256
Metal	14	111	119	503	6

Note(s):

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



## Imports of Zirconium

Country	1998	1999	2000	2001	2002
Austria					
Concentrates	900	1 017	1 684	1 127	1 526
Belarus					
Concentrates	1 625	971	1 843	2 274	1 997
Belgium-Luxembourg					
Concentrates	3 062	3 531	7 954	5 657	13 267
Metal	1 014	535	477	670	483
Czech Republic					
Concentrates	3 151	3 736	3 459	3 480	2 911
Metal	200	174	617	486	580
France					
Concentrates	54 164	60 282	57 420	59 386	43 841
Metal	156	116	135	2 323	251
Germany					
Concentrates	72 300	*70 000	*70 000	82 728	76 921
Metal	496	396	412	409	456
Italy					
Concentrates	144 636	141 560	151 500	137 649	136 504
Metal	377	141	1 159	936	85
Netherlands					
Concentrates	26 225	32 422	30 993	27 300	21 401
Metal	170	88	64	53	42
Poland					
Concentrates	1 024	956	1 790	2 002	1 207
Metal	36	22	7	29	13
Portugal					
Concentrates	4 375	3 955	3 610	3 990	2 924
Romania					
Concentrates	178	110	468	685	...
Metal	...	57	18	48	12
Russia					
Concentrates	5 119	8 445	9 530	11 955	11 507
Slovenia					
Concentrates	293	305	415	440	440
Spain					
Concentrates	98 066	108 668	115 108	133 013	145 970
Metal	170	114	232	163	41
Sweden					
Concentrates	506	648	602	435	424
Metal	...	122	91	66	138
Switzerland					
Metal	61	94	45	66	115
Turkey					
Concentrates	1 680	1 072	3 184	2 263	3 914
United Kingdom					
Concentrates	54 986	37 695	34 053	46 548	30 513
Metal	510	263	733	693	397
Morocco					
Concentrates	290	479	548	844	...
Nigeria					
Metal	44	5	...	...	...
Tunisia					
Concentrates	690	431	864	1 301	...
Canada					
Concentrates	8 654	5 826	7 154	8 155	7 729
Metal	322	280	284	379	429
Mexico					
Concentrates	1 502	6 736	9 271	10 294	10 132
Zirconium sand	19 251	17 291	16 391	13 074	7 642
USA					
Concentrates	89 542	57 626	65 186	60 624	35 289
Metal	894	859	1 040	717	556

**Imports of Zirconium**

tonnes

Country	1998	1999	2000	2001	2002
Brazil					
Concentrates	6 632	5 504	15 012	12 288	10 631
Colombia					
Concentrates	2 451	3 043	2 731	3 335	4 156
China					
Concentrates	98 616	130 688	161 007	165 135	219 596
Metal	665	888	1 053	979	630
Hong Kong					
Concentrates	23 216	23 905	18 845	17 994	20 475
India					
Concentrates (a)	4 679	3 665	3 636	7 267	14 090
Indonesia					
Concentrates	1 170	3 010	12 184	18 031	16 075
Metal	32	58	177	404	537
Japan					
Concentrates	78 626	74 647	86 952	84 124	74 757
Metal	671	654	704	557	628
Korea, Republic of					
Concentrates	6 252	12 494	11 246	12 207	12 922
Metal	135	165	168	174	293
Malaysia					
Concentrates	7 380	14 158	17 945	...	...
Philippines					
Zirconium sand	21	152	274	51	...
Metal	22	31	49	115	...
Saudi Arabia					
Concentrates	280	780	508	22	362
Singapore					
Concentrates	2 940	3 465	4 243	3 709	4 130
Taiwan					
Concentrates	15 737	15 360	19 038	13 535	14 881
Zirconium sand	10 490	10 291	14 402	...	...
Metal	71	331	112	247	91
Thailand					
Concentrates	2 032	21	6 713	1 645	162
Metal	...	2	31	100	169
Australia					
Concentrates	443	351	418	415	161
Metal	2	46	39	145	46

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

**Production of Beryl**

tonnes

Country	1998	1999	2000	2001	2002
Russia	*1 000	*1 000	*1 000	*1 000	*1 000
Madagascar (a)	30	20	2	1	*1
Mozambique	...	...	----	1	54
Zambia	7	7	7	7	7
USA	6 080	5 070	4 510	2 480	1 970
China	...	...	...	*400	*400
Kazakhstan (a)	221	220	431	737	...

