

# European Mineral Statistics



2001–05



**British  
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL





BRITISH GEOLOGICAL SURVEY

## European Mineral Statistics 2001-05

A product of the World Mineral Statistics database

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# Commentary

## 1. Introduction

Within Europe's relatively restricted land area there exists a remarkable geological variety. It includes ancient crystalline 'shields' and massifs, complex younger fold-belts penetrated by igneous intrusions, deep sedimentary basins containing coal and other minerals, and landscapes profoundly modified by a recent ice age. As a consequence Europe has a rich endowment of all the major groups of minerals. In the nineteenth century the continent's burgeoning industrial economies were built on its resources of metals and coal. The productive capacity of those resources was, with some exceptions, largely outgrown in the twentieth century but Europe continues to obtain a high proportion of its needs for industrial and construction minerals from within its own borders. In addition, a recent bonanza has been the discovery and exploitation of the offshore resources of petroleum and natural gas beneath the North Sea and other areas of the continental shelf.

During the industrial revolution of the eighteenth and nineteenth centuries the interest of sovereign states in their own economic and demographic performance led to the development of statism, that is, the direction and control of their internal affairs to a much greater degree than before. From statism came the concept of statistics – the numbers collected and compiled as the basis for such action by the state. Among many other things, almost all European countries compile annual statistics of national mineral production and trade and these form the basis of this European compilation<sup>1</sup>.

For many countries, from antiquity, the ownership of precious metals has been vested in the state or the sovereign and for the majority of European countries state ownership extends to all metals and high-value industrial minerals. Chiefly as a result, in Europe and the world as a whole, there is a direct correspondence between the unit value of a mineral commodity and the amount and accuracy of official statistical information available on it. At the extreme high end of the value range this relationship tends to break down so that data on gemstones and precious metals is less straightforward than that on base metals. However, as a rule the state does not claim ownership of low-value construction minerals, such as crushed rock aggregate, sand & gravel and others. Partly as a consequence, the statistics for such minerals tend to be less comprehensive, less reliable and more difficult to compile and compare than those for other minerals. It is ironic that with modern environmental concerns and pressures on land-use in Europe it is precisely these less well-documented minerals – their occurrence, production, trade and consumption - that are of greatest concern to local and national governments.

So far as possible, the statistics of production compiled by the BGS are the official data for the countries concerned, whose government departments and agencies compile and publish them on the basis of returns from annual, or more frequent, inquiries in the form of mandatory questionnaires to producers. Trade statistics published by BGS are invariably compiled, directly or indirectly, from official publications.

Where official production data are not available, or where there is reasonable cause to doubt the accuracy or completeness of such data, information is sought from other sources such as geological survey organizations, chambers of mines, universities, trade associations and the primary producers themselves. Time and resources preclude double-checking in any but the most necessary of cases.

An increasing problem, particularly in Europe, is the invocation of rules that debar a government body from divulging national production data if there is only a small number of producers, the object being the maintenance of commercial confidentiality. However we often find in such cases that the primary producers themselves are willing to release the information for publication. A further problem lies in the

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<sup>1</sup> For this compilation 'Europe' is defined as the 25 EU members (as of 1 December 2005), the EU associates Norway and Switzerland and the EU applicant countries Bulgaria, Croatia, Romania and Turkey; this group of 31 countries is for convenience referred to as 'EU31'.

desire of governments, everywhere, to recover costs by asking for payment for official information – which is often marketed through an agent. This situation is coupled with an increasing apparent disregard for the value (as distinct from the price) of impartial mineral statistics and a conviction that their compilation should be funded entirely by the users of the data, or by the industrial sector concerned. It is true that no other industrial sector has a statistical operation wholly dedicated to its physical (as opposed to financial) activities. The reason is that no other industrial sector is at one and the same time so crucial to the maintenance of civilisation and so little understood by the population at large.

## 2. Construction minerals

The most important construction minerals<sup>2</sup> and their chief uses are summarised below (Table 1):

**Table 1** Construction minerals and their principal uses

Aggregates, natural (sand and gravel):– crushed rock (limestone, sandstone, igneous rock etc.):–	<i>concrete, building sand and fill roadstone, fill, concrete</i>
Common clay and shale:–	<i>bricks, pipes, tiles and cement manufacture</i>
Gypsum:–	<i>plaster, plasterboard and cement</i>
Limestone and dolomite:–	<i>crushed-rock aggregate, cement, other industrial and agricultural uses</i>
Building stone (dimension stone) :–	<i>this comprises almost any competent rock-type that may be used in the form of shaped and/or sized blocks for either structural or decorative purposes. It normally includes roofing stone and slate</i>

### 2.1 Statistical problems of aggregate minerals

Aggregates suffer from the incompleteness of available production data and incompatibility of different countries' production statistics for this group. The European data for aggregates presented here represent an early attempt at compiling reliable data and we would welcome any comments, amendments and corrections that users may wish to make.

Other problems are related to the terminology used by different countries. These can include such categories as:

- 'gravel and crushed rock' with no distinction between types of aggregate minerals
- 'building stone' that incorporates both crushed-rock aggregate and dimension stone
- 'limestone' and other purely petrological descriptions with no indication of the construction/industrial use split
- 'sand' with no distinction between material for construction sand and special sand for industrial uses e.g. for glass

With the establishment of the European single market on 1st January 1993 a new statistical system was introduced across the Community to measure production for sale (Prodcom). It covers many activities, including mining and quarrying. Information is presented on the volume and value of sales and the headings are compatible with trade headings, the intention being to provide an assessment of the apparent consumption of a particular product. However, the data for minerals are of highly variable quality.

<sup>2</sup> Statistics for gypsum are complicated by the availability of large quantities of synthetic gypsum, which is not covered in this publication

## **2.2 European situation**

The statistical tables in this volume show that it is possible to account in detail for at least 2742 million tonnes of primary aggregate production in the EU31 countries. The European Aggregates Association (UEPG) ([www.uepg.eu](http://www.uepg.eu)) estimates that the average annual production of primary aggregates in only eighteen European countries is 2832 million tonnes.

These totals easily exceed the total tonnage of all other minerals produced in the EU. This fact highlights the concerns expressed in many countries about the sustainability of the resource, both in terms of tonnage remaining and also the land-use and environmental issues that are raised by the implicit need for the expansion of quarries to maintain the level of output.

All European countries consume construction minerals, generally in proportion to the size of their individual economies. The majority of the EU member countries are self-sufficient in supply of aggregate minerals but while some, e.g. UK, produce approximately equal quantities of sand & gravel and crushed-rock aggregates others are, for obvious geological and topographic reasons, deficient in one or the other. For example, Netherlands lacks resources suitable for the production of hard-rock aggregates while Austria, landlocked and without broad alluvial lowlands, is a net importer of sand and gravel. Simple statistical analysis, especially if only 'gross' national trade positions are examined, can be misleading: aggregates are low-cost minerals 'ex-pit' and are, as a result, sensitive to transport costs. They may be imported via a short cross-border route at lower cost than if they were carried a much greater distance within national borders.

For countries bordering the North Sea production of marine-dredged sand and gravel is a significant part of supply. In the case of the UK this source amounts to approximately 20 million tonnes/year or 21 per cent of total UK sand and gravel production in 2005. Almost one third of this tonnage is landed at foreign ports as exports. Crushed rock produced from onshore sites is also conveyed by sea from Norway and Scotland.

Recycled and secondary aggregates have become an increasingly important part of supply, in response to environmental constraints on the production of primary (quarried) material. In Great Britain these materials account for 21 per cent of total supply. UEPG shows production of recycled aggregates as 179 million tonnes in 2005 with the UK and Germany being the largest producers with 56 million tonnes and 46 million tonnes, respectively.

The EU Mining Waste Directive will introduce stricter controls across Europe by setting out the minimum requirements for safe containment of waste from mines. This has been finalised and Member States are required to comply with the Directive by May 2008, although discussions on definitions and transposition into national legislation continue. The Directive applies to all onshore minerals extraction, including metals, industrial, construction and energy.

## **3. Industrial (non-construction) minerals**

These comprise a wide range of non-metallic, non-energy minerals used as feedstocks for manufacturing or industrial processing aids, exemplified by barytes, fluor spar, magnesite, kaolin (china clay), mica, and salt. The category includes metallic minerals used for non-metallic products, e.g. bauxite, chromite, ilmenite and also 'construction minerals' used for non-construction purposes, e.g. limestone. Unlike metals, where whatever the raw material the ultimate refined marketable material is produced to a few accepted standards for use in a variety of applications, industrial minerals depend to a great extent on their intrinsic 'as mined' physical and chemical qualities. Thus, for industrial minerals the two most significant variables are the grade of the deposit, that is, how much useful mineral it contains, and the quality of the mineral, that is, its suitability for specific end-uses. The quality may be a combination of physical properties such as particle size and shape, brightness, viscosity in suspension, specific gravity,

hardness, strength and insulating properties. Several industrial minerals are valued purely for their chemical composition in that they form the basis for production of, for example, the essential plant nutrients potassium and phosphorus or the halogens chlorine and fluorine and many other elements used as chemical feedstocks.

It has been suggested that the point at which the value of a country's industrial mineral production (including construction minerals) overtakes that of its metal (mine) production marks its transition to a mature industrial economy. Certainly this point was attained long ago for the major economies of Europe: the value of metal production in France, Germany, Italy and the UK is negligible compared to the value of industrial minerals output.

A problem for the compiler of statistics on industrial minerals is that many of them cannot be precisely defined, but grade into one another. Thus, kaolin grades into kaolinitic clay, bauxite into high-alumina clay, dolomite into limestone, and this has implications for the comparability of statistics between deposits and countries. Many industrial minerals are produced and marketed in either a 'wet', 'dried' or 'calcined' forms; this can markedly affect the weight of the material. In this compilation every effort has been made to ensure comparability between countries in this respect. Some mineral-derived elements may be obtained by a number of mineral-based but different routes: sulphur is obtained, in Europe, as a by-product from oil refining, from sour gas, from base metal smelting and as a primary product from pyrites (iron sulphide). Some semi-processed materials<sup>3</sup> can be obtained from completely different sources, for example magnesia (magnesium oxide), which is produced from both magnesite and a combination of sea-water and dolomite. Salt is a further example, being extracted as a solid (rock salt), as brine and by evaporation of sea water.

European production of industrial minerals<sup>4</sup> supplies a fairly high proportion of the continent's requirements, in contrast to the position with metals. However, in the cases of several minerals, production is dominated by one country and the majority are still dependent on imports for all but a few of these minerals. The proportions of selected minerals produced by Europe is given in Table 2.

**Table 2** EU31 production of selected industrial minerals as world percentages

<i>Industrial mineral</i>	<i>% of world</i>	<i>EU31 countries with &gt;2% of world output in 2005</i>
Feldspar	48.9	Italy (18%), Turkey, France, Spain, Czech Republic, Poland
Kaolin	25.3	UK (8.2%), Germany, Czech Republic, Turkey
Gypsum	25.1	Spain (11.5%), France
Bentonite & fuller's earth	21.0	Greece (5.9%), Spain, Turkey, Italy
Magnesite	20.1	Turkey (9.0%), Slovakia, Austria
Talc	16.1	Finland (5.9%), France
Potash	14.3	Germany (11.4%)
Fluorspar	6.6	Spain (2.9%)
Barytes	5.8	–

## 4. Metals

<sup>3</sup>In the case of several oxides, hydroxides and salts the yardstick for inclusion in this compilation is that the material should be the basis for a further transformation process although the compilers accept that this criterion has been applied in a flexible way.

<sup>4</sup>The tabulated statistics show that availability of reported data is much lower for industrial minerals than for metals, with many estimated totals being shown.



Until the middle of the nineteenth century the demands of industry in Europe were met by indigenous metal mines but thereafter it became clear that the resources of other continents would become an important source of supply, having, as they did, very large and rich ore bodies that could be worked at relatively low cost. Initially, ores and concentrates were transported to Europe for processing. Many high-volume ores, notably iron ore, still are imported but smelting and refining of base metal concentrates has been increasingly undertaken at or near the sites of the overseas mines. Europe as a whole is now heavily dependent on extra-European sources of virtually all metals although recycling makes an important contribution and, as the statistical tables show, several European countries still have significant mine production of one or more metals.

Certain European countries are major mine producers of particular metals, e.g. Poland for copper (3.4 per cent of the world total in 2005), Finland and Turkey for chromium (3.6 per cent and 3.0 per cent respectively) and Ireland for zinc (4.4 per cent), but the majority of European countries depend chiefly on imports from other continents. Since 2004, the percentage of mine production for metals produced in the EU31 has generally decreased slightly, but increases have been seen in chromium (5.6 per cent in 2004) due to increased production in Turkey, and nickel (1.7 per cent in 2004) as mining commenced in Spain from Rio Narcea's Aguablanca nickel mine. The overall European position with regard to mine production of the major non-ferrous metals in 2005 is shown in Table 3.

**Table 3** EU31 mine production of selected metals as world percentages

<i>Metal</i>	<i>% world</i>	<i>EU31 countries with &gt;1% of world output in 2005</i>
Silver	9.5	Poland (6.2%), Sweden, Turkey
Zinc	9.4	Ireland (4.4%), Sweden, Poland
Titanium	7.4	Norway (7.4%)
Lead	6.8	Ireland (2.2%), Sweden, Poland
Chromium	6.7	Finland (3.6%), Turkey
Copper	5.6	Poland (3.4%)
Tungsten	3.8	Austria (2.3%), Portugal
Nickel	2.1	Greece (1.4%)
Iron	2.0	Sweden (1.5%)
Aluminium (bauxite)	2.0	Greece (1.4%)
Mercury	1.8	Finland (1.8%)
Gold	0.6	–
Manganese	0.6	–

EU31 consumption for each of the metals listed in Table 3 is between 20 and 35 per cent of total world consumption.

European smelting and refining of imported ores and concentrates provides the bulk of supply in the cases of iron, aluminium (bauxite), zinc, lead and the minor metals associated with these elements, and about half of total copper supply. Refining in Europe of semi-processed materials from other continents accounts for a large part of vanadium, nickel and cobalt supply but tin metal is now entirely imported. Ferro-alloys of a number of metals are produced in Europe but imports of the major types are an indispensable part of total supply.

The balance of metals supply is made up of imports of refined metal. It is emphasized that the situation of individual countries may vary widely from one to another, as the statistics show.

In 2005, metals prices were generally high due, in part, to high demand from China, although cobalt, magnesium, platinum group metals and tin showed lower average prices than in 2004. China consumed around 22 per cent of the world total of refined aluminium and copper, 26 per cent of primary lead, 15 per cent of nickel, 33 per cent of refined tin, and 29 per cent of slab zinc (World Bureau of Metal Statistics). China also consumed 31 per cent of steel, although the per capita consumption was a fairly modest 268.6 kilograms (compare to the EU at 383.4 kilograms per capita) (International Iron and Steel Institute). Stocks of many minerals and metals, including copper, lead and zinc, were low.

## 5. Energy minerals

These comprise petroleum, natural gas, coal and uranium. Statistics for production and trade of petroleum and coal are fairly complete and present few problems to compilers. However the data for petroleum conceal the distribution of differing grades of crude oil. For example, although the UK is a net exporter of petroleum there is a significant import of heavy crude which is a necessary requirement that cannot be supplied by the North Sea and other offshore fields. In 2004 Norway produced 4.0 per cent of total world output of oil and the United Kingdom produced 2.3 per cent, these two countries being the seventh and fourteenth largest world producers respectively. No other European country produces more than 0.5 per cent of the world total. Europe (EU31) as a whole produced 7.5 per cent of the world total.

In January 2007, the Commission of the European Communities proposed a comprehensive package of measures to establish a new energy policy for Europe. The policy aims to address issues relating to sustainability, security of supply and competitiveness by proposing ambitious targets on greenhouse gas emissions and renewable energy, creating a true internal market, and strengthening regulation. The internal energy market would aim to be competitive, sustainable and have security of supply to avoid black-outs and price surges. Diversity of supply of gas will be promoted and effective mechanisms implemented to ensure solidarity between Member States in energy crises. In October 2006, the Commission adopted an Energy Efficiency Plan which, if successful, would mean the EU would use around 13 per cent less energy by 2020.

Before 1975, European production of both petroleum and natural gas was negligible but Europe produced 11.6 per cent of the world total for natural gas in 2005 and 6.8 per cent of petroleum. These percentages both show small reductions on the 2004 figures of 12.7 per cent and 7.5 per cent, respectively.

Coal output in Europe has been declining steadily for many years as deep mines become increasingly uncompetitive with sources in other continents. In 1981 production from the present EU31 countries was 1351 million tonnes. In 2005 production from the same territories was 682 million tonnes of which half was provided by Germany (3.4 per cent of the world total) and Poland (2.7 per cent).

‘Black coal’ or ‘hard coal’ is normally taken to mean bituminous coal and anthracite. ‘Brown coal’ comprises sub-bituminous coal and lignite. Black coals have a higher calorific value and lower volatile content than brown coals, the use of which is almost confined to burning in electricity generating stations. Within black coals a fundamental division is made into ‘steam coal’, for power generation, and ‘coking coal’, used for metallurgical purposes, predominantly iron smelting in blast furnaces. An important distinction in mining methods is that between deep mines (with shafts or deep declines) and opencast or open pit mines. The latter have, as a rule, lower costs and are therefore more profitable. Both methods give rise to planning and social concerns.

Mine production of uranium in the EU31 countries in 2005 amounted to 696 tonnes U<sub>3</sub>O<sub>8</sub> equivalent, or 1.4 per cent of the world total, chiefly attributable to the Czech Republic. The EU31 countries occupy the top four positions for nuclear share in electricity generation in 2005 (International Atomic Energy Agency). These countries are France, Lithuania, Slovakia and Belgium, with nuclear share ranging from 78.5 per cent to 55.6 per cent.

The overall European position with regard to production of energy minerals in 2005 is shown in Table 4.

**Table 4** EU31 production of energy minerals as world percentages

<i>Mineral</i>	<i>% world</i>	<i>EU31 countries with &gt; 1% of world output 2005</i>
Natural gas	11.6	UK (3.3%), Norway, Netherlands
Coal	11.6	Germany (3.4%), Poland, Greece, Turkey, Czech Republic
Petroleum	6.8	Norway (3.6%), UK
Uranium	1.4	Czech Republic (1.0%)

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## Explanatory notes

The statistics in this publication are from the World Mineral Statistics database.

### Coverage

*European 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 BGS files and is available for consultation.

### Production

*Metals* Mine production of many metals is expressed in terms of metal content. This is clearly indicated adjacent to the commodity description. Unless otherwise specified, metal production statistics relate to metal recovered from both domestic and imported materials, whether primary or secondary, but exclude remelted material.

## **Trade**

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

Tables showing trade in 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'.

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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* and

*Metallstatistik*; publications of the Interstate Statistical Committee of the CIS, the United States Geological Survey, and the United Nations Statistics Division.

In addition, information has been obtained from the websites of the following organisations, companies, statistical offices and government departments: United Nations; Kaolin & Plastic Clays Europe; International Iron and Steel Institute; Eurofer; World Nuclear Association; Eurostat; European Aggregates Association; Falconbridge Ltd; Inmet Mining; Aluminium de Grece; New Boliden; Eurozinc Mining Corporation; Vereinigung der Osterreichischen Zementindustrie, Austria; Federation de l'Industrie Cimentiere Belge, Belgium; Statistics Belgium; Czech Republic Statistical Office; Statistics Denmark; Geological Survey of Finland; Federation des Minerais, Mineraux Industrielles et Metaux non Ferreux, France; Comite Professionel de Petrole, France; Ministere de l'Economie, des Finances et de l'Industrie, France; Infociments, France; Statistisches Bundesamt Deutschland, Germany; National Statistical Service of Greece; Federacciai, Italy; Unione Petrolifera, Italy; Istituto Nazionale di Statistica, Italy; Statec, Luxembourg; Centraal Bureau voor de Statistiek, Netherlands; Staatstoezicht op de Mijnen, Netherlands; Statistisk Sentralbyra, Norway; Instituto Nacional de Estatistica, Portugal; Unesid, Spain; Sveriges Geologiska Undersokning, Sweden; Jernkontoret, Sweden; Statistiska Centralbyran, Sweden; Department of Trade and Industry, United Kingdom; The Crown Estate, United Kingdom.

## 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

## Table notes for country tables

### Aggregates – production

- (1) So far as possible, these statistics include construction sands; gravel, pebbles, shingle and flint; crushed stone used for concrete aggregates, roadstone and other construction use; granules, chippings and powders, listed under Prodcom codes 14211190, 14211210, 14211230, 14211250, 14211290
- (2) Where official sources show more than one series for aggregates the higher series has generally been used in this compilation
- (3) Where marine sands and gravels have been identified, these are included
- (4) Information may be incomplete or absent due to reporting methods, confidentiality or lack of available information. All EU31 countries produce sand and gravel and crushed rock
- (5) Production from many small operations are not officially compiled. The minimum number of employees for which establishments are required to report production varies between different countries and can also vary from year to year within a country
- (6) Quantities of sand from sand and gravel operations may be discarded due to low demand. This may or may not be included in the statistics

### Aggregates - exports and imports

- (1) The figures in this table include construction sands, pebbles, gravel, shingle, flint, crushed rock, granules, chippings and powders covered by the Harmonised System codes 2505.90, 2517.10, 2517.41 and 2517.49
- (2) Exports include marine dredged sand and gravel landed at foreign ports

### Bauxite - production

- (1) Including production of refractory bauxite

### Alumina - production

- (1) Where possible figures show the alumina equivalent ( $Al_2O_3$ ) of total hydrate produced, whether or not calcined

### Bauxite, alumina and aluminium - exports and imports

- (1) Except where alumina hydrate is separately specified, national trade figures for alumina can be considered as inclusive of hydrate
- (2) 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

### Antimony - mine production

- (1) Including antimony content of antimonial lead alloys

### White arsenic - production

- (1) Including calculated trioxide equivalent of arsenic metal produced except where this would involve double counting

### Arsenic - exports and imports

- (1) Data relating to arsenic are not fully recorded by many countries

### Barytes - production

- (1) Small quantities of witherite may be included

### Barytes - exports and imports

- (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

- (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 attapulgit, a mineralogically distinct clay mineral but exhibiting similar properties

### Bentonite and Fuller's Earth - exports and imports

- (1) See notes 1 - 3 under production
- (2) The figures refer to natural and sodium-exchanged bentonite, and fuller's earth, Harmonised System 2508.10 and 2580.20
- (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

### Bismuth - mine production

- (1) In some instances the figures are 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

### Bismuth - exports and imports

- (1) The compounds are bismuth carbonate and/or bismuth nitrate

### Bromine - exports and imports

- (1) Trade in bromine is not separately distinguished from other halogens by many countries

### Cadmium - production

- (1) Data exclude secondary metal

### Chromium - exports and imports

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

### Coal - production

- (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

### Coal - exports

- (1) Excludes bunker shipments

### Cobalt metal - production

- (1) In addition, several countries including the United Kingdom, Finland and France are known to produce substantial amounts of cobalt compounds

### Copper - smelter production

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

#### Refined copper - production

- (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

#### Copper - exports and imports

- (1) The term 'unwrought' copper corresponds to items 7402, 7403 and 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

#### Diamond - exports and imports

- (1) Carats have been used as the unit except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
- (2) See explanatory notes at the front of the volume regarding currency conversion
- (3) The term 'Dust' corresponds to item 7105.10 of the Harmonised System and includes both natural and synthetic diamond dust

#### Gold - mine production

- (1) In several countries substantial amounts of gold produced in small operations are not recorded in the official statistics

#### Gold - exports and imports

- (1) The term 'metal' includes both unwrought and partly worked gold and alloys but excludes gold coin

#### Graphite - production

- (1) Including all forms of amorphous and crystalline graphite but excluding synthetic material

#### Graphite - exports and imports

- (1) Excluding synthetic graphite

#### Gypsum - production

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

#### Gypsum - exports & imports

- (1) The term 'crude' may include some anhydrite

#### Pig iron - production

- (1) Sponge iron and direct reduced iron (DRI) are included where these have been separately identified

#### Crude steel - production

- (1) Figures include production from scrap unless otherwise indicated

#### Iron, steel and ferro-alloys - exports and imports

- (1) 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

#### Refined Lead - production

- (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

#### Lead - exports and imports

- (1) 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 identified.

#### Magnesite and magnesia - exports and imports

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

#### Manganese - exports and imports

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

#### Mercury - production

- (1) Several countries are believed to have unrecorded production of mercury from copper electrowinning processes and by recovery from effluents

#### Mica - exports and imports

- (1) Data show unmanufactured mica and include sheet, block, splittings, ground and waste, unless these are separately specified. Mica powder is included under the term 'ground'

#### Molybdenum - exports and imports

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

#### Nickel - smelter/refinery production

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

#### Nickel - exports and imports

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

#### Crude petroleum - production

- (1) The figures include natural gas liquids

#### Natural gas - production

- (1) Flared or reinjected gas is excluded as far as possible

#### Platinum group metals - exports and imports

- (1) The term 'Platinum' and/or 'Platinum metals' includes unwrought, partly worked and alloys

#### Rare earths - exports and imports

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

#### Salt - production

- (1) Refined salt is excluded
- (2) Salt is known to be produced in many countries for which statistics are not available.

#### Sillimanite minerals - production

- (1) A number of other countries produce sillimanite minerals but details of output are not reported

#### Sillimanite minerals - exports and imports

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

#### Silver - exports and imports

- (1) Excluding silver coin but including silver shipped for minting
- (2) The term 'metal' includes both unwrought and partly worked silver and alloys

#### Tantalum and niobium - exports and imports

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



#### Tin - exports and imports

- (1) The term 'unwrought' tin corresponds to item 8001 of the Harmonised System and comprises ingots, pigs, unwrought bars, sticks, etc

#### Titanium minerals - production

- (1) The figures refer to gross tonnage of titanium concentrates

#### Titanium - exports and imports

- (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', 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

#### Tungsten - exports and imports

- (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

#### Uranium – mine production

- (1) Excludes uranium production from decommissioning operations.

#### Vanadium - exports and imports

- (1) 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

#### Zinc - exports and imports

- (1) The term 'unwrought' zinc corresponds to item 7901 of the Harmonised System and comprises blocks, pigs, slabs, etc

#### Zirconium - exports and imports

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



# **STATISTICAL TABLES BY COUNTRY**

# Austria

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel (c)	tonnes	23 102 333	28 758 261	27 287 331	29 395 685	29 082 502
Crushed rock (c)	tonnes	22 404 109	22 438 122	26 333 481	27 687 041	25 204 014
Cement, clinker	tonnes	...	...	...	...	80 288
Cement, finished	tonnes	3 863 000	3 967 000	*4 000 000	4 040 000	4 739 768
Coal						
Anthracite & bituminous	tonnes	...	...	...	...	7 793
Brown coal & lignite	tonnes	(e) 1 193 970	(e) 1 411 824	(e) 1 152 389	(e) 235 397	6 138
Copper, refined	tonnes	66 154	64 900	65 100	74 200	72 300
Graphite (a)	tonnes	116	—	—	—	—
Gypsum						
Gypsum	tonnes	790 478	847 117	889 727	920 809	911 162
Anhydrite	tonnes	138 745	122 085	113 823	117 318	106 032
Iron ore (b)	tonnes	1 843 275	1 941 759	2 124 787	1 889 419	2 047 950
Pig iron	tonnes	4 392 878	4 607 000	4 676 742	4 846 740	5 400 000
Crude steel	tonnes	5 870 000	6 189 000	6 261 000	6 530 000	7 031 000
Ferro-alloys						
Ferro-molybdenum	tonnes	4 900	4 930	4 400	4 700	5 000
Ferro-nickel	tonnes	2 600	2 150	2 000	1 900	2 500
Ferro-vanadium	tonnes	5 800	5 500	5 300	5 800	6 250
Kaolin	tonnes	20 047	21 212	15 034	16 345	55 508
Lead, refined	tonnes	23 666	*23 000	*20 000	*26 000	*24 000
Magnesite	tonnes	680 534	728 235	766 525	715 459	693 754
Nickel, smelter/refinery	tonnes	1 300	*1 000	1 000	300	400
Crude petroleum	tonnes	1 050 355	1 032 204	1 014 716	981 588	933 040
Natural gas	million m <sup>3</sup>	1 954	2 015	2 029	2 011	1 654
Salt						
Rock salt	tonnes	1 384	1 491	1 610	1 228	1 497
Salt in brine	tonnes	646 000	641 634	723 286	745 670	*745 000
Sulphur and pyrites						
Recovered (d)	tonnes (sulphur content)	50 135	54 925	50 568	55 322	54 377
Talc	tonnes	137 776	138 195	137 596	136 305	166 569
Tungsten, mine	tonnes (metal content)	1 429	1 377	1 381	1 335	1 280

Note(s):-

(1) Austria is believed to produce arsenic & bentonite

(a) Crude

(b) Including micaceous iron oxide

(c) Sales

(d) From petroleum refining and/or natural gas

(e) Coal; all forms

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	2 323 043	2 581 242	3 163 141	2 829 930	2 745 393
Aluminium and bauxite						
Unwrought	tonnes	12 071	14 271	16 150	13 341	6 616
Unwrought alloys	tonnes	89 985	94 594	87 528	122 693	125 796
Scrap	tonnes	55 565	57 505	52 564	71 362	67 434
Antimony						
Metal	tonnes	37	103	16	19	1 089
Barytes	tonnes	1 402	1 197	479	2 737	1 407
Bentonite and fuller's earth						
Bentonite	tonnes	8 142	10 394	9 246	8 242	10 173
Bismuth						
Metal	tonnes	24	0	8	8	8
Cement						
Cement clinkers	tonnes	60 212	47 401	54 375	58 262	32 877
Portland cement	tonnes	118 822	97 600	136 732	185 069	151 330
Other cement	tonnes	19 896	27 365	42 712	40 830	53 951

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Chromium						
Ores & concentrates	tonnes	647	896	1 155	392	276
Metal	tonnes	2 858	4 506	5 485	7 194	8 893
Cobalt						
Metal	tonnes	50	173	85	22	5
Copper						
Unwrought	tonnes	84 765	74 370	81 897	71 119	83 750
Unwrought alloys	tonnes	1 121	916	907	580	604
Scrap	tonnes	18 439	25 765	25 606	36 476	33 274
Diamond						
Unsorted	carats	£128 000	£2 321 000	£319 000	£477 000	£188 000
Gem	carats	£1 511 000	...	...	£1 665 000	£2 895 000
Dust	carats	£418 000	£653 000	£190 000	£432 000	£406 000
Diatomite	tonnes	5 802	5 071	4 650	5 347	5 375
Feldspar	tonnes	10 174	12 279	13 436	18 864	18 998
Gold						
Metal	kilograms	16 800	18 000	10 900	11 500	8 500
Waste & scrap	kilograms	44 900	5 600	2 500	2 900	5 500
Graphite	tonnes	3 631	3 384	4 574	5 094	7 082
Gypsum						
Crude	tonnes	54 034	46 524	21 562	22 732	21 433
Calcined	tonnes	72 827	82 493	97 840	100 444	94 207
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	6 154	16 390	17 202	5 999	9 476
Silicon metal	tonnes	140	470	751	598	628
Ingots, blooms, billets	tonnes	177 057	217 580	256 981	334 124	484 431
Scrap	tonnes	754 489	777 267	842 323	1 099 278	1 024 301
Kaolin	tonnes	2 998	3 105	1 870	2 277	3 019
Lead						
Unwrought	tonnes	6 375	7 831	8 988	14 504	10 746
Magnesite and magnesia						
Magnesite	tonnes	82	5 489	2 401	642	1 338
Magnesia	tonnes	54 021	44 729	50 263	73 037	59 283
Manganese						
Metal	tonnes	28 326	29 058	18 923	11 575	5 470
Mercury	kilograms	24 100	900	800	1 700	4 100
Mica	tonnes	2 951	3 512	3 767	3 917	4 915
Molybdenum						
Metal	tonnes	2 023	2 123	(b) *2 200	(b) *2 300	(b) *4 800
Oxides	tonnes	0	0	5	125	...
Nickel						
Mattes, sinters etc.	tonnes	153	288	47	9	...
Unwrought (a)	tonnes	532	570	206	297	226
Scrap	tonnes	495	377	440	1 520	1 927
Crude petroleum	tonnes	60 151	...	—	—	—
Phosphates	tonnes	1 320	906	1 280	802	1
Platinum metals						
Platinum & platinum metals	kilograms	£2 785 000	£2 827 000	£4 556 000	£8 114 000	£12 253 000
Waste & scrap	kilograms	...	...	£362 000	£50 000	£397 000
Rare earths						
Cerium compounds	tonnes	...	(b) *2 500	1 750	1 564	1 980
Other rare earth compounds	tonnes	...	(b) *7 000	6 144	6 415	6 449
Metals	tonnes	...	...	417	456	421
Salt	tonnes	...	...	253 791	183 850	199 133
Silver						
Metal	kilograms	116 900	101 000	87 800	77 400	62 600
Sulphur and pyrites						
Sulphur, sublimed & precipitated	tonnes	6 707	14 596	9 265	8 435	9 245
Talc	tonnes	162 302	142 879	174 590	151 022	158 799
Tantalum and niobium						
Tantalum	tonnes	98	43	...	—	—
Tin						
Unwrought (a)	tonnes	80	115	151	153	116
Scrap	tonnes	206	363	153	278	62

Austria

Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Titanium						
Metal	tonnes	298	300	340	397	317
Oxides	tonnes	2 876	3 000	2 404	2 640	3 457
Tungsten						
Metal	tonnes	967	813	(b) *1 300	(b) *2 400	(b) *2 100
Zinc						
Unwrought (a)	tonnes	15 461	34 705	36 012	37 304	13 469
Scrap	tonnes	2 089	3 763	2 984	2 000	3 559

Note(s):-

(a) Including alloys

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

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	2 293 185	2 545 866	2 446 023	2 087 667	2 516 839
Aluminium and bauxite						
Bauxite	tonnes	25 581	21 354	31 082	36 791	36 123
Alumina	tonnes	43 134	41 141	43 318	23 636	41 269
Alumina hydrate	tonnes	5 937	6 538	7 779	6 372	10 125
Unwrought	tonnes	160 372	136 767	141 841	106 348	82 597
Unwrought alloys	tonnes	139 329	170 541	184 478	229 607	214 611
Scrap	tonnes	(b) *123 900	(b) *129 700	(b) *143 400	128 798	150 412
Antimony						
Metal	tonnes	205	270	120	53	74
Oxide	tonnes	146	190	207	316	263
Arsenic						
Metallic arsenic	tonnes	28	16	5	...	2
Barytes	tonnes	3 151	2 420	2 742	3 910	5 863
Bentonite and fuller's earth						
Bentonite	tonnes	55 291	54 441	47 358	53 871	58 344
Fuller's earth	tonnes	45	129	560	615	374
Bismuth						
Metal	tonnes	67	105	128	114	62
Bromine	kilograms	228 000	254 900	252 200	93 000	222 000
Cement						
Cement clinkers	tonnes	314 407	314 864	444 535	443 956	532 745
Portland cement	tonnes	717 691	804 924	763 455	773 897	860 087
Other cement	tonnes	29 489	18 597	17 434	51 811	43 083
Chromium						
Ores & concentrates	tonnes	37 321	28 384	36 348	26 761	21 398
Metal	tonnes	1 713	1 808	2 337	3 731	4 440
Coal						
Hard coal (c)	tonnes	3 846 806	3 993 504	3 965 922	3 552 594	4 108 821
Brown coal	tonnes	52 745	61 439	59 077	38 833	2 139
Briquettes	tonnes	108 786	76 354	84 343	83 035	96 318
Cobalt						
Metal	tonnes	415	345	30	585	694
Copper						
Unwrought, unrefined	tonnes	—	—	—	15 203	20 081
Unwrought, refined	tonnes	35 845	24 707	29 479	18 429	21 176
Unwrought alloys	tonnes	3 164	2 555	3 103	2 460	2 260
Scrap	tonnes	59 281	80 512	82 015	87 807	82 787
Diamond						
Unsorted	carats	£2 616 000	£1 647 000	£1 734 000	£1 193 000	£1 254 000
Gem, cut	carats	£4 963 000	£3 789 000	£4 329 000	£4 660 000	£5 743 000
Industrial	carats	£461 000	£115 000	£105 000	£631 000	£706 000
Dust	carats	33 000 000	20 000 000	15 000 000	24 000 000	23 000 000
Diatomite	tonnes	21 396	24 364	12 946	13 178	12 892
Feldspar	tonnes	4 213	1 608	1 083	418	1 549
Fluorspar	tonnes	3 514	3 448	2 125	3 078	2 561

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Gold						
Metal	kilograms	21 300	17 300	26 500	17 300	22 100
Waste & scrap	kilograms	400	1 200	200	200	1 800
Graphite	tonnes	5 521	6 004	4 971	7 229	13 655
Gypsum						
Crude	tonnes	16 701	17 429	23 705	16 985	15 280
Calcined	tonnes	41 988	48 808	59 897	70 261	66 118
Iodine	kilograms	101 600	81 000	85 500	124 100	92 700
Iron ore	tonnes	...	...	5 691 360	5 783 359	7 423 015
Iron, steel and ferro-alloys						
Pig iron	tonnes	34 724	30 284	34 462	66 196	51 982
Sponge & powder	tonnes	10 385	14 873	12 042	10 917	25 214
Ferro-chrome	tonnes	33 710	24 412	32 874	43 438	41 046
Ferro-silico-magnesium	tonnes	829	877	969	627	678
Ferro-manganese	tonnes	24 511	37 772	34 748	39 026	37 865
Ferro-silico-manganese	tonnes	5 054	4 829	11 795	6 817	26 572
Ferro-molybdenum	tonnes	1 087	1 348	1 066	1 011	617
Ferro-niobium & ferro-niobium-tantalum	tonnes	543	781	1 669	934	899
Ferro-phosphorus	tonnes	990	1 023	1 645	1 433	1 749
Ferro-silicon	tonnes	20 884	23 493	36 918	47 223	32 445
Ferro-titanium & Fe-Si-Ti	tonnes	737	1 136	1 427	961	1 121
Ferro-tungsten & Fe-Si-W	tonnes	845	562	712	589	535
Ferro-vanadium	tonnes	622	571	643	587	256
Other ferro-alloys	tonnes	3 640	3 083	3 631	3 321	3 981
Silicon metal	tonnes	8 478	10 273	9 822	9 127	11 698
Ingots, blooms, billets	tonnes	163 944	120 409	99 393	156 796	108 004
Scrap	tonnes	833 909	865 061	936 512	1 017 497	1 113 082
Kaolin	tonnes	254 030	249 132	228 674	249 353	234 906
Lead						
Unwrought	tonnes	46 677	44 878	37 927	39 533	23 062
Scrap	tonnes	1 921	1 844	2 672	2 192	1 068
Lithium						
Carbonate	tonnes	114	113	118	115	182
Magnesite and magnesia						
Magnesite	tonnes	2 878	13 115	12 935	4 814	17 019
Magnesia	tonnes	26 220	20 545	9 325	181 050	188 449
Manganese						
Metal	tonnes	19 889	18 223	10 024	6 497	8 707
Mercury	kilograms	2 400	5 700	4 000	3 900	1 600
Mica	tonnes	570	599	899	645	512
Molybdenum						
Metal	tonnes	197	356	382	865	599
Nickel						
Mattes, sinters etc.	tonnes	552	737	401	369	460
Unwrought (a)	tonnes	5 150	4 554	5 251	6 772	6 903
Scrap	tonnes	540	641	520	632	447
Oxides	tonnes	853	609	430	293	312
Crude petroleum	tonnes	7 858 165	8 128 843	7 819 276	7 539 310	7 836 688
Phosphates	tonnes	...	...	237 605	210 010	67 853
Platinum metals						
Platinum & platinum metals	kilograms	600	2 900	9 400	9 400	7 200
Potash						
Fertiliser salts	tonnes	17 357	19 531	20 424	23 040	23 685
Chloride	tonnes	3 618	5 318	159 216	145 757	144 234
Other potassic fertilisers	tonnes	5 874	4 685	17 997	22 629	15 713
Rare earths						
Cerium compounds	tonnes	2 287	2 025	2 810	2 034	3 055
Other rare earth compounds	tonnes	5 534	3 128	3 062	3 973	2 685
Metals	tonnes	409	324	457	463	374
Salt	tonnes	59 742	92 209	206 355	350 903	210 736
Sillimanite	tonnes	3 531	2 499	2 660	1 981	2 194
Silver						
Metal	kilograms	138 500	100 900	109 300	127 600	127 900