Note(s):

(a) Includes ornamental and industrial products

**Production of Borates**

tonnes

Country	1998	1999	2000	2001	2002
Russia	*1 000 000	*1 000 000	*1 000 000	*1 000 000	*1 000 000
Turkey	*1 650 000	*1 400 000	*1 400 000	*1 400 000	*1 300 000
USA (a)	1 170 000	1 220 000	1 070 000	1 050 000	1 050 000
Argentina	279 272	565 647	512 624	673 320	510 000
Bolivia	15 930	15 362	41 000	32 000	*35 000
Chile	280 140	324 691	337 966	327 743	431 293
Peru	22 002	14 716	9 309	9 374	8 814
China (b)	247 100	289 400	283 000	346 500	...
Iran (c)	1 700	1 920	2 754	2 890	...
Kazakhstan	13 100	...	28 500	*30 000	*30 000

Note(s):

(a) Sold or used by producers

(b) B<sub>2</sub>O<sub>3</sub> equivalent

(c) Years ended 20 March following that stated

**Production of Germanium Metal**

tonnes

Country	1998	1999	2000	2001	2002
Ukraine	1	1	...	...	...
USA (a)	*22	*20	*23	*20	*12
China	14	14	14	21	...
Japan	0	1	2	2	1

Note(s):

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

(a) Including production of secondary metal

**Production of Primary Magnesium Metal**

tonnes

Country	1998	1999	2000	2001	2002
France	14 700	16 200	16 500	4 800	2 000
Norway	35 400	40 800	41 400	36 000	*10 000
Russia	34 100	35 200	35 500	*35 000	*35 000
Serbia and Montenegro	3 965	1 203	1 270	203	----
Ukraine	5 040	3	----	----	----
Canada	(a) *60 000	(a) *64 000	(a) *64 000	*65 000	*70 000
USA	106 100	75 000	94 000	50 000	20 000
Brazil	*9 000	7 968	5 723	5 500	4 500
China	70 464	120 700	142 100	199 700	231 700
India	1 500	*1 000	*500	*500	*500
Israel	24 500	24 300	31 700	34 000	28 000
Kazakhstan (b)	20 907	11 031	10 380	16 455	*18 000

Note(s):

(a) Capacity

(b) Not marketed as metal but used in titanium production

**Production of Nepheline Syenite**

tonnes

Country	1998	1999	2000	2001	2002
Norway	319 835	304 592	330 000	330 362	330 461
Russia (b)	859 698	859 000	814 000	960 000	...
South Africa (a)	104 000	82 000	...	...	...
Canada	636 000	678 000	721 000	708 000	721 000

Note(s):