## Austria

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Sulphur and pyrites						
Pyrites	tonnes	1 040	1 064	2 107	3 126	3 251
Sulphur	tonnes	22 055	44 365	64 198	58 218	60 054
Sulphur, sublimed & precipitated	tonnes	314	237	388	6 339	9 589
Talc	tonnes	50 199	46 833	30 831	49 930	50 768
Tantalum and niobium						
Tantalum	tonnes	12	3	54	64	0
Tin						
Unwrought (a)	tonnes	838	906	702	765	1 926
Scrap	tonnes	186	208	174	170	79
Titanium						
Metal	tonnes	1 594	1 062	441	943	1 691
Oxides	tonnes	19 343	19 478	18 528	18 612	25 640
Tungsten						
Metal	tonnes	399	235	271	400	825
Carbide	tonnes	703	399	...	...	...
Vanadium						
Vanadiferous residues	tonnes	*26 000	*25 000	*25 000	*27 000	*29 000
Ores & concentrates	tonnes	527	488	459	467	1 565
Pentoxide	tonnes	1 477	1 042	(b) *400	(b) *1 000	...
Metal	tonnes	0	7	2	9	—
Zinc						
Unwrought	tonnes	54 380	51 331	58 968	47 866	58 838
Unwrought alloys	tonnes	22 617	23 414	24 621	31 444	28 955
Scrap	tonnes	1 233	1 774	1 643	2 035	609
Zirconium						
Concentrates	tonnes	1 127	1 526	1 206	1 486	1 200

## Note(s):-

(a) Including alloys

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

(c) Including anthracite



## Belgium

### Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel (a) (b)	tonnes	11 064 638	10 449 346	9 245 757	8 787 817	8 330 239
Crushed rock (a) (c)	tonnes	39 270 358	39 772 457	36 772 879	38 562 546	40 388 027
White arsenic	tonnes	*1 000	*1 000	*1 000	*1 000	*1 000
Cadmium	tonnes	1 236	117	—	—	—
Cement clinker	tonnes	1 121 656	1 301 790	...	...	...
Cement, finished	tonnes	7 241 000	7 103 000	6 553 000	6 216 000	6 587 000
Cobalt metal	tonnes	*1 090	1 135	1 704	(d) 2 947	(d) 3 298
Copper, refined	tonnes	424 000	422 500	423 000	383 000	382 900
Pig iron	tonnes	7 732 111	7 988 396	7 812 593	8 224 000	7 254 000
Crude steel	tonnes	10 741 493	11 322 008	11 114 775	11 697 000	10 422 000
Ferro-alloys						
Ferro-vanadium	tonnes	926	1 492	...	...	...
Kaolin	tonnes	*300 000	*300 000	*300 000	*300 000	*300 000
Lead, refined	tonnes	100 000	88 000	65 000	62 000	97 200
Selenium metal	tonnes	*200	*200	*200	*200	*200
Sulphur and pyrites						
Recovered (e) (f)	tonnes (sulphur content)	368 000	359 000	383 000	371 000	376 000
Tin, smelter	tonnes	8 500	8 900	7 700	8 900	7 700
Slab zinc	tonnes	256 400	238 700	244 400	272 500	222 000

Note(s):-

- (a) Deliveries
- (b) Includes silica sand
- (c) Includes gravel, slag and tarred macadam
- (d) Some metal production in China is recorded in Belgium
- (e) From metal sulphide processing
- (f) From petroleum refining and/or natural gas

## Luxembourg

### Production

Commodity	Units	2001	2002	2003	2004	2005
Cement clinker	tonnes	844 000	895 000	770 000	847 000	834 000
Cement, finished	tonnes	726 000	729 000	709 000	797 000	767 000
Crude steel	tonnes	2 724 679	2 736 000	2 675 000	2 684 000	2 194 000

## Belgium-Luxembourg

### Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	15 784 851	15 340 439	13 562 764	13 208 283	14 573 270
Aluminium and bauxite						
Bauxite	tonnes	63 483	73 550	98 961	54 734	46 717
Alumina	tonnes	3 608	8 955	7 058	...	10 714
Unwrought	tonnes	142 931	234 880	157 800	266 682	267 811
Unwrought alloys	tonnes	41 445	52 402	40 919	42 010	38 889
Scrap	tonnes	161 980	151 468	133 871	137 374	149 914
Antimony						
Metal	tonnes	2	48	181	493	693
Oxide	tonnes	(a) *11 700	(a) *11 700	12 063	12 443	11 526
Arsenic						
Metallic arsenic	tonnes	29	62	27	10	101
Barytes	tonnes	6 707	1 781	1 424	3 646	4 016

## Belgium-Luxembourg

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Bentonite and fuller's earth						
Bentonite	tonnes	5 642	14 819	28 403	22 700	26 049
Bismuth						
Compounds	tonnes	1 415	...	...	...	...
Bromine	kilograms	21 200 000	21 462 800	17 930 400	21 275 800	19 124 000
Cadmium						
Metal	tonnes	1 525	607	1 018	746	639
Sulphide	tonnes	31	17	10	15	29
Cement						
Cement clinkers	tonnes	1 111 745	767 780	749 249	842 257	833 257
Portland cement	tonnes	1 432 246	1 854 749	1 815 882	1 598 742	1 715 979
Other cement	tonnes	840 274	687 836	592 657	616 066	612 642
Chromium						
Ores & concentrates	tonnes	17 051	9 510	5 491	2 433	10 777
Metal	tonnes	318	262	660	852	782
Coal						
Anthracite	tonnes	1 029 455	940 201	999 793	1 399 280	1 463 646
Other coal	tonnes	1 309 947	1 783 567	1 777 869	2 273 223	2 948 838
Briquettes	tonnes	15 955	43 484	19 122	...	11 682
Cobalt						
Ore	tonnes	104	145	381	1 064	543
Metal (b)	tonnes	*3 300	*3 600	*3 800	*3 900	*3 100
Oxides (b)	tonnes	*3 200	*3 800	*6 900	*2 100	*5 200
Copper						
Matte & cement	tonnes	631	15 222	...	493	...
Unwrought, unrefined	tonnes	12 322	3 537	10 521	19 942	4 499
Unwrought, refined	tonnes	240 995	201 367	336 637	169 556	241 363
Unwrought alloys	tonnes	20 265	14 815	21 710	13 556	14 463
Scrap	tonnes	136 612	127 668	152 584	169 397	177 787
Diamond						
Gem, rough	carats	122 500 000	...	131 000 000	154 000 000	147 000 000
Gem, cut	carats	4 500 000	8 000 000	6 500 000	6 000 000	5 500 000
Industrial	carats	8 000 000	8 000 000	10 500 000	7 000 000	5 500 000
Dust	carats	24 500 000	39 500 000	38 000 000	42 500 000	40 000 000
Diatomite	tonnes	3 575	3 174	1 512	1 856	1 330
Fluorspar	tonnes	298	219	22 639	4 208	26 395
Gold						
Metal	kilograms	3 200	2 000	500	1 200	100
Waste & scrap	kilograms	£1 365 000	...	£1 316 000	...	...
Graphite	tonnes	4 878	5 653	9 097	581	834
Gypsum						
Crude	tonnes	104 842	59 688	64 538	91 110	46 691
Calcined	tonnes	3 998	3 628	2 556	175 496	2 709
Iodine	kilograms	1 908 400	2 351 000	4 904 400	3 646 100	3 460 200
Iron ore	tonnes	43 578	70 035	43 752	23 450	81 560
Iron, steel and ferro-alloys						
Pig iron	tonnes	116 359	172 175	227 815	225 486	201 577
Sponge & powder	tonnes	4 395	13 263	18 741	29 127	15 850
Ferro-chrome	tonnes	39 937	41 565	39 778	32 998	31 851
Ferro-silico-chrome	tonnes	...	3 593	10 381	7 214	9 107
Ferro-silico-magnesium	tonnes	1 171	38	79	39	11
Ferro-manganese	tonnes	24 367	23 985	16 246	9 621	11 674
Ferro-silico-manganese	tonnes	31 139	29 953	38 032	41 307	29 858
Ferro-molybdenum	tonnes	...	...	...	19 219	22 420
Ferro-silicon	tonnes	30 427	30 962	18 856	31 000	21 812
Other ferro-alloys	tonnes	9 135	4 342	9 678	6 445	6 700
Silicon metal	tonnes	12 440	5 873	8 227	6 078	9 095
Ingots, blooms, billets	tonnes	498 122	548 174	395 499	368 589	639 936
Scrap	tonnes	1 799 938	1 821 636	2 310 658	2 851 040	2 712 683
Kaolin	tonnes	357 363	332 718	539 940	664 743	777 451
Lead						
Ores & concentrates	tonnes	96 613	104 187	84 545	109 580	96 610
Unwrought	tonnes	96 885	84 303	104 827	93 316	110 372
Scrap	tonnes	9 465	6 981	6 307	12 736	9 142

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Lithium						
Oxides	tonnes	470	548	982	1 837	1 545
Carbonate	tonnes	3 392	3 935	4 000	10 053	4 999
Magnesite and magnesia						
Magnesite	tonnes	276	440	7 061	512	575
Magnesia	tonnes	60 846	73 182	134 268	53 755	52 665
Manganese						
Ores & concentrates	tonnes	47 237	16 949	13 476	11 300	10 648
Metal	tonnes	4 129	3 216	3 091	1 377	1 826
Mercury	kilograms	54 100	15 900	17 000	1 300	8 800
Mica	tonnes	829	915	1 907	1 635	3 226
Molybdenum						
Ores & concentrates	tonnes	9 864	9 271	11 690	16 219	17 683
Metal	tonnes	543	199	314	221	342
Oxides	tonnes	242	1 621	820	571	687
Nickel						
Unwrought	tonnes	12 265	12 351	9 848	16 290	13 376
Unwrought alloys	tonnes	2 531	1 752	1 947	2 843	2 510
Scrap	tonnes	2 595	6 118	1 114	1 694	1 008
Oxides	tonnes	380	712	268	772	702
Crude petroleum	tonnes	328 893	2 319 755	2 263 897	2 967 608	2 616 977
Phosphates	tonnes	43 858	54 563	75 856	101 115	108 238
Platinum metals						
Platinum	kilograms	3 000	3 200	2 000	1 000	700
Platinum metals	kilograms	8 300	7 300	2 100	4 400	2 100
Waste & scrap	kilograms	762 100	319 342	239 700	245 596	305 700
Potash						
Fertiliser salts	tonnes	3 172	5 313	1 193	441	127
Sulphate (a)	tonnes	*399 600	*444 600	*490 000	*685 000	*598 000
Chloride	tonnes	184 145	211 383	142 227	140 950	116 862
Other potassic fertilisers	tonnes	4 561	5 803	4 756	7 993	9 773
Rare earths						
Rare earth compounds	tonnes	1 060	452	743	721	413
Ferro-cerium & other pyrophoric alloys	tonnes	9	7	2	0	...
Metals	tonnes	265	160	158	237	187
Salt	tonnes	68 728	129 726	117 806	105 680	121 103
Sillimanite	tonnes	6 368	5 783	22 825	49 319	77 463
Silver						
Ores & concentrates	kilograms	...	1 128 700	56 900	29 800	7 200
Metal	kilograms	27 300	67 500	47 600	24 100	12 600
Sulphur and pyrites						
Sulphur	tonnes	41 761	44 882	40 984	36 824	47 927
Sulphur, sublimed & precipitated	tonnes	239	291	350	338	290
Talc	tonnes	81 767	86 924	92 350	128 120	168 900
Tin						
Unwrought	tonnes	7 897	8 883	7 538	8 803	6 814
Unwrought alloys	tonnes	338	138	171	184	388
Scrap	tonnes	116	28	601	607	362
Titanium						
Titanium minerals	tonnes	2 718	113 342	123 823	139 393	131 597
Metal	tonnes	1 348	1 296	1 214	1 031	1 093
Oxides	tonnes	286 659	314 469	348 005	397 481	366 632
Tungsten						
Metal	tonnes	448	259	374	404	452
Carbide	tonnes	26	21	35	39	25
Vanadium						
Vanadiferous residues	tonnes	4 408	3 414	3 129	...	...
Ores & concentrates	tonnes	...	218	748	1 456	2 600
Pentoxide	tonnes	26	46	22	9	2
Zinc						
Ores & concentrates	tonnes	332 101	101 157	232 845	384 652	511 730
Unwrought	tonnes	89 817	114 430	130 356	136 768	10 058
Scrap	tonnes	22 938	28 597	19 485	26 546	37 754

## Belgium-Luxembourg

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Zirconium						
Concentrates	tonnes	14 979	18 253	10 047	11 105	22 965
Metal	tonnes	193	233	163	170	222

## Note(s):-

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

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

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	23 173 017	17 771 910	19 492 423	20 219 032	20 831 220
Aluminium and bauxite						
Bauxite	tonnes	112 399	106 310	102 691	82 208	87 376
Alumina	tonnes	8 785	9 983	11 350	12 942	10 879
Alumina hydrate	tonnes	35 659	43 902	43 941	33 798	37 831
Unwrought	tonnes	448 703	473 246	382 266	513 835	497 013
Unwrought alloys	tonnes	151 061	196 413	217 309	235 761	265 937
Scrap	tonnes	185 465	157 885	146 723	157 812	158 799
Antimony						
Ores & concentrates	tonnes	6	491	6	13	5
Metal	tonnes	11 928	13 379	11 409	12 225	10 722
Oxide	tonnes	900	1 583	1 615	1 708	1 735
Arsenic						
Metallic arsenic	tonnes	73	75	90	95	164
Asbestos	tonnes	65	...	1	63	...
Barytes	tonnes	6 706	5 369	6 045	3 255	3 432
Bentonite and fuller's earth						
Bentonite	tonnes	24 730	27 239	33 129	35 509	45 282
Fuller's earth	tonnes	6 362	6 626	6 428	11 164	8 028
Bismuth						
Metal	tonnes	1	4	4	20	27
Bromine	kilograms	23 057 000	25 627 900	21 097 900	23 466 200	25 108 000
Cadmium						
Metal	tonnes	7 828	5 121	4 914	4 064	4 779
Sulphide	tonnes	46	4	18	—	29
Cement						
Cement clinkers	tonnes	133 317	64 453	256 355	553 911	442 986
Portland cement	tonnes	809 758	795 844	846 044	956 062	898 871
Other cement	tonnes	159 414	187 371	292 756	314 515	275 177
Chromium						
Ores & concentrates	tonnes	5 789	4 179	4 644	6 094	18 464
Metal	tonnes	629	664	765	821	1 245
Coal						
Anthracite	tonnes	1 138 122	3 412 532	3 439 165	4 134 160	3 293 344
Other coal	tonnes	9 829 971	8 263 921	8 342 288	9 728 235	8 997 265
Brown coal	tonnes	232 063	244 300	219 162	232 809	229 192
Briquettes	tonnes	52 887	53 715	14 717	3 924	14 120
Cobalt						
Ore	tonnes	50	—	67	455	263
Metal (a)	tonnes	*4 600	*4 800	*7 200	*6 300	*5 100
Oxides	tonnes	667	644	800	1 103	(b) *1 300
Copper						
Matte & cement	tonnes	16	—	9	4 799	370
Unwrought, unrefined	tonnes	148 800	209 172	291 190	291 111	237 645
Unwrought, refined	tonnes	44 050	36 907	58 266	17 318	9 515
Unwrought alloys	tonnes	3 657	1 659	1 641	1 510	1 906
Scrap	tonnes	245 104	261 567	225 822	256 504	257 738

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Diamond						
Unsorted	carats	£80 231 000	£45 615 000	£36 269 000	£41 932 000	£37 971 000
Gem, rough	carats	123 000 000	...	126 000 000	121 500 000	134 500 000
Gem, cut	carats	8 500 000	9 500 000	6 500 000	7 500 000	6 500 000
Industrial	carats	25 000 000	26 500 000	19 500 000	15 000 000	14 500 000
Dust	carats	56 500 000	72 000 000	21 000 000	26 500 000	30 500 000
Diatomite	tonnes	9 067	8 357	7 507	9 052	8 192
Feldspar	tonnes	25 250	24 632	30 225	30 969	25 876
Fluorspar	tonnes	13 662	11 565	33 622	10 571	70 149
Gold						
Metal	kilograms	2 300	3 200	9 100	12 400	14 400
Graphite	tonnes	9 948	10 638	12 414	3 301	3 040
Gypsum						
Crude	tonnes	701 760	719 403	524 938	713 502	768 702
Calcined	tonnes	329 502	322 930	290 348	366 504	460 067
Iodine	kilograms	2 006 900	2 357 000	4 817 700	3 419 800	3 332 800
Iron ore	tonnes	11 223 322	12 204 732	11 577 845	10 655 707	9 384 885
Iron, steel and ferro-alloys						
Pig iron	tonnes	233 325	270 015	291 507	396 174	330 709
Sponge & powder	tonnes	8 425	13 234	26 084	107 639	48 915
Ferro-chrome	tonnes	155 561	176 217	198 691	215 638	220 896
Ferro-silico-chrome	tonnes	7 992	3 426	12 392	7 435	9 587
Ferro-silico-magnesium	tonnes	1 414	425	327	993	1 656
Ferro-manganese	tonnes	63 766	67 683	54 564	49 305	60 564
Ferro-silico-manganese	tonnes	58 555	56 769	54 676	56 622	60 454
Ferro-molybdenum	tonnes	2 355	3 573	5 141	4 317	5 199
Ferro-nickel	tonnes	36 455	42 337	32 673	51 796	61 454
Ferro-niobium	tonnes	849	720	719	712	849
Ferro-phosphorus	tonnes	604	769	1 124	1 237	1 700
Ferro-silicon	tonnes	67 460	73 251	63 474	93 591	79 901
Ferro-titanium & Fe-Si-Ti	tonnes	1 436	1 761	2 069	1 677	2 141
Ferro-tungsten & Fe-Si-W	tonnes	...	...	...	...	309
Ferro-vanadium	tonnes	331	182	412	568	650
Other ferro-alloys	tonnes	4 791	8 591	5 186	9 673	10 854
Silicon metal	tonnes	12 750	14 985	15 579	15 136	18 563
Ingots, blooms, billets	tonnes	2 631 575	2 383 948	3 894 592	2 814 705	3 452 850
Scrap	tonnes	2 740 480	3 146 151	3 896 924	4 413 160	3 761 788
Kaolin	tonnes	467 193	607 908	890 277	1 023 999	962 536
Lead						
Ores & concentrates	tonnes	101 613	115 471	80 203	117 597	134 300
Unwrought	tonnes	30 894	27 490	20 874	27 042	18 807
Scrap	tonnes	38 002	25 527	28 028	26 904	26 699
Lithium						
Oxides	tonnes	784	1 159	1 197	(a) *2 000	2 014
Carbonate	tonnes	5 136	5 879	5 086	6 108	6 205
Magnesite and magnesia						
Magnesite	tonnes	12 733	2 547	7 167	505	767
Magnesia	tonnes	90 663	73 514	151 590	65 125	84 730
Manganese						
Ores & concentrates	tonnes	106 749	72 216	79 645	73 953	66 840
Metal	tonnes	8 136	5 413	4 480	2 466	4 150
Mercury	kilograms	18 000	22 600	29 200	54 700	18 600
Mica						
Unmanufactured	tonnes	...	276	89	1 588	913
Ground	tonnes	1 033	1 359	3 223	4 311	2 996
Molybdenum						
Ores & concentrates	tonnes	19 527	24 746	36 903	45 922	54 452
Metal	tonnes	1 196	277	179	277	383
Oxides	tonnes	635	730	2 702	1 519	2 072
Nickel						
Mattes, sinters etc.	tonnes	33	216	61	162	214
Unwrought	tonnes	33 851	32 016	41 648	42 387	41 364
Unwrought alloys	tonnes	682	488	636	979	822
Scrap	tonnes	2 577	2 611	828	1 644	1 221
Oxides	tonnes	292	326	497	366	324

## Belgium-Luxembourg

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Crude petroleum	tonnes	38 628 736	37 490 772	42 731 484	34 210 727	34 417 017
Phosphates	tonnes	1 395 630	1 668 206	1 664 247	1 545 478	1 688 029
Platinum metals						
Platinum	kilograms	...	3 044	2 481	19 590	...
Platinum metals	kilograms	...	7 545	11 324	235	1 978
Waste & scrap	kilograms	£129 469 000	...	...	...	...
Potash						
Fertiliser salts	tonnes	22 677	23 295	24 355	26 328	17 331
Sulphate	tonnes	183 131	203 971	213 779	212 176	260 839
Chloride	tonnes	1 014 654	1 175 981	1 163 936	1 276 732	1 211 640
Other potassic fertilisers	tonnes	18 801	19 044	21 700	22 357	17 698
Rare earths						
Cerium compounds	tonnes	831	639	843	615	411
Other rare earth compounds	tonnes	375	126	143	287	139
Ferro-cerium & other pyrophoric alloys	tonnes	89	30	...	...	...
Metals	tonnes	279	225	195	226	252
Salt	tonnes	3 285 692	3 411 148	1 895 987	1 236 192	1 315 385
Sillimanite	tonnes	10 972	10 499	29 333	53 146	81 538
Silver						
Metal	kilograms	875 300	652 200	735 100	476 800	175 200
Sulphur and pyrites						
Sulphur, crude	tonnes	162 134	155 665	152 598	152 830	167 624
Sulphur, refined	tonnes	277 195	218 830	241 917	305 518	322 649
Sulphur, sublimed & precipitated	tonnes	178	25	103	28	127
Talc	tonnes	105 971	115 112	124 455	135 046	224 624
Tantalum and niobium						
Tantalum	tonnes	1	7	41	20	1
Tin						
Unwrought	tonnes	1 050	1 223	490	1 686	1 210
Unwrought alloys	tonnes	2 208	2 464	2 737	3 421	1 284
Scrap	tonnes	3 312	4 756	4 816	5 726	1 382
Titanium						
Ilmenite	tonnes	71	9 889	11 632	...	—
Other titanium minerals	tonnes	56 785	132 921	164 624	165 288	165 711
Titanium slag	tonnes	44 909	41 594	...	...	...
Metal	tonnes	1 791	1 516	1 712	1 868	2 289
Oxides	tonnes	224 507	271 627	272 441	339 444	291 670
Tungsten						
Metal	tonnes	405	279	404	372	340
Carbide	tonnes	39	70	51	42	42
Vanadium						
Vanadiferous residues	tonnes	1 286	...	...	...	...
Ores & concentrates	tonnes	...	483	1 379	1 116	894
Pentoxide	tonnes	2 142	2 981	57	3	267
Metal	tonnes	32	501	238	32	60
Zinc						
Ores & concentrates	tonnes	824 825	864 008	1 189 103	1 410 560	1 182 083
Unwrought	tonnes	233 322	236 971	244 081	261 216	46 505
Unwrought alloys	tonnes	910	4 767	2 649	13 872	35 653
Scrap	tonnes	50 156	60 893	42 424	42 534	44 890
Zirconium						
Concentrates	tonnes	5 657	13 267	5 178	3 991	14 504
Metal	tonnes	670	483	533	534	605

Note(s):-

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

# Bulgaria

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	*3 500 000	*3 500 000	3 710 186	3 333 000	...
Barytes	tonnes	131 100	123 200	91 200	75 400	79 500
Bentonite and fuller's earth						
Bentonite	tonnes	171 092	211 500	145 500	224 900	181 200
Bismuth, mine	tonnes (metal content)	*40	*40	*40	*40	*40
Cadmium	tonnes	333	345	307	356	319
Cement, finished	tonnes	2 088 000	2 137 000	2 100 000	2 100 000	2 100 000
Coal						
Anthracite & bituminous	tonnes	115 000	122 000	53 000	170 000	...
Brown coal & lignite	tonnes	26 095 516	26 433 500	27 641 000	26 455 000	(c) 26 200 000
Copper, mine	tonnes (metal content)	97 100	84 400	80 240	79 600	94 900
Copper, smelter	tonnes	134 700	167 000	199 300	215 800	225 000
Copper, refined	tonnes	34 500	40 700	45 900	55 300	60 000
Feldspar	tonnes	23 000	*34 000	*35 000	*35 000	*35 000
Fluorspar	tonnes	300	—	—	—	—
Gold, mine	kilograms (metal content)	1 700	2 612	2 270	2 431	*2 400
Gypsum	tonnes	166 838	156 400	165 500	175 900	187 700
Iron ore	tonnes	324 800	373 000	466 100	82 700	—
Pig iron	tonnes	1 211 000	1 072 000	1 386 000	1 200 000	1 200 000
Crude steel	tonnes	1 972 000	1 860 000	1 950 000	2 106 000	1 940 000
Ferro-alloys						
Ferro-silicon	tonnes	*8 000	*8 000	*8 000	*8 000	*8 000
Kaolin	tonnes	*140 000	*150 000	*120 000	*190 000	*200 000
Lead, mine	tonnes (metal content)	18 500	19 800	19 950	18 970	13 000
Lead, refined	tonnes	83 000	67 500	74 000	69 000	80 800
Manganese ore	tonnes	1 515	4	4 200	27 800	38 500
Perlite	tonnes	12 300	10 500	16 800	8 500	15 300
Crude petroleum	tonnes	33 888	33 000	27 900	33 100	30 000
Natural gas	million m <sup>3</sup>	21	11	11	333	573
Salt	tonnes	1 931 000	1 800 000	1 882 000	1 900 000	1 900 000
Silver, mine	kilograms (metal content)	56 806	60 000	*60 000	*60 000	*60 000
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	203 000	245 000	260 000	301 000	312 000
Recovered (b)	tonnes (sulphur content)	30 000	30 000	30 000	25 000	30 000
Zinc, mine	tonnes (metal content)	10 600	12 900	13 000	15 548	12 700
Slab zinc	tonnes	88 000	83 000	86 800	101 500	95 100

Note(s):-

(1) Bulgaria is believed to produce chromite, fluorspar, magnesite and platinum group metals

(a) From metal sulphide processing

(b) From petroleum refining and/or natural gas

(c) Coal; all forms

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	123 942	227 464	214 135	384 420	160 032
Aluminium and bauxite						
Unwrought alloys	tonnes	627	2 152	1 971	4 616	5 254
Scrap	tonnes	18 352	22 994	21 838	22 036	21 902
Asbestos	tonnes	36	9	0	83	...
Barytes	tonnes	131 137	123 224	91 215	75 393	76 644
Bentonite and fuller's earth						
Bentonite	tonnes	160 332	121 868	102 263	95 435	76 614
Cadmium						
Metal	tonnes	374	337	344	378	316
Cement						
Cement clinkers	tonnes	397 914	435 202	602 632	392 414	338 505
Portland cement	tonnes	643 158	485 972	568 083	460 281	455 824
Other cement	tonnes	240	2 729	22 625	...	...

## Bulgaria

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Copper						
Ores & concentrates	tonnes	96 065	83 032	72 861	78 563	124 717
Matte & cement	tonnes	1 291	4 233	4 356	6 718	5 750
Unwrought	tonnes	151 681	173 720	218 482	219 415	219 009
Scrap	tonnes	8 736	9 459	9 507	9 480	8 244
Gypsum						
Crude & calcined	tonnes	2 841	2 406	1 868	2 231	2 347
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	4 225	5 088	8 045	5 646	3 072
Ingots, blooms, billets	tonnes	410 940	111 719	355 397	277 332	97 757
Scrap	tonnes	375 118	459 322	572 559	769 559	784 778
Kaolin	tonnes	115 257	113 538	124 396	114 399	124 899
Lead						
Unwrought	tonnes	68 749	58 789	61 799	54 686	69 825
Manganese						
Ores & concentrates	tonnes	832	...	6 402	42 122	53 559
Molybdenum						
Metal	tonnes	...	37	49	546	105
Platinum metals						
Waste & scrap (a)	kilograms	*28 500	*35 800	*17 500	*24 000	*31 400
Salt	tonnes	1 898	4 938	2 625	8 586	10 090
Sulphur and pyrites						
Sulphur	tonnes	17 274	25 306	21 478	20 103	25 019
Zinc						
Unwrought (b)	tonnes	73 362	70 967	74 801	89 287	82 902

Note(s):-

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

(b) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	13 069	17 160	24 578	20 303	17 200
Aluminium and bauxite						
Unwrought (a)	tonnes	19 069	22 890	28 194	35 515	40 748
Antimony						
Metal	tonnes	50	48	52	47	...
Asbestos	tonnes	271	160	50	196	...
Bentonite and fuller's earth	tonnes	550	653	511	1 089	1 600
Cement						
Cement clinkers	tonnes	...	3 088	3 815	23 048	180 254
Portland cement	tonnes	7 864	7 491	33 810	51 493	23 787
Other cement	tonnes	...	...	...	920	1 128
Coal						
Anthracite	tonnes	1 928 500	1 173 622	1 396 246	1 464 605	2 016 911
Other coal	tonnes	1 758 266	2 315 367	3 038 589	2 784 512	2 270 525
Copper						
Ores & concentrates	tonnes	316 840	281 687	454 875	561 613	632 255
Unwrought	tonnes	15 655	8 392	3 880	8 599	18 613
Scrap	tonnes	919	1 919	2 722	2 935	5 094
Diatomite	tonnes	1 198	8 478	1 139	1 292	1 312
Feldspar	tonnes	22 072	21 852	23 367	30 805	34 723
Fluorspar	tonnes	22 601	1 296	2 143	1 882	1 210
Graphite	tonnes	223	210	492	420	319
Gypsum						
Crude	tonnes	33 737	47 984	38 119	49 426	18 684
Calcined	tonnes	9 692	17 476	22 615	35 558	49 163
Iodine	kilograms	5 319	4 636	11 250	6 755	5 080



## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Iron ore						
Iron ore	tonnes	1 359 466	1 302 809	1 850 563	1 570 605	1 050 925
Burnt pyrites	tonnes	2 666	1 307	128 640	357 898	437 710
Iron, steel and ferro-alloys						
Pig iron	tonnes	21 281	16 304	45 935	14 228	19 624
Ferro-manganese	tonnes	4 707	2 047	5 152	5 116	5 540
Other ferro-alloys	tonnes	7 256	4 440	9 232	7 441	6 539
Silicon metal	tonnes	...	137	232	663	585
Ingots, blooms, billets	tonnes	62 056	7 951	116 005	280 895	275 001
Scrap	tonnes	55 376	43 260	74 445	90 491	108 450
Kaolin	tonnes	26 805	28 486	36 360	75 425	76 231
Lead						
Ores & concentrates	tonnes	83 051	52 368	64 751	74 163	83 398
Unwrought	tonnes	2 252	2 218	1 759	5 558	10 723
Scrap	tonnes	1 714	2 800	816	441	1 227
Magnesite and magnesia	tonnes	5 463	6 544	5 815	6 354	8 500
Manganese						
Ores & concentrates	tonnes	8 612	1 125	234 401	46 768	13 631
Phosphates	tonnes	393 280	490 935	550 013	515 889	543 637
Potash						
Potassic fertilisers	tonnes	25 284	11 724	3 453	4 725	7 794
Salt	tonnes	105 676	125 613	116 840	138 631	165 727
Talc	tonnes	455	404	465	487	599
Titanium						
Titanium minerals	tonnes	535	653	2 979	407	1 287
Oxides	tonnes	2 646	2 448	3 156	3 332	3 959
Zinc						
Ores & concentrates	tonnes	124 895	120 409	149 957	167 098	149 735
Unwrought (a)	tonnes	2 299	3 049	4 146	4 285	1 450
Zirconium						
Concentrates	tonnes	1 490	1 413	1 375	1 149	1 589

Note(s):-

(a) Including alloys

# Croatia

## Production

Commodity	Units	2001	2002	2003	2004	2005
Bentonite and fuller's earth						
Bentonite	tonnes	10 580	12 102	13 568	15 674	17 391
Gypsum	tonnes	130 861	145 000	166 340	193 263	196 133
Crude steel	tonnes	57 993	33 851	43 380	85 947	73 640
Ferro-alloys						
Ferro-chrome	tonnes	361	—	—	—	—
Crude petroleum	tonnes	1 120 797	1 108 434	1 052 121	1 037 787	980 486
Natural gas	million m <sup>3</sup>	2 009	2 122	2 190	2 198	2 283
Salt	tonnes	32 585	30 483	32 533	32 723	36 970
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	7 000	7 069	7 471	9 000	9 000

Note(s):-

(a) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Aluminium and bauxite						
Bauxite	tonnes	5 981	3 869	1 478	566	276
Scrap	tonnes	8 311	10 187	10 914	12 024	15 927
Copper						
Scrap	tonnes	6 506	7 001	7 497	9 613	10 814
Gypsum						
Crude & calcined	tonnes	20 032	28 318	...	...	...
Iron, steel and ferro-alloys						
Scrap	tonnes	133 451	197 532	235 322	279 852	318 840
Kaolin	tonnes	2 620	5 319	4 362	351	15
Lead						
Scrap	tonnes	809	749	750	853	794
Crude petroleum	tonnes	15 001	1	...	20 000	...
Salt	tonnes	1 609	4 242	5 530	9 226	5 688
Sulphur and pyrites						
Sulphur	tonnes	6 386	7 150	7 505	8 505	8 028

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Aluminium and bauxite						
Bauxite	tonnes	76 243	42 464	71 335	48 302	112 007
Unwrought	tonnes	(a) 32 087	32 229	21 289	47 437	56 509
Unwrought alloys	tonnes	...	8 326	7 329	9 672	14 915
Asbestos	tonnes	2 666	3 274	1 958	3 251	2 429
Barytes	tonnes	111	1 803	1 053	1 878	715
Bentonite and fuller's earth						
Bentonite	tonnes	10 094	14 571	1 238	2 181	1 897
Chromium						
Ores & concentrates	tonnes	908	287	341	459	537
Metal	tonnes	6	160	200	279	54
Coal						
Hard coal	tonnes	642 574	281 298	1 034 849	1 218 407	957 899
Lignite	tonnes	84 520	34 807	69 679	79 921	77 959
Briquettes	tonnes	18 278	65 401	22 828	2 981	4 734
Diatomite	tonnes	1 232	928	809	703	495
Feldspar	tonnes	10 491	10 609	11 894	13 713	17 011
Fluorspar	tonnes	155	164	152	204	143

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Gold						
Metal	kilograms	...	1 316	5 034	1 193	1 083
Gypsum						
Crude	tonnes	25 633	28 326	35 732	14 974	41 665
Calcined	tonnes	20 046	29 147	33 419	37 499	33 316
Iron, steel and ferro-alloys						
Pig iron	tonnes	12 560	14 124	14 821	15 175	15 270
Ferro-alloys	tonnes	1 706	2 265	2 421	2 980	2 893
Silicon metal	tonnes	438	391	350	510	261
Ingots, blooms, billets	tonnes	22 673	13 527	18 523	3 562	12 421
Scrap	tonnes	7 569	3 937	5 361	7 156	18 407
Kaolin	tonnes	6 357	6 046	6 303	6 472	7 941
Lead						
Unwrought	tonnes	841	1 635	988	1 460	1 492
Magnesite and magnesia	tonnes	764	949	1 006	1 479	1 647
Manganese						
Metal	tonnes	58	57	50	93	93
Crude petroleum	tonnes	4 012 709	4 009 452	3 776 305	4 197 554	3 855 070
Phosphates	tonnes	173 144	177 728	181 534	245 224	272 005
Platinum metals						
Platinum & platinum metals	kilograms	2 989	604	...	839	12 320
Potash						
Chloride	tonnes	144 977	124 881	146 692	168 015	131 567
Salt	tonnes	84 219	139 989	164 046	165 277	226 931
Silver						
Metal	kilograms	4 573	4 000	*3 500	3 340	3 837
Sulphur and pyrites						
Sulphur	tonnes	53 025	39 190	46 017	63 606	70 897
Sulphur, sublimed & precipitated	tonnes	299	1 738	3 611	4 817	1 923
Talc	tonnes	1 397	1 587	1 531	1 726	1 378
Tin						
Unwrought (a)	tonnes	114	89	95	67	62
Titanium						
Oxides	tonnes	2 142	2 081	2 327	2 401	2 561
Zinc						
Unwrought (a)	tonnes	2 816	3 006	5 324	3 516	3 329

Note(s):-

(a) Including alloys

# Cyprus

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Crushed rock	tonnes	9 300 000	10 500 000	10 700 000	11 600 000	12 064 112
Bentonite and fuller's earth						
Bentonite	tonnes	127 000	128 400	144 859	155 717	172 366
Cement clinker	tonnes	...	212 459	56 034	68 865	37 891
Cement, finished	tonnes	1 368 800	1 438 160	1 636 879	1 688 917	1 834 645
Copper, mine	tonnes (metal content)	4 600	3 700	2 500	—	—
Copper, refined	tonnes	4 604	3 695	2 552	1 344	—
Gypsum	tonnes	250 000	295 000	300 000	255 000	215 500

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Aluminium and bauxite						
Unwrought	tonnes	6 236	1 028	381	316	62
Scrap	tonnes	5 003	2 813	2 966	3 699	4 578
Bentonite and fuller's earth						
Bentonite	tonnes	80 714	81 388	71 460	81 596	85 724
Cement						
Cement clinkers	tonnes	96 709	245 656	200 461	31 215	37 891
Portland cement	tonnes	316 758	201 542	196 173	146 669	219 460
Copper						
Unwrought	tonnes	5 015	3 697	2 610	1 322	...
Scrap	tonnes	1 307	2 808	1 266	2 221	2 548
Gypsum						
Crude & calcined	tonnes	209 179	169 213	184 389	215 297	73 741
Iron, steel and ferro-alloys						
Scrap	tonnes	26 839	38 154	41 926	46 316	55 240
Lead						
Scrap	tonnes	1 965	1 874	2 073	1 711	1 212
Salt	tonnes	236	1 729	508	559	635

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	3 104	1 870	3 201	(a) *8 400	5 921
Aluminium and bauxite						
Unwrought alloys	tonnes	6 749	7 629	7 697	10 858	9 898
Bentonite and fuller's earth	tonnes	11 060	24 260	20 519	18 052	3 057
Cement						
Cement clinkers	tonnes	5 550	17 144	74 627	28 622	43 375
Portland cement	tonnes	1 636	2 926	2 496	2 092	2 339
Coal	tonnes	85 931	71 734	21	...	3
Fluorspar	tonnes	496	7 607	8 901	5	...
Gold						
Metal	kilograms	1 223	938	4 561	313	359
Iodine	kilograms	17 000	29 894	8 685	226	67
Kaolin	tonnes	369	380	487	299	154
Lead						
Unwrought	tonnes	2 359	2 367	918	317	172
Crude petroleum	tonnes	1 048 256	1 143 649	838 280	417 475	...
Platinum metals						
Platinum & platinum metals	kilograms	110	40	35	78	97
Salt	tonnes	11 616	10 530	14 053	8 650	13 795