(a) Mostly used as aggregate

(b) Nepheline concentrates

**Production of Perlite**

tonnes

Country	1998	1999	2000	2001	2002
Armenia	220 000	90 000	140 000	16 618	19 598
Bulgaria	12 100	12 700	16 700	12 300	10 500
Georgia	*5 000	*5 000	*5 000	*5 000	*5 000
Greece	658 332	777 898	817 825	840 660	*840 000
Hungary	148 455	140 787	151 069	89 900	72 196
Italy	*60 000	*60 000	*60 000	*60 000	*60 000
Russia	*45 000	*45 000	*45 000	*45 000	*45 000
Slovakia	24 238	19 460	17 022	14 910	18 635
Turkey	124 312	147 818	149 426	154 515	151 902
Ukraine	*25 000	*25 000	*25 000	*25 000	*25 000
South Africa	*400	*400	*400	*400	*400
Mexico	54 840	61 596	68 702	80 297	85 703
USA	832 000	821 000	873 000	611 000	638 000
Argentina	21 495	21 008	17 521	...	...
China	*400 000	*450 000	*500 000	*550 000	*600 000
India (a)	207	383	274	176	283
Iran (b)	13 320	15 069	28 000	20 000	...
Japan	*250 000	*260 000	*260 000	*260 000	*260 000
Philippines	14 000	22 500	4 600	16 500	...
Thailand	3 600	6 050	5 600	8 500	...
Australia (c)	6 068	3 886	6 675	6 214	8 300
New Zealand	*2 000	*2 000	*2 000	*3 000	*3 000

Note(s):

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

(a) Years ended 31 March following that stated

(b) Years ended 20 March following that stated

(c) Years ended 30 June of that stated

**Production of Selenium Metal**

tonnes

Country	1998	1999	2000	2001	2002
Belgium	*200	*200	*200	*200	*200
Finland	43	37	37	42	37
Germany	*100	*100	*100	*100	*100
Poland	67	67	65	65	68
Russia	*40	*40	41	48	48
Serbia and Montenegro	41	26	21	14	17
Sweden	*20	74	104	88	90
Zambia	13	12	10	13	*11
Canada	398	359	335	238	226
USA	*350	...	...	...	...
Chile (a)	29	70	47	84	...
Peru	18	23	21	16	16
China	*65	*65	*65	*65	*65
India (b)	11	6	10	10	6
Japan	550	546	612	735	752
Kazakhstan	*40	*40	*40	*40	*40
Philippines	40	35	38	43	*40
Uzbekistan	*20	*20	*20	*20	*20

Note(s):

(1) In addition to the countries listed, Australia, the Republic of Korea and Zimbabwe are believed to produce selenium metal

(a) Exports

(b) Years ended 31 March following that stated

**Production of Natural Sodium Carbonate**

tonnes

Country	1998	1999	2000	2001	2002
Botswana	195 500	233 643	191 000	251 231	283 197
Ethiopia (a)	5 272	4 409	3 805	7 543	3 843
Kenya	242 910	245 680	238 190	297 780	304 110
USA	10 100 000	10 200 000	10 200 000	10 300 000	10 500 000
Pakistan	3 112	3 748	3 075	3 513	3 669

Note(s):

(a) Years ended 7 July of that stated

**Production of Strontium Minerals**

tonnes

Country	1998	1999	2000	2001	2002
Spain	119 077	123 457	158 590	164 030	171 293
Turkey	*30 000	*25 000	*25 000	*65 000	*70 000
Mexico	118 230	164 682	157 420	145 789	94 015
Argentina (a)	2 416	2 141	*2 200	1 734	1 474
China	*35 000	*35 000	*35 000	*50 000	*50 000
Pakistan (b)	598	634	1 079	-----	416

Note(s):

(1) In addition to the countries listed, Germany and Poland are believed to produce strontium minerals

(a) May contain unbeneficiated material

(b) Years ended 30 June of that stated

**Production of Tellerium Metal**

tonnes

Country	1998	1999	2000	2001	2002
Canada	62	64	53	51	45
USA	50	50	50	50	50
Peru	22	17	22	19	20
Japan	39	35	36	39	29

Note(s):

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

**Mine Production of Uranium**

tonnes (metal content)