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Silver						
Metal	kilograms	9 624	8 614	8 461	5 135	5 675
Sulphur and pyrites						
Sulphur	tonnes	1 222	939	1 370	1 226	1 356
Talc	tonnes	181	202	255	242	386
Titanium						
Oxides	tonnes	859	1 032	1 172	1 172	1 286

## Note(s):-

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

# Czech Republic

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	11 916 192	12 248 595	15 267 650	15 703 358	15 672 765
Crushed rock	tonnes	20 301 407	23 643 644	27 934 515	28 846 776	30 221 600
Bentonite and fuller's earth						
Bentonite	tonnes	224 000	174 000	199 000	201 000	186 000
Cement clinker	tonnes	2 441 353	2 102 275	...	...	...
Cement, finished	tonnes	3 590 689	3 249 155	3 502 103	3 828 677	3 978 056
Coal						
Bituminous	tonnes	14 808 000	14 097 000	13 382 000	14 648 000	12 778 000
Lignite	tonnes	507 000	501 000	470 000	450 000	467 000
Brown coal	tonnes	51 036 000	48 834 000	49 920 000	47 840 000	48 658 000
Diatomite	tonnes	5 200	5 600	4 800	5 100	4 100
Feldspar	tonnes	373 000	401 000	421 000	488 000	472 000
Graphite	tonnes	17 000	16 000	9 000	5 000	3 000
Gypsum	tonnes	24 000	108 000	104 000	71 000	25 000
Pig iron	tonnes	4 670 700	4 839 880	5 207 000	5 385 000	4 627 000
Crude steel	tonnes	6 315 900	6 511 970	6 783 000	7 033 000	6 189 000
Ferro-alloys						
Ferro-vanadium	tonnes	*2 500	*3 000	*3 000	*3 500	*3 500
Kaolin (a)	tonnes	561 600	562 300	582 100	639 100	639 300
Lead, refined	tonnes	30 500	*30 500	*30 000	*30 000	26 000
Crude petroleum	tonnes	178 000	253 000	310 000	299 000	306 000
Natural gas	million m <sup>3</sup>	101	91	131	175	356
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	40 000	40 000	45 000	60 000	65 000
Uranium, mine	tonnes (metal content)	490	477	458	435	420

Note(s):-

(a) Beneficiated

(b) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	555 449	417 503	464 898	344 850	468 540
Aluminium and bauxite						
Unwrought (a)	tonnes	38 362	34 611	43 045	48 698	48 885
Scrap	tonnes	30 520	33 636	33 410	43 223	39 297
Barytes	tonnes	535	986	895	616	557
Bentonite and fuller's earth						
Bentonite	tonnes	46 823	32 002	17 439	62 012	85 093
Cadmium						
Metal	tonnes	87	0	0	0	...
Cement						
Cement clinkers	tonnes	213 960	77 171	44 410	91 626	29 169
Portland cement	tonnes	618 868	350 341	506 588	576 531	526 784
Other cement	tonnes	33 244	38 341	11 476	3 216	34 046
Chromium						
Metal	tonnes	1	88	338	364	109
Coal						
Hard coal (b)	tonnes	5 712 522	5 680 003	5 668 451	5 706 798	5 260 739
Lignite	tonnes	2 977 065	1 770 888	1 082 961	1 072 275	1 324 025
Briquettes	tonnes	168 874	188 383	191 650	160 823	148 966
Copper						
Unwrought	tonnes	1 909	1 712	978	7 834	4 251
Scrap	tonnes	39 516	38 121	36 874	53 086	53 707
Diatomite	tonnes	5 493	5 288	5 083	4 734	4 247
Feldspar	tonnes	131 699	122 206	133 868	143 941	160 469
Fluorspar	tonnes	9 442	8 131	23 471	10 073	8 677
Gold						
Metal	kilograms	4 431	5 468	5 113	12 247	1 100
Waste & scrap	kilograms	1 373	2 453	1 349	31	600

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Graphite	tonnes	2 621	3 487	4 058	3 924	3 489
Gypsum						
Crude	tonnes	39 414	87 247	92 133	90 750	33 307
Calcined	tonnes	6 674	3 967	4 718	5 563	4 272
Iodine	kilograms	...	267	330	537	1 000
Iron, steel and ferro-alloys						
Pig iron	tonnes	25 352	28 844	50 125	55 687	15 526
Ferro-chrome	tonnes	2 300	287	77	1 016	524
Ferro-vanadium	tonnes	2 195	2 949	3 012	3 417	2 613
Other ferro-alloys	tonnes	2 412	4 445	6 630	12 098	19 067
Silicon metal	tonnes	816	859	778	4 488	512
Ingots, blooms, billets	tonnes	250 740	287 557	249 522	267 912	251 513
Scrap	tonnes	1 000 515	1 057 822	1 178 514	1 930 343	1 351 676
Kaolin	tonnes	455 089	443 674	441 545	483 636	268 850
Lead						
Unwrought	tonnes	6 786	5 724	7 112	7 230	8 665
Scrap	tonnes	3 750	3 346	2 926	3 059	4 948
Magnesite and magnesia	tonnes	702	59	1 924	3 790	6 273
Mercury	kilograms	12 000	16 542	9 970	22 172	8 200
Nickel						
Unwrought (a)	tonnes	42	211	186	967	57
Scrap	tonnes	237	219	417	525	843
Oxides	tonnes	126	159	358	296	658
Crude petroleum	tonnes	118 714	129 275	155 258	64 315	57 522
Platinum metals						
Platinum & platinum metals	kilograms	...	79 408	(c) *22 000	(c) *4 600	(c) *20 600
Waste & scrap	kilograms	(c) *86 900	2 818	5 316	4 158	4 500
Potash						
Potassic fertilisers	tonnes	253	541	808	2 416	3 463
Salt	tonnes	7 135	7 768	10 490	12 986	13 833
Silver						
Metal	kilograms	...	140 057	171 398	291 519	28 900
Sulphur and pyrites						
Sulphur	tonnes	2 398	7 410	10 087	9 787	9 294
Sulphur, sublimed & precipitated	tonnes	3 069	118	134	1 581	503
Tantalum and niobium						
Tantalum	tonnes	106	40	55	84	68
Tin						
Unwrought (a)	tonnes	38	20	66	191	381
Titanium						
Metal	tonnes	59	82	239	191	358
Oxides	tonnes	26 626	34 258	33 354	37 673	40 707
Tungsten						
Metal	tonnes	413	251	108	133	185
Zinc						
Unwrought (a)	tonnes	1 619	1 253	1 670	5 659	7 865
Scrap	tonnes	2 267	2 325	2 247	2 976	2 498

Note(s):-

(a) Including alloys

(b) Including anthracite

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

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	261 199	237 868	206 018	509 217	574 008
Aluminium and bauxite						
Bauxite	tonnes	15 212	15 391	13 871	20 922	24 315
Alumina	tonnes	24 771	22 117	23 142	26 898	28 458
Alumina hydrate	tonnes	9 960	11 981	12 767	17 215	10 898
Unwrought	tonnes	43 792	64 108	66 747	75 289	69 977
Unwrought alloys	tonnes	76 779	78 849	82 823	90 688	96 702
Scrap	tonnes	26 013	23 986	24 336	28 542	34 226

## Czech Republic

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Antimony						
Metal	tonnes	53	76	45	14	72
Oxide	tonnes	548	626	365	557	588
Arsenic						
Metallic arsenic	tonnes	18	24	20	8	9
Asbestos	tonnes	2 322	785	1 464	2 891	0
Barytes	tonnes	10 594	10 754	8 448	8 782	8 552
Bentonite and fuller's earth						
Bentonite	tonnes	15 410	12 623	11 795	19 852	14 776
Fuller's earth	tonnes	595	547	702	564	1 290
Bismuth						
Metal	tonnes	26	42	56	64	50
Cadmium						
Sulphide	tonnes	36	11	20	19	21
Cement						
Cement clinkers	tonnes	147	6 792	76 152	167 711	95 108
Portland cement	tonnes	1 278 439	748 672	1 044 234	1 105 823	1 027 011
Other cement	tonnes	104 981	83 286	28 197	24 799	38 434
Chromium						
Ores & concentrates	tonnes	15 054	11 655	10 674	11 365	12 440
Metal	tonnes	12	14	66	60	149
Coal						
Anthracite	tonnes	6 258	19 893	15 177	52 247	43 713
Other coal	tonnes	1 196 643	1 199 062	1 265 727	1 642 568	1 192 214
Cobalt						
Metal	tonnes	41	35	54	81	75
Oxides	tonnes	37	32	25	33	18
Copper						
Unwrought	tonnes	18 434	12 110	6 326	5 644	4 551
Scrap	tonnes	2 759	1 656	2 080	5 601	6 114
Diamond						
Unsorted	carats	£156 000	£128 000	£187 000	£3 000	£300
Gem, rough	carats	£141 000	£158 000	...	...	£18 000
Gem, cut	carats	£226 000	£382 000	£802 000	£626 000	£1 046 000
Industrial	carats	£430 000	£568 000	£360 000	£163 000	£391 000
Dust	carats	£943 000	£886 000	£858 000	£776 000	£956 000
Diatomite	tonnes	1 695	1 647	1 562	1 969	2 263
Feldspar	tonnes	7 226	7 975	7 388	8 785	13 315
Fluorspar	tonnes	27 785	18 182	16 628	28 408	24 009
Gold						
Metal	kilograms	1 402	1 288	1 596	1 957	769
Waste & scrap	kilograms	392	175	338	1 911	13 000
Graphite	tonnes	1 518	1 476	2 765	3 663	4 787
Gypsum						
Crude	tonnes	9 523	14 790	20 266	29 328	19 253
Calcined	tonnes	23 410	23 899	32 810	43 894	37 637
Iodine	kilograms	24 000	18 819	29 637	31 428	28 400
Iron ore	tonnes	6 891 369	6 811 707	8 221 566	7 636 968	6 576 885
Iron, steel and ferro-alloys						
Pig iron	tonnes	91 906	90 568	72 151	88 014	88 549
Sponge & powder	tonnes	670	5 739	21 478	5 661	6 130
Ferro-chrome	tonnes	39 975	43 181	13 193	16 248	16 772
Ferro-manganese	tonnes	20 716	21 055	24 154	27 051	30 921
Ferro-silico-manganese	tonnes	25 660	26 130	55 989	59 361	53 258
Ferro-molybdenum	tonnes	1 157	1 054	1 346	1 710	1 744
Ferro-silicon	tonnes	20 640	20 570	26 721	34 812	34 114
Ferro-vanadium	tonnes	278	250	225	395	564
Other ferro-alloys	tonnes	8 092	7 851	8 745	9 817	10 959
Silicon metal	tonnes	2 832	2 713	4 095	8 401	2 589
Ingots, blooms, billets	tonnes	272 751	263 839	268 231	352 672	484 450
Scrap	tonnes	347 858	372 348	506 094	593 330	392 135



## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Kaolin	tonnes	19 514	12 791	15 466	14 034	16 895
Lead						
Unwrought	tonnes	58 777	56 941	55 699	73 472	418 804
Magnesite and magnesia						
Magnesite	tonnes	4 362	3 516	5 528	5 973	6 860
Magnesia	tonnes	33 375	32 090	34 377	42 226	43 277
Manganese						
Ores & concentrates	tonnes	7 314	11 507	11 966	11 663	13 820
Metal	tonnes	206	376	386	593	619
Mercury	kilograms	1 000	1 875	2 531	7 300	1 100
Mica	tonnes	890	926	764	879	819
Molybdenum						
Ores & concentrates	tonnes	...	...	...	...	189
Metal	tonnes	45	29	42	66	89
Nickel						
Unwrought (a)	tonnes	2 231	1 825	2 158	2 574	2 520
Oxides	tonnes	177	236	465	712	785
Crude petroleum	tonnes	6 004 685	5 548 002	7 380 375	6 530 733	7 674 771
Phosphates	tonnes	48 539	27 955	24 299	24 282	22 633
Platinum metals						
Platinum & platinum metals	kilograms	...	1 147	5 249	...	1 289
Potash						
Potassic fertilisers	tonnes	92 242	83 492	78 801	111 694	101 506
Rare earths						
Rare earth compounds	tonnes	...	212	177	92	198
Salt	tonnes	602 712	622 455	681 134	909 966	891 667
Sillimanite	tonnes	3 785	2 673	3 480	3 779	3 733
Silver						
Metal	kilograms	...	173 805	238 756	422 971	102 100
Sulphur and pyrites						
Sulphur	tonnes	56 621	51 922	52 784	34 787	16 983
Sulphur, sublimed & precipitated	tonnes	45 665	39 772	49 164	70 159	89 595
Talc	tonnes	9 082	9 299	10 278	9 426	9 986
Tantalum and niobium						
Tantalum	tonnes	147	128	168	261	141
Tin						
Unwrought (a)	tonnes	592	531	635	550	634
Titanium						
Titanium minerals	tonnes	78 515	60 976	74 709	53 570	80 407
Metal	tonnes	111	372	620	800	1 143
Oxides	tonnes	4 394	4 307	5 462	6 773	8 008
Tungsten						
Metal	tonnes	136	65	73	116	173
Vanadium						
Pentoxide	tonnes	5 172	4 162	4 898	5 429	3 831
Zinc						
Unwrought	tonnes	(a) 27 142	(a) 26 929	(a) 28 748	(a) 34 205	28 263
Unwrought alloys	tonnes	...	...	...	...	8 039
Zirconium						
Concentrates	tonnes	3 480	2 911	2 105	1 605	655
Metal	tonnes	486	580	348	32	60

Note(s):-

(a) Including alloys

# Denmark

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	55 200 000	53 300 000	50 800 000	57 300 000	69 500 000
Crushed rock	tonnes	330 000	390 000	380 000	372 000	378 000
Bentonite and fuller's earth						
Bentonite	tonnes	12 166	14 539	16 303	18 352	18 515
Cement clinker	tonnes	102 571	152 636	61 909	52 758	42 691
Cement, finished	tonnes	2 575 512	2 544 868	2 580 427	2 892 831	2 880 554
Diatomite						
Moler (a)	tonnes	192 000	211 000	221 000	188 000	209 000
Crude steel	tonnes	746 000	392 000	—	—	—
Crude petroleum	tonnes	17 378 000	18 494 000	18 341 000	19 446 000	18 822 000
Natural gas	million m <sup>3</sup>	7 930	7 947	7 555	8 946	9 908
Salt	tonnes	587 000	*590 000	*600 000	*600 000	*600 000
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	3 981	4 386	4 751	4 660	4 223

Note(s):-

(1) Denmark is believed to produce kaolin

(2) In addition to the countries producing sillimanite minerals, synthetic mullite is known to be produced in Denmark

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

(b) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	1 112 789	880 032	736 820	795 330	787 389
Aluminium and bauxite						
Alumina	tonnes	3 481	4 520	4 556	...	3 579
Unwrought alloys	tonnes	26 092	23 363	17 538	14 019	23 509
Scrap	tonnes	48 753	45 342	36 738	55 407	70 828
Bentonite and fuller's earth						
Bentonite	tonnes	10 911	14 601	16 821	17 279	17 066
Cement						
Cement clinkers	tonnes	101 949	97 886	65 962	85 967	54 542
Portland cement	tonnes	1 220 484	1 259 988	1 164 923	1 127 638	1 235 477
Other cement	tonnes	17 458	12 697	11 947	13 535	13 118
Chromium						
Metal	tonnes	964	496	521	661	703
Coal						
Hard coal	tonnes	100 160	97 862	6 665	7 380	86 739
Copper						
Scrap	tonnes	39 979	37 058	39 487	38 573	27 227
Diatomite	tonnes	*80 000	*90 000	*90 000	*90 000	*90 000
Gold						
Metal	kilograms	854	4 979	894	...	...
Waste & scrap	kilograms	7 789	807	343	1	120
Gypsum						
Crude	tonnes	86 764	110 317	83 754	81 318	111 720
Calcined	tonnes	141 866	155 843	65 842	13 837	25 474
Iron, steel and ferro-alloys						
Ingots, blooms, billets	tonnes	59 258	21 432	8 119	16 223	1 203
Scrap	tonnes	770 311	1 058 048	1 310 175	1 564 469	1 402 982
Kaolin	tonnes	1 050	688	583	461	637
Lead						
Unwrought	tonnes	3 090	3 048	3 011	1 930	1 312
Scrap	tonnes	1 864	1 338	1 885	1 805	3 067
Mercury	kilograms	865	3 642	10 554	27 458	1 932
Nickel						
Scrap	tonnes	280	190	593	777	676
Crude petroleum	tonnes	11 645 846	13 073 624	13 015 898	14 324 704	13 567 566
Platinum metals						
Platinum & platinum metals	kilograms	751	115	208	...	1 435

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Salt	tonnes	327 344	340 177	376 794	350 587	355 887
Silver						
Metal	kilograms	17 229	13 532	...	...	...
Sulphur and pyrites						
Sulphur	tonnes	1 044	1 182	1 598	2 608	332
Tin						
Scrap	tonnes	94	90	110	178	68
Titanium						
Metal	tonnes	170	120	185	166	184
Oxides	tonnes	1 128	1 000	578	1 304	1 136
Tungsten						
Metal	tonnes	10	37	13	26	5
Vanadium						
Vanadium-titanium pig iron	tonnes	134	193	...	...	...
Zinc						
Scrap	tonnes	7 178	9 263	5 543	2 336	3 538

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	2 124 031	2 299 752	2 632 665	2 949 549	2 804 325
Aluminium and bauxite						
Bauxite	tonnes	20 077	6 140	11 297	13 801	9 148
Alumina	tonnes	18 897	20 228	17 896	23 666	21 979
Unwrought (a)	tonnes	48 723	61 538	65 386	75 233	70 617
Scrap	tonnes	163 573	52 460	41 373	39 949	63 678
Barytes	tonnes	46 013	53 153	39 341	36 133	28 788
Bentonite and fuller's earth						
Bentonite	tonnes	40 261	43 666	46 516	37 253	47 386
Fuller's earth	tonnes	183	41	40	107	137
Cement						
Cement clinkers	tonnes	10	4 033	23 222	22 506	31 634
Portland cement	tonnes	238 654	274 440	185 757	187 982	230 842
Other cement	tonnes	33 903	29 067	30 501	33 913	36 753
Chromium						
Ores & concentrates	tonnes	512	1 496	920	614	53
Metal	tonnes	19	63	106	90	53
Coal						
Anthracite	tonnes	81 874	120 888	92 434	77 502	52 143
Other coal	tonnes	6 916 611	6 087 316	9 126 099	7 487 269	5 881 938
Copper						
Unwrought	tonnes	2 600	2 560	2 324	2 065	1 702
Scrap	tonnes	12 798	12 564	18 332	16 446	13 827
Diamond						
Gem, cut	carats	£4 302 000	£4 006 000	£10 290 000	£9 319 000	£6 506 000
Diatomite	tonnes	5 728	7 175	6 744	5 001	6 561
Feldspar	tonnes	5 753	4 698	3 904	3 878	3 868
Fluorspar	tonnes	1 238	6 971	12 406	16 005	15 124
Gold						
Metal	kilograms	911	796	...	...	2 075
Waste & scrap	kilograms	842	62	57	46	72
Graphite	tonnes	707	355	567	478	288
Gypsum						
Crude	tonnes	256 834	223 666	282 006	283 604	317 736
Calcined	tonnes	8 952	34 509	36 882	38 650	45 691
Iodine	kilograms	24 614	19 000	21 037	9 080	13 249
Iron ore						
Burnt pyrites	tonnes	47 038	60 659	52 806	81 071	85 975

## Denmark

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Iron, steel and ferro-alloys						
Pig iron	tonnes	112 108	59 866	5 678	14 844	12 720
Sponge & powder	tonnes	1 943	14 155	6 471	103 479	29 188
Ferro-manganese	tonnes	3 497	1 674	16	38	161
Ferro-silico-manganese	tonnes	6 079	2 071	...	...	818
Ferro-silicon	tonnes	2 479	337	2 495	3 564	2 548
Other ferro-alloys	tonnes	13 822	784	459	712	366
Silicon metal	tonnes	1 686	2 179	1 521	1 061	659
Ingots, blooms, billets	tonnes	11 604	75 117	588 317	598 552	551 407
Scrap	tonnes	326 574	325 841	237 035	250 551	313 558
Kaolin	tonnes	19 369	34 441	20 987	13 056	14 117
Lead						
Unwrought	tonnes	3 447	2 073	816	2 072	2 135
Scrap	tonnes	1 535	2 489	2 237	2 366	2 288
Magnesite and magnesia						
Magnesite	tonnes	1 204	1 085	2 499	1 984	2 002
Magnesia	tonnes	4 770	3 731	2 297	2 575	4 560
Manganese						
Metal	tonnes	76	115	152	164	157
Mercury	kilograms	1 276	796	260	403	2 901
Mica	tonnes	241	408	305	369	413
Nickel						
Unwrought (a)	tonnes	202	114	96	112	97
Crude petroleum	tonnes	2 853 538	3 193 530	3 517 270	3 725 978	2 666 384
Phosphates	tonnes	44 643	57 813	80 114	30 425	1 311
Platinum metals						
Platinum & platinum metals	kilograms	381	530	...	1 324	2 076
Potash						
Sulphate	tonnes	11 689	7 028	14 654	18 006	2 683
Chloride	tonnes	135 815	146 234	166 236	119 153	38 706
Other potassic fertilisers	tonnes	12 535	13 373	11 254	13 099	29 605
Rare earths						
Other rare earth compounds	tonnes	...	...	...	...	16
Salt	tonnes	255 671	317 692	376 122	440 020	436 794
Sillimanite	tonnes	3 518	2 726	3 414	2 274	2 909
Silver						
Metal	kilograms	19 137	13 512	*7 000	...	...
Sulphur and pyrites						
Sulphur	tonnes	9 358	8 616	8 210	7 883	7 066
Talc	tonnes	13 156	16 577	14 407	14 085	14 103
Titanium						
Metal	tonnes	891	737	745	778	770
Oxides	tonnes	20 799	23 967	21 022	22 269	23 156
Tungsten						
Metal	tonnes	5	15	5	103	307
Zinc						
Unwrought	tonnes	10 537	11 031	10 761	10 813	9 855
Unwrought alloys	tonnes	5 070	3 030	1 647	1 548	1 457

Note(s):-

(a) Including alloys

# Estonia

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	2 300 000	1 650 400	1 973 740	2 341 620	3 459 760
Crushed rock	tonnes	1 800 000	4 571 100	4 082 700	5 426 600	6 760 700
Cement, finished	tonnes	404 600	465 900	506 200	614 600	726 000
Lead, refined	tonnes	—	—	—	3 000	*7 000

Note(s):-

(1) Small amounts of steel are believed to be produced in Estonia

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	282 172	376 987	469 343	487 863	522 792
Aluminium and bauxite						
Unwrought (a)	tonnes	3 744	6 095	11 986	5 479	2 414
Scrap	tonnes	9 994	9 108	9 712	8 062	10 686
Cement						
Cement clinkers	tonnes	277 012	163 887	157 353	113 105	97 442
Portland cement	tonnes	183 156	176 923	172 223	209 168	225 729
Chromium						
Metal	tonnes	200	12	148	...	...
Coal						
Hard coal (b)	tonnes	33 648	37 954	5 875	...	...
Cobalt						
Metal	tonnes	49	—	143	12	...
Copper						
Scrap	tonnes	7 981	7 285	6 857	6 479	6 660
Gold						
Waste & scrap	kilograms	8 044	9 895	8 812	...	3
Iron, steel and ferro-alloys						
Pig iron (c)	tonnes	*700	*500	...	...	...
Ferro-chrome	tonnes	2 283	—	5 695	45	...
Other ferro-alloys	tonnes	4 269	10 270	17 725	1 193	665
Silicon metal	tonnes	21	1	...	...	...
Scrap	tonnes	380 328	326 407	376 554	358 185	440 622
Lead						
Unwrought	tonnes	58	...	412	3 846	7 774
Scrap	tonnes	459	437	520	1 414	153
Manganese						
Metal	tonnes	490	923	1 320	...	...
Mercury	kilograms	...	2 476	2 500	...	3 400
Molybdenum						
Metal	tonnes	76	1	47	1	1
Nickel						
Mattes, sinters etc.	tonnes	938	0	86	...	...
Unwrought (a)	tonnes	619	—	999	...	42
Scrap	tonnes	1 587	195	108	296	34
Crude petroleum (c)	tonnes	*1 031 000	*648 000	*283 000	*321 000	*339 000
Platinum metals						
Waste & scrap	kilograms	216 839	41 383	3 706	3 981	...
Rare earths						
Rare earth compounds	tonnes	784	4 156	2 129	1 064	2 319
Metals	tonnes	5	...	30	14	3
Silver						
Metal	kilograms	83	364	...	13	93
Tantalum and niobium						
Tantalum	tonnes	1	...	25	39	65
Tin						
Scrap	tonnes	54	18	8	7	125
Titanium						
Metal	tonnes	145	316	336	188	31

Estonia

Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Tungsten						
Ores & concentrates	tonnes	71	2	127	...	...
Metal	tonnes	307	4	196	1	3
Zinc						
Scrap	tonnes	1 429	1 408	1 612	1 146	539

Note(s):-

(a) Including alloys

(b) Including anthracite

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

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	380 156	669 205	464 516	456 144	739 618
Aluminium and bauxite						
Alumina	tonnes	1 757	270	854	1 586	182
Unwrought (a)	tonnes	6 047	6 086	10 428	5 859	1 686
Asbestos	tonnes	58	61	...	...	...
Cement						
Cement clinkers	tonnes	...	...	...	...	21 219
Portland cement	tonnes	44 989	31 847	36 438	16 827	3 311
Other cement	tonnes	572	451	634	...	...
Chromium						
Metal	tonnes	204	0	140	8	23
Coal						
Hard coal (b)	tonnes	126 569	59 183	60 731	44 399	53 647
Cobalt						
Metal	tonnes	30	0	138	17	0
Gold						
Metal	kilograms	...	58	2 570	74	234
Gypsum						
Crude & calcined	tonnes	13 236	20 355	23 314	80 834	20 957
Iron, steel and ferro-alloys						
Pig iron	tonnes	...	...	...	...	240
Ferro-alloys	tonnes	12 273	9 905	16 840	2 132	2 125
Silicon metal	tonnes	649	946	1 827	574	125
Scrap	tonnes	28 995	17 142	35 654	85 689	111 930
Manganese						
Metal	tonnes	821	155	1 201	401	552
Molybdenum						
Metal	tonnes	102	0	43	4	...
Nickel						
Mattes, sinters etc.	tonnes	1 779	1 075	1 696	46	73
Unwrought (a)	tonnes	691	315	1 328	163	60
Scrap	tonnes	1 641	211	100	331	108
Platinum metals						
Waste & scrap	kilograms	8 171	8 790	7 250	...	...
Potash						
Potassic fertilisers	tonnes	24 891	*18 000	19 986	23 469	15 248
Rare earths						
Rare earth compounds	tonnes	3	609	1 734	3 208	4 317
Salt	tonnes	72 431	78 085	78 883	78 849	58 269
Silver						
Metal	kilograms	8 089	9 575	8 892	10 512	132 992
Talc	tonnes	...	...	...	...	300
Tin						
Unwrought	tonnes	301	...	12	16	6

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Titanium						
Metal	tonnes	57	302	234	113	216
Oxides	tonnes	1 273	1 090	1 082	235	1 344
Tungsten						
Ores & concentrates	tonnes	68	—	121	...	...
Metal	tonnes	408	2	130	3	1
Zinc						
Unwrought (a)	tonnes	498	...	10 578	17 468	9 105
Scrap	tonnes	6 568	5 245	4 473	191	18

Note(s):-

(a) Including alloys

(b) Including anthracite

# Finland

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	53 000 000	51 000 000	55 000 000	55 000 000	63 000 000
Crushed rock	tonnes	38 000 000	39 000 000	40 000 000	43 000 000	44 000 000
Cadmium	tonnes	604	400	—	—	—
Cement, finished (a)	tonnes	1 324 705	1 198 423	1 186 000	1 295 000	1 347 000
Chromium ores and concentrates	tonnes	575 126	566 090	549 000	580 000	572 000
Cobalt metal	tonnes	8 100	8 240	7 989	7 893	8 171
Copper, mine	tonnes (metal content)	11 600	14 400	14 900	15 500	15 500
Copper, smelter	tonnes	169 251	160 896	160 596	151 647	157 900
Copper, refined	tonnes	115 500	126 016	135 713	132 384	132 126
Feldspar	tonnes	36 145	39 552	59 362	44 495	42 783
Gold, mine	kilograms (metal content)	1 700	1 300	*1 200	*1 300	*1 300
Pig iron	tonnes	2 851 821	2 828 275	3 092 051	3 036 566	3 056 165
Crude steel	tonnes	3 938 122	4 002 914	4 766 203	4 832 427	4 738 446
Ferro-alloys						
Ferro-chrome	tonnes	236 000	248 000	250 000	264 492	234 881
Mercury	kilograms	71 200	50 600	25 000	23 500	34 200
Mica	tonnes	8 983	7 170	9 337	9 250	9 500
Nickel, mine	tonnes (metal content)	3 700	3 500	3 400	3 400	3 400
Nickel, smelter/refinery	tonnes	54 600	55 348	50 989	49 580	39 159
Phosphate rock	tonnes	767 020	799 814	799 339	838 000	823 000
Selenium metal	tonnes	42	37	52	65	66
Silver, mine	kilograms (metal content)	*11 000	*12 000	*12 000	*13 000	*13 000
Sulphur and pyrites						
Pyrites	tonnes (sulphur content)	260 000	235 000	276 200	283 700	189 000
Recovered (b)	tonnes (sulphur content)	329 555	328 441	328 779	325 523	305 013
Recovered (c)	tonnes (sulphur content)	46 000	55 000	61 000	65 000	70 000
Talc	tonnes	476 620	477 229	501 658	528 943	508 169
Wollastonite	tonnes	18 399	17 400	17 300	16 763	15 950
Zinc, mine	tonnes (metal content)	20 100	34 100	38 800	37 200	40 500
Slab zinc	tonnes	248 800	235 300	265 900	284 525	281 904

Note(s):-

(1) Finland is believed to produce arsenic

(a) Sales

(b) From metal sulphide processing

(c) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	581 353	879 966	446 404	422 709	580 815
Aluminium and bauxite						
Unwrought alloys	tonnes	33 670	23 529	18 557	17 254	14 107
Scrap	tonnes	7 913	15 189	16 720	22 946	21 053
Bentonite and fuller's earth						
Bentonite	tonnes	15 891	10 286	1 132	188	155
Cadmium						
Metal	tonnes	682	34	0	...	—
Cement						
Portland cement	tonnes	872	633	837	11 449	3 367
Chromium						
Ores & concentrates	tonnes	354	281	612	708	841
Cobalt						
Metal (a)	tonnes	*3 600	*3 900	*4 100	*5 200	*5 800
Oxides (a)	tonnes	*3 500	*3 700	*3 400	*2 100	*1 700
Copper						
Unwrought, unrefined	tonnes	51 804	43 523	33 180	25 618	29 685
Unwrought, refined	tonnes	19 935	37 256	34 333	27 650	40 170
Unwrought alloys	tonnes	1 382	1 002	724	903	746
Scrap	tonnes	14 032	16 462	19 693	23 543	30 577



## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Feldspar	tonnes	32 570	30 444	33 632	42 612	37 386
Gold						
Waste & scrap	kilograms	912	762	929	368	778
Gypsum						
Crude & calcined	tonnes	4 710	5 026	981	440	451
Iron, steel and ferro-alloys						
Ferro-chrome & ferro-silico-chrome	tonnes	82 590	80 026	33 499	35 780	39 341
Ingots, blooms, billets	tonnes	130 066	186 989	501 945	624 170	436 083
Scrap	tonnes	362 373	359 153	374 778	315 977	286 494
Kaolin	tonnes	7 561	10 698	10 032	8 111	7 378
Lead						
Scrap	tonnes	811	338	159	884	3 589
Mercury	kilograms	77 627	54 859	25 530	23 462	32 090
Mica	tonnes	7 362	5 514	8 099	7 511	5 745
Nickel						
Ores & concentrates	tonnes	30 711	11 939	1 459	—	—
Unwrought	tonnes	36 815	39 367	37 416	36 458	30 628
Scrap	tonnes	50	118	...	26	28
Oxides	tonnes	...	(a) *2 000	(a) *600	(a) *500	(a) *400
Phosphates	tonnes	...	40	1 626	16 375	996
Potash						
Sulphate	tonnes	(a) *14 000	(a) *33 300	(a) *51 300	(a) *34 900	33 484
Other potassic fertilisers	tonnes	4 368	3 075	710	1 094	38 993
Silver						
Ores & concentrates	kilograms	220 037	530 720	357 250	507 350	416 650
Metal	kilograms	20 207	6 886	6 882	9 804	6 764
Sulphur and pyrites						
Pyrites (a)	tonnes	*250 700	*282 000	*266 000	*279 000	*100 000
Talc (a)	tonnes	*135 000	*120 000	*227 000	*276 000	*278 000
Tin						
Unwrought alloys	tonnes	91	33	9	46	60
Scrap	tonnes	83	104	126	86	58
Titanium						
Metal	tonnes	109	26	30	22	44
Oxides (a)	tonnes	*128 700	*127 000	*84 000	*98 000	*105 000
Tungsten						
Metal	tonnes	28	49	67	91	77
Zinc						
Unwrought	tonnes	175 402	186 916	212 125	235 735	235 320
Unwrought alloys	tonnes	206	105	97	436	83
Scrap	tonnes	8 159	7 324	5 195	2 281	2 116

Note(s):-

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

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	44 785	29 163	47 702	75 016	43 488
Aluminium and bauxite						
Bauxite	tonnes	3 544	3 790	6 027	4 782	3 661
Alumina	tonnes	2 204	2 042	1 904	2 220	2 659
Alumina hydrate	tonnes	41 950	44 570	24 958	37 361	28 300
Unwrought	tonnes	21 586	13 704	3 534	3 295	4 057
Unwrought alloys	tonnes	28 948	24 253	33 174	37 999	40 510
Scrap	tonnes	29 829	30 310	23 445	18 901	15 537
Antimony						
Oxide	tonnes	269	238	238	248	199
Barytes	tonnes	2 537	3 070	3 119	3 559	3 931
Bentonite and fuller's earth						
Bentonite	tonnes	50 898	27 758	26 569	27 321	26 395
Fuller's earth	tonnes	60	207	212	322	201

## Finland

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Bromine	kilograms	92 000	57 054	56 506	71 251	71 000
Cement						
Cement clinkers	tonnes	95 591	7 265	67 297	28 129	17 594
Portland cement	tonnes	333 868	382 160	438 363	423 958	383 260
Other cement	tonnes	8 722	8 669	9 654	9 344	13 211
Chromium						
Ores & concentrates	tonnes	7 174	4 294	6 050	6 092	6 962
Metal	tonnes	174	87	190	164	258
Coal						
Hard coal (c)	tonnes	6 174 441	5 788 973	10 145 037	8 283 891	4 724 392
Cobalt						
Ore	tonnes	61 785	64 274	41 707	80 202	54 794
Metal	tonnes	...	(b) *400	(b) *100	(b) *700	1 759
Oxides	tonnes	1	4	45	126	336
Copper						
Ores & concentrates	tonnes	503 460	500 798	543 488	528 930	504 658
Unwrought, refined	tonnes	5 489	347	82	11	35
Unwrought alloys	tonnes	3 899	3 796	4 311	2 778	3 229
Scrap	tonnes	3 624	3 190	2 472	1 735	2 423
Diamond						
Unsorted	carats	35 000	...	...	55 000	120 000
Gem, cut	carats	160 000	...	...	235 000	355 000
Industrial	carats	20 000	...	...	...	...
Dust	carats	345 000	445 000	365 000	320 000	450 000
Diatomite	tonnes	2 996	5 871	6 981	5 881	2 700
Feldspar	tonnes	742	352	104	257	380
Fluorspar	tonnes	10 892	10 089	18 672	17 069	16 597
Gold						
Metal	kilograms	1 677	1 132	1 230	1 332	949
Waste & scrap	kilograms	...	46 928	90 780	67 582	22 981
Graphite	tonnes	411	281	197	168	84
Gypsum						
Crude	tonnes	292 833	286 347	231 517	278 645	341 680
Calcined	tonnes	7 725	7 682	7 066	7 010	7 517
Iodine	kilograms	4 491	9 000	4 879	27 020	6 209
Iron ore						
Iron ore	tonnes	3 916 207	3 791 710	4 212 158	3 921 507	4 215 633
Burnt pyrites	tonnes	56	13 132	26 163	63	—
Iron, steel and ferro-alloys						
Pig iron	tonnes	42 707	72 083	41 213	30 453	27 160
Sponge & powder	tonnes	12 235	16 335	28 412	16 906	969
Ferro-chrome	tonnes	5 073	5 690	9 395	6 562	7 404
Ferro-manganese	tonnes	13 199	12 744	16 237	15 805	14 728
Ferro-silico-manganese	tonnes	29 989	32 832	41 466	40 800	38 375
Ferro-molybdenum	tonnes	1 873	2 333	2 776	2 709	2 293
Ferro-nickel	tonnes	61 421	61 244	71 996	60 213	47 531
Ferro-niobium	tonnes	426	485	494	470	478
Ferro-phosphorus	tonnes	221	139	506	570	489
Ferro-silicon	tonnes	18 928	20 729	37 976	32 507	25 723
Ferro-titanium & Fe-Si-Ti	tonnes	1 271	1 271	1 632	2 063	1 912
Ferro-vanadium	tonnes	175	222	238	250	243
Other ferro-alloys	tonnes	4 767	3 162	3 640	4 448	4 505
Silicon metal	tonnes	3 007	2 397	1 601	2 097	1 306
Ingots, blooms, billets	tonnes	448 017	350 229	196 611	253 730	51 678
Scrap	tonnes	482 372	476 516	781 633	865 142	756 267
Kaolin	tonnes	1 355 460	1 207 343	1 305 240	1 301 806	1 144 335
Lead						
Unwrought	tonnes	1 825	3 032	2 753	2 582	2 854
Scrap	tonnes	287	137	139	41	29
Magnesite and magnesia						
Magnesia	tonnes	12 856	10 159	17 096	11 567	16 476
Manganese						
Ores & concentrates	tonnes	10 538	36 014	9 983	20 381	28 335
Metal	tonnes	259	997	717	547	753
Mercury	kilograms	177	158	214	554	28
Mica	tonnes	1 818	2 621	3 664	2 861	2 998