Country	1998	1999	2000	2001	2002
Czech Republic	611	605	498	490	477
France	508	438	319	194	-----
Portugal	19	10	13	4	2
Romania	*100	*100	*50	85	90
Russia	*2 000	*2 000	*2 000	*2 500	*2 900
Spain	255	255	251	-----	-----
Ukraine	*500	*500	*500	*750	*800
Gabon	731	294	-----	-----	-----
Namibia	2 778	2 687	2 713	2 237	3 369
Niger	3 713	2 916	2 898	2 919	3 076
South Africa	965	919	861	903	846
Canada	10 936	8 214	10 683	12 487	12 203
USA	1 810	1 773	1 522	1 015	902
Argentina	8	8	-----	-----	-----
China	*500	*500	*500	*665	*730
India	*200	*200	*200	*230	*230
Kazakhstan	1 074	1 367	1 752	2 050	2 800
Pakistan	*23	*23	*23	*46	*38
Uzbekistan	2 000	2 130	2 350	1 962	1 860
Australia	4 901	5 997	7 588	7 652	7 496
World Total	33 600	30 900	34 700	36 200	37 800
World Total (U <sub>3</sub> O <sub>8</sub> equivalent)	39 600	36 500	40 900	42 700	44 600

Note(s):

(1) Excluding uranium production from decommissioning operations in France, Germany and Spain

**Production of Vermiculite**

tonnes

Country	1998	1999	2000	2001	2002
Russia	*25 000	*25 000	*25 000	*25 000	*25 000
Egypt (c)	*50	...	...	...	...
Kenya	353	164	124	-----	-----
South Africa	221 331	217 820	208 835	160 265	210 297
Uganda	-----	-----	-----	100	664
Zimbabwe	14 804	12 844	16 215	9 104	21 494
USA (a)	...	*175 000	*150 000	*150 000	...
Argentina	903	*2 800	*2 800	1 450	1 232
Brazil (b)	31 658	40 045	31 676	21 000	23 000
China	...	92 610	...	...	...
India (d)	4 274	3 123	5 003	5 097	5 563
Japan	*15 000	*15 000	*15 000	*15 000	*15 000
Australia (c)	7 589	10 490	11 750	12 038	6 696

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

(d) Years ended 31 March following that stated

**Production of Wollastonite**

tonnes

Country	1998	1999	2000	2001	2002
Finland	16 700	13 883	17 000	18 399	17 400
Namibia	267	347	406	284	742
South Africa	646	200	-----	-----	...
Mexico	41 264	44 126	30 836	39 830	42 756
USA	...	...	*130 000	*130 000	*130 000
China	*300 000	391 060	427 540	839 200	...
India (a)	94 700	117 094	121 891	136 420	172 510

## Note(s):

(1) In addition to the countries listed, Japan, Kazakhstan, Dem P R of Korea, Morocco, Pakistan and Turkey are believed to produce wollastonite

(a) Years ended 31 March following that stated



# MAPS AND GRAPHS



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Background text listing various chemical elements and compounds such as Antimony, Arsenic, Barium, Bismuth, Boron, Bromine, Cadmium, Chromium, Cobalt, Copper, Diamond, Diatomite, Feldspar, Ferro-alloys, Fluorspar, Fuller's earth, Germanium, Gold, Graphite, Gypsum, Indium, Iron, Iridium, Lead, Lithium, Magnesium, Manganese, Mercury, Mica, Molybdenum, Natural gas, Nepheline, Niobium, Perlite, Petroleum, Phosphates, Platinum, Potash, Pyrites, Rare earths, Salt, Selenium, Silicon, Sillimanite, Silver, Strontium, Sulphur, Talc, Tantalum, Tellurium, Tin, Titanium, Tungsten, Uranium, Vanadium, Vermiculite, Wollastonite, Zinc, Zirconium, Zirconium Alumina, Aluminium, Antimony, Arsenic, Asbestos, Barytes, Bauxite, Bentonite, Beryl, Bismuth, Borates, Bromine, Cadmium, Chromium, Coal, Cobalt, Copper, Diamond, Diatomite, Feldspar, Ferro-alloys, Fluorspar, Fuller's earth, Germanium, Gold, Graphite, Gypsum, Indium, Iron, Iridium, Lead, Lithium, Magnesium, and Magnesia.