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Molybdenum						
Ores & concentrates	tonnes	3 296	3 581	4 868	5 603	4 127
Nickel						
Ores & concentrates	tonnes	250 973	178 968	146 122	169 170	104 983
Mattes, sinters etc.	tonnes	30 946	57 571	51 225	42 944	50 194
Unwrought (a)	tonnes	9 809	14 977	24 289	24 307	23 801
Unwrought alloys	tonnes	...	...	...	...	875
Scrap	tonnes	31	90	200	1 332	860
Oxides	tonnes	48	6 093	0	11	...
Crude petroleum	tonnes	10 951 956	11 745 754	12 019 477	12 249 366	10 603 534
Phosphates	tonnes	46 352	55 716	55 555	57 184	488
Platinum metals						
Platinum & platinum metals	kilograms	248	296	773	231	495
Potash						
Chloride (d)	tonnes	168 200	156 100	177 100	192 600	148 400
Salt	tonnes	366 217	447 703	395 727	408 367	438 346
Sillimanite	tonnes	298	338	299	302	445
Silver						
Metal	kilograms	89 015	87 543	56 470	75 350	70 623
Sulphur and pyrites						
Sulphur	tonnes	35 387	26 123	19 575	8 238	310
Talc	tonnes	4 027	3 251	3 971	1 827	866
Tin						
Unwrought (a)	tonnes	199	149	151	126	178
Titanium						
Metal	tonnes	112	84	107	258	121
Oxides	tonnes	9 007	10 335	11 390	13 163	14 380
Tungsten						
Metal	tonnes	119	113	169	119	121
Zinc						
Ores & concentrates	tonnes	422 274	433 196	436 345	479 603	499 024
Unwrought alloys	tonnes	...	...	...	...	1 218
Scrap	tonnes	1 882	2 030	2 511	395	711

## Note(s):-

- (a) Including alloys
- (b) BGS estimates, based on known exports from certain countries
- (c) Including anthracite
- (d) K<sub>2</sub>O content

# France

## Production

Commodity	Units	2001	2002	2003	2004	2005
<b>Primary aggregates</b>						
Sand and gravel	tonnes	175 150 000	167 970 000	165 470 000	168 080 000	168 640 000
Crushed rock	tonnes	221 600 000	215 290 000	217 400 000	223 170 000	219 480 000
<b>Bauxite</b>						
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	153 000	150 000	170 000	170 000	175 000
Primary aluminium	tonnes	*510 000	*500 000	*500 000	*500 000	*500 000
White arsenic	tonnes	461 000	463 000	444 000	447 000	440 000
Barytes	tonnes	*1 000	*1 000	*1 000	*1 000	*1 000
Bromine	tonnes	81 000	85 200	81 100	81 000	*81 000
Cadmium	kilograms	176	154	*120	*120	*100
Cement clinker	tonnes	*8 000 000	*8 000 000	*8 000 000	*8 000 000	*8 000 000
Cement, finished	tonnes	16 503 000	16 479 000	16 313 000	17 157 000	17 332 000
<b>Coal</b>						
Anthracite & bituminous	tonnes	19 839 000	19 437 000	19 655 000	20 962 000	21 277 000
Lignite	tonnes	1 972 000	1 483 000	1 728 000	200 000	—
Diatomite	tonnes	324 000	147 000	9 000	—	—
Feldspar	tonnes	*85 000	*80 000	*80 000	*75 000	*75 000
Fluorspar	tonnes	720 000	659 000	654 000	628 000	651 000
Gold, mine	kilograms (metal content)	123 000	122 000	90 000	70 000	53 000
Gypsum	tonnes	2 512	1 724	1 470	—	—
Iron ore	tonnes	*4 500 000	*3 500 000	*3 500 000	*3 500 000	*3 500 000
Pig iron	tonnes	36 587	21 367	—	—	—
Crude steel	tonnes	11 884 224	13 093 042	12 615 893	13 087 705	12 595 584
<b>Ferro-alloys</b>						
Ferro-manganese & spiegeleisen	tonnes	19 190 552	20 258 473	19 757 864	20 770 252	19 480 777
Ferro-silico-manganese	tonnes	414 200	416 569	*300 000	*106 000	...
Ferro-silicon	tonnes	65 248	66 215	*107 000	*64 000	...
Silicon metal	tonnes	*100 000	*100 000	*100 000	*100 000	*100 000
Kaolin	tonnes	89 896	84 768	*85 000	*85 000	*85 000
Lead, refined	tonnes	377 000	339 000	335 000	316 000	293 000
Primary magnesium metal	tonnes	231 400	203 400	91 000	89 000	*90 000
Mica (a)	tonnes	4 800	2 000	—	—	—
Nickel, smelter/refinery	tonnes	15 000	17 000	18 000	19 000	...
Crude petroleum	tonnes	13 036	11 444	11 370	12 103	12 684
Natural gas	million m <sup>3</sup>	1 382 646	1 316 890	1 219 000	1 138 000	1 079 000
Potash	tonnes (K <sub>2</sub> O content)	1 809	1 751	1 523	1 325	1 013
Potassic salts	tonnes (K <sub>2</sub> O content)	244 000	128 000	—	—	—
<b>Salt</b>						
Rock salt	tonnes	596 000	434 000	320 000	406 000	494 000
Brine salt	tonnes	1 452 000	1 456 000	1 409 000	1 433 000	1 468 000
Salt in brine	tonnes	4 023 000	4 056 000	4 351 000	4 408 000	4 750 780
Sea salt	tonnes	1 536 000	848 000	1 302 000	1 365 000	1 026 000
<b>Sillimanite minerals</b>						
Andalusite	tonnes	61 000	59 000	62 000	68 000	*65 000
Silver, mine	kilograms (metal content)	929	709	495	682	*700
<b>Sulphur and pyrites</b>						
Recovered (b)	tonnes (sulphur content)	840 000	795 600	710 400	698 400	622 345
Recovered (c)	tonnes (sulphur content)	*260 000	229 000	196 000	196 000	180 000
Talc	tonnes	417 000	359 000	394 000	402 000	416 000
Uranium, mine	tonnes (metal content)	194	12	—	—	—
Slab zinc	tonnes	328 900	333 300	257 000	260 000	209 000

Note(s):-

- (1) France may produce fuller's earth
- (2) In addition to the countries producing sillimanite minerals, synthetic mullite is known to be produced in France
- (3) Significant quantities of germanium are believed to be recovered from imported or domestic material

- (a) Including mica recovered from mica schists and/or kaolin beneficiation
- (b) From petroleum refining and/or natural gas
- (c) Other

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	12 547 219	11 154 637	10 116 439	9 389 763	8 492 936
Aluminium and bauxite						
Bauxite	tonnes	4 157	14 013	253	2 985	5 195
Alumina	tonnes	166 329	167 309	188 951	232 762	255 392
Alumina hydrate	tonnes	117 496	103 258	125 437	144 331	139 694
Unwrought	tonnes	78 306	81 601	63 659	70 010	77 097
Unwrought alloys	tonnes	72 663	75 069	75 318	78 047	95 700
Scrap	tonnes	248 291	274 551	257 279	299 226	314 243
Antimony						
Metal	tonnes	60	104	8	79	186
Oxide	tonnes	3 715	3 391	4 352	4 540	5 177
Arsenic						
Metallic arsenic	tonnes	22	...	0	...	8
Asbestos	tonnes	59	...	5	31	—
Barytes (b)	tonnes	*61 000	*30 200	*55 500	*75 700	*57 700
Bentonite and fuller's earth						
Bentonite	tonnes	23 580	20 343	18 966	7 696	9 243
Fuller's earth	tonnes	267	34	—	10	31
Bismuth						
Compounds	tonnes	12	...	...	...	...
Metal	tonnes	28	26	46	28	39
Cadmium						
Metal	tonnes	3 614	1 232	794	604	533
Cement						
Cement clinkers	tonnes	491 760	555 646	479 952	460 364	310 228
Portland cement	tonnes	686 872	549 756	604 494	785 100	792 192
Other cement	tonnes	120 320	157 945	144 523	112 828	102 222
Chromium						
Ores & concentrates	tonnes	2 129	2 835	2 879	2 928	2 340
Metal	tonnes	6 634	5 056	4 498	7 182	8 074
Coal						
Anthracite	tonnes	15 698	26 834	9 324	1 077	14 913
Other coal	tonnes	69 544	94 865	74 343	93 265	68 197
Cobalt						
Metal	tonnes	733	516	502	675	699
Oxides	tonnes	114	64	69	221	57
Copper						
Unwrought	tonnes	27 912	15 723	32 947	60 745	48 050
Unwrought alloys	tonnes	11 581	9 283	6 585	11 940	9 851
Scrap	tonnes	190 041	192 020	180 294	243 074	262 874
Diamond						
Unsorted	carats	£264 000	£283 000	£398 000	£274 000	£518 000
Gem, rough	carats	97 000	149 000	...	...	500 000
Gem, cut	carats	1 000 000	...	1 000 000	1 500 000	1 500 000
Industrial	carats	£3 438 000	£2 554 000	£915 000	£20 000	£50 000
Diatomite	tonnes	28 149	27 647	30 199	26 043	25 379
Feldspar	tonnes	385 161	290 340	286 371	219 741	255 836
Fluorspar	tonnes	38 023	47 439	18 519	12 002	6 821
Gold						
Metal	kilograms	31 900	29 700	34 600	31 500	18 100
Waste & scrap	kilograms	77 800	40 800	33 700	70 500	29 600
Graphite	tonnes	178	...	167	122	225
Gypsum						
Crude	tonnes	478 877	427 138	335 780	324 894	250 845
Calcined	tonnes	282 629	286 568	297 326	311 437	350 955
Iodine	kilograms	74 900	107 000	30 900	30 500	40 900
Iron ore	tonnes	38 116	16 649	43 473	38 413	106 849

## France

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
<b>Iron, steel and ferro-alloys</b>						
Pig iron	tonnes	4 426	3 378	153	679	350
Sponge & powder	tonnes	6 895	5 983	6 231	5 221	6 465
Ferro-chrome	tonnes	2 478	3 747	1 456	1 074	857
Ferro-silico-magnesium	tonnes	5 714	6 521	5 262	5 521	6 829
Ferro-manganese	tonnes	26 049	26 302	28 094	14 360	7 181
Ferro-silico-manganese	tonnes	62 877	73 647	53 270	63 483	76 021
Ferro-molybdenum	tonnes	410	348	300	538	547
Ferro-nickel	tonnes	712	104	2	7	25
Ferro-niobium	tonnes	784	361	926	521	240
Ferro-silicon	tonnes	43 956	53 682	65 871	65 881	69 551
Ferro-titanium & Fe-Si-Ti	tonnes	1 842	1 434	1 463	1 305	1 542
Ferro-vanadium	tonnes	21	25	50	53	98
Other ferro-alloys	tonnes	45 650	35 746	37 534	34 781	34 138
Ingots, blooms, billets	tonnes	2 621 568	3 419 270	3 420 829	3 833 258	3 914 427
Scrap	tonnes	4 161 312	4 656 513	4 990 462	5 578 148	4 955 474
Kaolin	tonnes	290 332	325 323	1 613 484	484 554	421 927
<b>Lead</b>						
Unwrought	tonnes	62 680	60 095	12 868	6 182	6 920
Scrap	tonnes	21 979	23 473	27 789	27 003	24 683
<b>Lithium</b>						
Carbonate	tonnes	3 130	2 955	2 382	1 166	462
<b>Magnesite and magnesia</b>						
Magnesia	tonnes	9 561	14 126	23 037	37 930	45 661
<b>Manganese</b>						
Ores & concentrates (a)	tonnes	382 914	413 461	332 067	272 815	139 723
Metal	tonnes	261	168	424	745	324
Mercury	kilograms	12 500	7 100	6 800	93 800	15 400
Mica	tonnes	2 836	4 387	114 464	14 323	13 469
<b>Molybdenum</b>						
Metal	tonnes	93	65	15	436	35
Oxides	tonnes	11	20	27	31	9
<b>Nickel</b>						
Unwrought	tonnes	9 094	7 460	8 396	9 203	10 148
Unwrought alloys	tonnes	434	294	542	1 455	1 762
Scrap	tonnes	9 134	6 625	8 306	6 618	6 373
Oxides	tonnes	551	24	359	1 140	63
Crude petroleum	tonnes	55 631	90 903	91 091	39	20 374
Phosphates	tonnes	2 536	1 488	1 018	6 362	4 463
<b>Platinum metals</b>						
Platinum	kilograms	6 900	5 300	3 800	2 800	1 700
Platinum metals	kilograms	7 000	4 600	3 400	5 200	2 600
Waste & scrap	kilograms	91 300	107 500	35 400	44 182	184 400
<b>Potash</b>						
Sulphate	tonnes	508	740	860	8 248	54 235
Chloride	tonnes	134 868	95 248	41 600	19 459	6 376
Other potassic fertilisers	tonnes	988	536	660	1 271	841
<b>Rare earths</b>						
Rare earth compounds	tonnes	638	314	1 660	8 588	2 007
Ferro-cerium & other pyrophoric alloys	tonnes	105	94	109	125	32
Metals	tonnes	26	231	58	65	7
Salt	tonnes	423 727	437 847	497 458	506 431	407 255
Sillimanite	tonnes	56 510	46 454	49 958	51 653	55 052
<b>Silver</b>						
Metal	kilograms	658 600	584 600	465 300	404 600	252 300
<b>Sulphur and pyrites</b>						
Sulphur, crude	tonnes	559 527	385 326	382 273	481 226	347 690
Sulphur, refined	tonnes	1 354	10 988	16 851	16 076	13 904
Sulphur, sublimed & precipitated	tonnes	753	764	652	562	642
Talc	tonnes	191 750	222 699	226 550	262 147	279 659
<b>Tantalum and niobium</b>						
Tantalum	tonnes	32	207	3	20	101

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Tin						
Unwrought	tonnes	350	354	577	430	324
Unwrought alloys	tonnes	627	659	612	527	1 020
Scrap	tonnes	1 484	618	279	457	478
Titanium						
Metal	tonnes	5 636	4 180	3 722	4 086	5 891
Oxides	tonnes	180 271	199 744	180 080	172 796	157 543
Tungsten						
Metal	tonnes	911	624	538	571	574
Carbide	tonnes	366	348	241	251	265
Vanadium						
Pentoxide	tonnes	10	8	183	138	13
Metal	tonnes	0	0	0	26	25
Zinc						
Ores & concentrates	tonnes	18 305	17 775	37 167	38 779	39 463
Unwrought	tonnes	127 252	143 307	109 839	115 352	80 472
Unwrought alloys	tonnes	30 971	31 535	31 625	35 879	33 940
Scrap	tonnes	42 470	33 611	38 294	56 440	63 571
Zirconium						
Concentrates	tonnes	657	1 126	653	1 129	1 058

Note(s):-

(a) Including manganiferous iron ore

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

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	9 295 683	9 666 340	8 239 025	9 431 953	10 264 292
Aluminium and bauxite						
Bauxite	tonnes	1 667 959	1 347 713	1 786 905	1 507 504	1 799 671
Alumina	tonnes	785 981	670 046	704 393	644 513	655 246
Alumina hydrate	tonnes	46 522	43 727	44 743	41 187	41 682
Unwrought	tonnes	182 477	148 344	165 490	144 053	150 798
Unwrought alloys	tonnes	324 411	325 980	324 997	369 795	366 369
Scrap	tonnes	145 422	133 794	149 876	143 833	135 611
Antimony						
Ores & concentrates	tonnes	223	6	5	11	9
Metal	tonnes	6 854	6 645	5 241	8 486	7 766
Oxide	tonnes	2 090	2 093	1 972	2 096	2 243
Arsenic						
Metallic arsenic	tonnes	50	17	4	9	21
Asbestos	tonnes	25	0	3	8	5
Barytes	tonnes	19 902	20 442	23 009	28 748	31 965
Bentonite and fuller's earth						
Bentonite	tonnes	162 787	174 735	170 540	220 260	163 999
Fuller's earth	tonnes	1 196	1 794	3 701	17 907	18 445
Bismuth						
Compounds	tonnes	101	...	...	...	...
Metal	tonnes	420	728	629	830	1 029
Bromine	kilograms	11 914 000	12 437 700	13 225 500	12 595 900	13 989 000
Cadmium						
Metal	tonnes	1 488	1 682	1 248	1 465	2 114
Oxide	tonnes	1 032	910	839	743	584
Sulphide	tonnes	7	82	20	5 802	6
Cement						
Cement clinkers	tonnes	919 175	852 287	793 933	865 213	946 642
Portland cement	tonnes	1 104 447	1 114 553	1 090 120	1 114 684	1 271 478
Other cement	tonnes	926 599	1 190 848	1 123 098	927 157	984 597
Chromium						
Ores & concentrates	tonnes	26 693	22 534	22 917	19 770	18 980
Metal	tonnes	699	782	677	1 323	669

## France

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
<b>Coal</b>						
Anthracite	tonnes	1 049 738	1 323 661	1 557 639	2 076 592	3 266 840
Other coal	tonnes	13 508 122	13 960 659	15 082 984	17 619 595	16 234 759
Lignite	tonnes	60 810	23 470	41 784	40 405	34 396
Briquettes	tonnes	98 610	74 423	68 883	75 872	116 845
<b>Cobalt</b>						
Ore	tonnes	69	45	9	5	1
Metal	tonnes	1 723	1 654	1 813	*1 600	2 038
Oxides	tonnes	471	370	533	522	474
<b>Copper</b>						
Matte & cement	tonnes	390	58	1 651	386	19
Unwrought, unrefined	tonnes	177	253	118	168	248
Unwrought, refined	tonnes	564 415	576 398	578 525	590 304	516 881
Unwrought alloys	tonnes	12 858	13 722	8 308	7 564	10 132
Scrap	tonnes	70 698	65 362	70 422	78 853	75 464
<b>Diamond</b>						
Unsorted	carats	£5 592 000	£3 788 000	£3 728 000	£3 423 000	£3 168 000
Gem, cut	carats	12 000 000	10 000 000	12 500 000	10 000 000	...
Industrial	carats	1 500 000	5 500 000	3 000 000	9 000 000	...
Dust	carats	24 000 000	10 500 000	10 500 000	10 000 000	7 500 000
Diatomite	tonnes	12 725	12 168	12 194	12 368	11 181
Feldspar	tonnes	29 741	40 941	37 538	44 615	85 460
Fluorspar	tonnes	3 355	3 510	7 006	10 457	21 526
<b>Gold</b>						
Metal	kilograms	42 500	35 100	30 900	*30 000	27 700
Waste & scrap	kilograms	335 000	4 600	12 500	...	5 200
Graphite	tonnes	24 440	13 016	11 149	15 083	20 449
<b>Gypsum</b>						
Crude	tonnes	205 820	168 598	266 857	311 411	361 820
Calcined	tonnes	44 697	48 920	45 214	85 845	60 358
Iodine	kilograms	1 469 800	1 553 000	1 563 800	1 317 700	1 685 200
<b>Iron ore</b>						
Iron ore	tonnes	16 707 431	19 069 088	18 890 174	20 777 700	19 506 894
Burnt pyrites	tonnes	24 758	0	3 348	65	160
<b>Iron, steel and ferro-alloys</b>						
Pig iron	tonnes	235 212	225 850	254 512	237 824	249 585
Sponge & powder	tonnes	124 727	140 863	148 215	151 090	184 661
Ferro-chrome	tonnes	253 110	310 760	260 231	224 722	192 129
Ferro-silico-chrome	tonnes	127	2 116	1 524	59	122
Ferro-silico-magnesium	tonnes	2 006	2 166	1 840	1 524	920
Ferro-manganese	tonnes	42 103	57 442	46 048	96 276	55 239
Ferro-silico-manganese	tonnes	53 527	64 538	73 362	61 446	58 403
Ferro-molybdenum	tonnes	5 803	4 839	4 643	5 474	5 235
Ferro-nickel	tonnes	27 640	36 725	28 974	10 966	9 229
Ferro-niobium	tonnes	2 133	1 703	2 286	2 297	2 722
Ferro-phosphorus	tonnes	2 550	2 464	2 160	2 942	2 536
Ferro-silicon	tonnes	68 969	87 071	70 729	62 260	71 269
Ferro-titanium & Fe-Si-Ti	tonnes	5 259	5 441	4 828	4 768	6 448
Ferro-tungsten & Fe-Si-W	tonnes	622	283	485	346	523
Ferro-vanadium	tonnes	1 401	940	1 063	1 031	1 351
Other ferro-alloys	tonnes	42 196	16 543	16 253	18 670	27 582
Silicon metal	tonnes	22 084	19 212	16 489	19 299	25 257
Ingots, blooms, billets	tonnes	2 120 903	1 777 677	1 595 528	1 803 335	1 621 219
Scrap	tonnes	2 934 281	2 833 589	3 019 857	3 449 108	2 819 160
Kaolin	tonnes	380 166	386 197	325 358	349 353	338 848
<b>Lead</b>						
Ores & concentrates	tonnes	182 072	146 270	...	...	253
Unwrought	tonnes	80 869	80 812	103 439	91 979	109 426
Scrap	tonnes	40 099	44 079	30 508	34 513	33 818
<b>Lithium</b>						
Oxides	tonnes	420	329	347	407	482
Carbonate	tonnes	1 133	1 612	1 381	1 484	1 392
<b>Magnesite and magnesite</b>						
Magnesite	tonnes	13 047	9 434	3 193	1 701	3 427
Magnesia	tonnes	148 516	146 526	149 468	148 780	161 488



## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Manganese						
Ores & concentrates (a)	tonnes	1 390 507	968 498	892 176	626 061	615 884
Metal	tonnes	11 081	8 693	7 613	8 851	11 039
Mercury	kilograms	23 100	25 200	57 900	299 200	202 600
Mica						
Ground (b)	tonnes	1 689	1 241	3 182	1 358	1 534
Waste	tonnes	981	2 001	1 043	546	1 423
Molybdenum						
Ores & concentrates	tonnes	2 126	1 604	1 591	1 492	1 783
Metal	tonnes	635	686	727	762	993
Oxides	tonnes	119	284	371	664	678
Nickel						
Mattes, sinters etc.	tonnes	19 437	15 496	15 087	12 329	15 399
Unwrought	tonnes	34 347	39 979	30 995	26 842	22 656
Unwrought alloys	tonnes	7 372	2 269	3 192	5 350	6 104
Scrap	tonnes	1 848	2 048	2 210	2 068	1 554
Oxides	tonnes	219	140	200	166	228
Crude petroleum	tonnes	85 259 764	80 589 846	84 181 898	86 416 072	84 951 337
Phosphates	tonnes	923 926	919 097	773 860	593 253	427 194
Platinum metals						
Platinum	kilograms	12 600	8 500	5 100	6 200	5 396
Platinum metals	kilograms	22 800	12 100	15 400	17 900	3 432
Waste & scrap	kilograms	104 000	200 100	334 300	40 700	55 600
Potash						
Fertiliser salts	tonnes	1 660	2 337	1 807	1 988	1 401
Sulphate	tonnes	80 698	93 051	90 543	77 441	70 705
Chloride	tonnes	1 444 445	1 463 860	1 755 346	1 866 149	1 492 129
Other potassic fertilisers	tonnes	25 096	25 410	32 600	31 959	29 488
Rare earths						
Cerium compounds	tonnes	15 049	9 914	10 315	11 710	7 105
Other rare earth compounds	tonnes	1 407	382	1 480	1 037	585
Ferro-cerium & other pyrophoric alloys	tonnes	14	29	2	1	5
Metals	tonnes	230	169	279	251	322
Salt	tonnes	457 520	564 159	753 902	850 703	1 110 898
Sillimanite	tonnes	2 518	2 685	3 411	3 360	3 080
Silver						
Metal	kilograms	1 421 400	954 400	970 000	675 000	729 800
Sulphur and pyrites						
Pyrites	tonnes	4 229	7 314	3 359	5 643	4 521
Sulphur, crude	tonnes	55 620	42 855	50 147	43 846	39 973
Sulphur, refined	tonnes	68 001	74 225	56 388	27 041	42 353
Sulphur, sublimed & precipitated	tonnes	8 194	2 622	2 488	12 555	5 809
Talc	tonnes	41 095	43 342	40 650	77 240	76 021
Tantalum and niobium						
Tantalum	tonnes	20	42	41	67	23
Tin						
Unwrought	tonnes	8 637	9 044	9 693	9 167	7 307
Unwrought alloys	tonnes	409	169	701	638	1 080
Scrap	tonnes	1 555	541	148	24	217
Titanium						
Ilmenite	tonnes	112 466	151 799	127 083	48 930	60 205
Other titanium minerals	tonnes	41 040	12 291	34 984	81 141	86 552
Titanium slag	tonnes	256 420	123 144	...	61 456	111 137
Metal	tonnes	8 459	6 461	5 689	8 259	9 403
Oxides	tonnes	127 843	138 316	151 809	140 068	119 699
Tungsten						
Metal	tonnes	889	422	448	568	784
Carbide	tonnes	628	604	695	692	592
Vanadium						
Ores & concentrates	tonnes	...	126	1	...	21
Pentoxide	tonnes	328	382	496	441	556
Metal	tonnes	54	54	34	72	88

France

Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Zinc						
Ores & concentrates	tonnes	574 312	558 771	482 493	458 760	423 664
Unwrought	tonnes	126 795	98 355	115 491	103 037	143 476
Unwrought alloys	tonnes	39 967	32 740	34 874	56 492	45 566
Scrap	tonnes	13 265	11 144	8 203	6 046	6 996
Zirconium						
Concentrates	tonnes	59 386	43 841	58 457	48 004	53 701
Metal	tonnes	2 323	251	288	276	207

Note(s):-

(a) Including manganiferous iron ore

(b) Including unmanufactured

# Germany

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	312 700 000	292 100 000	285 500 000	267 300 000	252 000 000
Crushed rock	tonnes	136 788 000	130 693 000	124 047 000	119 627 000	122 244 000
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	*750 000	*825 000	*830 000	*835 000	*830 000
Primary aluminium	tonnes	651 592	652 845	660 783	667 800	647 900
White arsenic	tonnes	*200	*200	*200	*200	*200
Barytes	tonnes	108 111	100 993	109 506	93 624	88 591
Bentonite and fuller's earth						
Bentonite	tonnes	447 913	495 310	478 796	404 549	352 374
Bromine	kilograms	*500 000	*500 000	*500 000	—	—
Cadmium	tonnes	539	422	640	*640	*640
Cement clinker	tonnes	24 523 000	20 120 000	21 513 000	26 281 000	24 315 000
Cement, finished	tonnes	32 600 000	31 200 000	33 400 000	32 000 000	30 600 000
Coal						
Anthracite & bituminous	tonnes	27 361 079	26 363 084	25 873 043	25 871 882	24 906 867
Brown coal	tonnes	175 364 780	181 778 432	179 086 923	181 926 060	177 881 773
Copper, smelter	tonnes	317 700	295 100	288 800	278 600	257 200
Copper, refined	tonnes	693 714	695 741	597 531	652 600	638 800
Feldspar	tonnes	302 650	243 368	233 028	182 842	168 640
Fluorspar	tonnes	30 381	34 429	33 289	33 203	35 364
Graphite	tonnes	3 190	3 312	2 840	3 155	2 638
Gypsum (a)	tonnes	1 966 000	1 761 000	1 748 000	1 579 000	1 644 000
Iron ore (b) (c)	tonnes	407 002	419 371	429 170	412 238	362 106
Pig iron	tonnes	29 394 000	29 967 000	30 071 000	30 628 000	29 300 000
Crude steel	tonnes	44 803 000	45 015 000	44 809 000	46 377 000	44 524 000
Ferro-alloys						
Ferro-chrome	tonnes	19 308	20 018	18 318	24 857	22 672
Other ferro-alloys	tonnes	*30 000	*30 000	*30 000	*30 000	*30 000
Silicon metal	tonnes	27 739	25 257	27 870	28 773	29 349
Kaolin (d)	tonnes	696 832	740 821	738 123	*740 000	*750 000
Lead, refined	tonnes	373 600	379 905	356 900	359 200	341 700
Crude petroleum	tonnes	3 569 290	3 768 054	3 799 864	3 515 537	3 572 764
Natural gas	million m <sup>3</sup>	21 698	21 556	22 228	20 411	19 171
Potash						
Potassic salts	tonnes (K <sub>2</sub> O content)	3 548 665	3 471 763	3 563 332	3 626 510	3 663 829
Salt						
Rock salt	tonnes	5 326 000	6 134 000	6 178 000	7 268 000	8 258 000
Brine salt	tonnes	1 211 000	1 249 000	1 123 000	974 000	1 006 000
Salt in brine	tonnes	6 196 000	6 310 000	6 668 000	7 212 000	7 449 000
Selenium metal	tonnes	*100	*100	*100	*100	*14
Sulphur and pyrites						
Recovered (e)	tonnes (sulphur content)	80 000	46 000	—	—	—
Recovered (f)	tonnes (sulphur content)	1 640 000	1 657 200	1 619 900	1 526 700	1 627 900
Recovered (g)	tonnes (sulphur content)	40 000	41 900	43 900	40 000	42 900
Talc	tonnes	*9 000	*8 000	3 859	...	...
Uranium, mine	tonnes (metal content)	27	221	104	77	80
Slab zinc	tonnes	361 348	378 561	388 131	382 020	334 900

Note(s):-

- (1) Germany is believed to produce strontium minerals and tellurium metal
- (2) Significant quantities of germanium are believed to be recovered from imported or domestic material

- (a) Including anhydrite
- (b) Including manganese Iron ore
- (c) Used as aggregate in the construction industry
- (d) Washed and dried
- (e) From metal sulphide processing
- (f) From petroleum refining and/or natural gas
- (g) Other

## Germany

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	21 152 142	19 748 571	19 811 898	21 817 271	21 698 651
Aluminium and bauxite						
Bauxite	tonnes	35 894	42 524	26 666	30 647	28 087
Alumina	tonnes	167 226	201 103	308 210	294 034	204 075
Alumina hydrate	tonnes	537 767	488 918	472 091	528 700	527 900
Unwrought	tonnes	71 793	59 597	48 570	58 365	60 757
Unwrought alloys	tonnes	294 918	327 962	340 772	354 998	330 843
Scrap	tonnes	557 252	499 791	556 405	544 522	583 987
Antimony						
Metal	tonnes	38	10	27	12	15
Oxide	tonnes	783	543	683	786	724
Arsenic						
Metallic arsenic	tonnes	8	9	8	14	20
Barytes	tonnes	38 775	32 297	32 546	32 383	32 375
Bentonite and fuller's earth						
Bentonite	tonnes	56 589	43 329	57 237	50 477	71 977
Fuller's earth	tonnes	410	...	299	860	1 540
Bismuth						
Compounds	tonnes	35	...	...	...	...
Metal	tonnes	104	228	152	275	371
Bromine	kilograms	15 000	13 700	16 700	5 600	3 000
Cadmium						
Metal	tonnes	1	1	0	...	...
Sulphide	tonnes	3	2	5	6	14
Cement						
Cement clinkers	tonnes	718 285	411 711	1 001 024	868 384	773 394
Portland cement	tonnes	1 959 481	2 083 433	2 472 418	3 496 157	3 587 966
Other cement	tonnes	1 084 249	1 226 979	1 196 558	1 580 315	1 876 289
Chromium						
Ores & concentrates	tonnes	6 771	11 760	3 666	12 691	14 188
Metal	tonnes	225	762	2 096	1 256	1 478
Coal						
Hard coal (a)	tonnes	105 443	49 449	182 233	183 694	255 029
Brown coal	tonnes	304 061	273 953	71 777	430	73
Briquettes	tonnes	218 890	173 867	156 179	87 651	74 800
Cobalt						
Metal	tonnes	1 027	901	1 116	1 441	1 395
Oxides	tonnes	126	122	151	233	185
Copper						
Ores & concentrates	tonnes	19 053	15 630	48 674	49 617	46 139
Unwrought, unrefined	tonnes	4 989	2 215	1 592	53	232
Unwrought, refined	tonnes	108 224	90 919	117 566	137 238	149 083
Unwrought alloys	tonnes	27 379	26 876	21 421	21 038	20 232
Scrap	tonnes	261 464	300 340	363 762	373 809	439 134
Diamond						
Unsorted	carats	£230 000	£16 000	£138 000	£663 000	£756 000
Gem, rough	carats	£90 000	£10 000	£87 000	£250 000	£619 000
Gem, cut	carats	162 390	178 297	174 915	...	165 090
Industrial	carats	£3 010 000	£1 166 000	£1 254 000	£974 000	£1 168 000
Dust	carats	41 500 000	10 000 000	17 000 000	13 500 000	9 000 000
Diatomite	tonnes	5 267	13 061	20 036	20 312	7 000
Feldspar	tonnes	63 736	134 033	102 472	118 838	113 329
Fluorspar	tonnes	16 634	22 274	17 105	17 594	24 061
Gold						
Metal	kilograms	78 100	45 400	36 400	36 500	47 600
Waste & scrap	kilograms	1 517 300	1 734 400	651 000	170 065	30 600
Graphite	tonnes	10 334	12 103	11 746	14 783	14 241
Gypsum						
Crude	tonnes	123 299	176 734	142 263	197 613	259 631
Calcined	tonnes	705 776	695 565	1 070 873	1 033 057	991 946
Iodine	kilograms	570 400	2 637 000	583 100	640 400	465 800

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Iron ore						
Iron ore	tonnes	16 280	15 521	9 376	8 756	7 023
Burnt pyrites	tonnes	6 112	6 907	6 491	3 241	7 257
Iron, steel and ferro-alloys						
Pig iron	tonnes	75 137	67 365	56 571	112 911	82 834
Sponge & powder	tonnes	30 585	83 354	95 612	148 734	175 291
Ferro-chrome	tonnes	34 379	33 992	30 640	22 758	26 472
Ferro-silico-chrome	tonnes	3 115	608	1	79	4
Ferro-silico-magnesium	tonnes	6 912	6 825	5 551	13 887	14 254
Ferro-manganese	tonnes	19 346	13 036	8 937	13 776	12 660
Ferro-silico-manganese	tonnes	13 743	11 520	10 306	9 286	2 928
Ferro-molybdenum	tonnes	903	1 283	2 054	2 597	3 867
Ferro-nickel	tonnes	...	57	94	625	31
Ferro-niobium	tonnes	816	828	713	1 076	1 448
Ferro-phosphorus	tonnes	1 149	1 163	691	786	936
Ferro-silicon	tonnes	66 920	64 000	60 016	61 239	53 979
Ferro-titanium & Fe-Si-Ti	tonnes	2 877	3 607	2 478	3 069	5 263
Ferro-tungsten & Fe-Si-W	tonnes	112	106	268	178	176
Ferro-vanadium	tonnes	373	634	653	600	528
Other ferro-alloys	tonnes	20 321	22 860	21 610	27 285	25 838
Silicon metal	tonnes	10 632	10 060	16 141	18 064	—
Ingots, blooms, billets	tonnes	2 032 350	2 011 458	2 563 182	2 104 580	1 950 158
Scrap	tonnes	6 598 673	6 880 778	6 718 904	6 956 839	6 692 022
Kaolin	tonnes	350 804	333 927	359 926	369 141	301 870
Lead						
Ores & concentrates	tonnes	8 868	22 024	31 512	3 423	102
Unwrought	tonnes	160 412	169 142	129 550	120 361	122 120
Scrap	tonnes	12 669	13 646	15 468	12 412	11 064
Lithium						
Oxides	tonnes	647	532	649	625	...
Carbonate	tonnes	1 771	1 768	2 484	2 660	2 991
Magnesite and magnesia						
Magnesite	tonnes	233	186	878	218	61
Magnesia	tonnes	90 154	66 559	45 840	66 422	81 021
Manganese						
Metal	tonnes	10 186	11 548	10 703	12 261	17 824
Mercury	kilograms	412 000	59 500	48 900	55 500	36 200
Mica	tonnes	1 922	2 018	2 457	3 655	3 656
Molybdenum						
Ores & concentrates	tonnes	157	240	905	2 309	2 770
Metal	tonnes	1 220	1 274	1 465	2 014	2 241
Oxides	tonnes	4 441	2 523	2 894	—	—
Nickel						
Ores & concentrates	tonnes	8 083	12 229	10 884	10 717	7 822
Unwrought	tonnes	8 418	5 582	5 225	5 549	8 988
Unwrought alloys	tonnes	6 328	5 837	6 011	8 732	9 376
Scrap	tonnes	10 826	8 277	8 091	8 096	9 342
Oxides	tonnes	670	505	246	105	102
Crude petroleum	tonnes	907 924	656 861	1 741 465	1 253 391	1 257 658
Phosphates	tonnes	674	302	66	43	5 048
Platinum metals						
Platinum	kilograms	28 500	21 400	26 300	31 900	43 300
Palladium	kilograms	19 600	40 200	22 000	15 900	20 800
Other platinum metals	kilograms	3 400	4 000	2 900	4 600	11 100
Waste & scrap	kilograms	1 040 875	1 067 200	803 500	815 821	1 648 800
Potash						
Fertiliser salts (b) (c)	tonnes	2 916 428	2 998 738	3 103 009	3 077 154	3 235 651
Rare earths						
Rare earth compounds	tonnes	225	102	115	108	123
Metals	tonnes	16	8	10	4	1
Salt	tonnes	3 023 135	3 340 569	3 695 084	3 201 549	3 372 522
Sillimanite	tonnes	8 092	10 565	12 413	14 382	12 191
Silver						
Metal	kilograms	2 446 100	2 638 400	3 032 700	2 814 700	2 631 200

## Germany

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
<b>Sulphur and pyrites</b>						
Pyrites	tonnes	511	483	389	339	240
Sulphur, crude	tonnes	976 781	943 122	856 707	854 548	862 753
Sulphur, refined	tonnes	36 859	35 614	41 163	40 135	36 067
Sulphur, sublimed & precipitated	tonnes	14 862	5 184	4 021	276	163
Talc	tonnes	6 048	7 088	5 285	3 862	3 906
<b>Tantalum and niobium</b>						
Niobium & tantalum ores	tonnes	379	545	174	93	...
Tantalum	tonnes	258	719	323	337	190
<b>Tin</b>						
Unwrought	tonnes	1 089	1 137	909	978	1 343
Unwrought alloys	tonnes	1 178	1 077	481	408	329
Scrap	tonnes	507	719	849	994	701
<b>Titanium</b>						
Titanium minerals	tonnes	475	541	778	319	607
Metal	tonnes	6 257	6 581	6 705	8 048	8 911
Oxides	tonnes	290 191	323 059	331 806	356 007	359 946
<b>Tungsten</b>						
Metal	tonnes	2 418	1 735	2 209	2 816	4 020
<b>Vanadium</b>						
Vanadiferous residues	tonnes	630	...	...	...	...
Ores & concentrates	tonnes	...	...	127	1 060	4 680
Pentoxide	tonnes	83	81	102	296	...
Metal	tonnes	359	351	483	522	1 469
<b>Zinc</b>						
Ores & concentrates	tonnes	62 741	43 050	4 741	695	7 257
Unwrought	tonnes	71 859	95 493	104 982	91 123	81 664
Unwrought alloys	tonnes	38 250	40 259	38 710	37 762	30 115
Scrap	tonnes	47 388	40 684	47 414	52 545	55 913
<b>Zirconium</b>						
Concentrates	tonnes	4 161	2 539	2 111	2 450	5 211
Metal	tonnes	265	343	300	275	286

Note(s):-

(a) Including anthracite

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

(c) Including sulphate, chloride and other potassic fertilisers

**Imports**

Commodity	Units	2001	2002	2003	2004	2005
<b>Primary aggregates</b>						
<b>Aluminium and bauxite</b>						
Bauxite	tonnes	1 965 709	1 950 542	1 907 966	2 119 259	2 435 244
Alumina	tonnes	777 003	867 297	1 047 728	1 107 265	999 798
Alumina hydrate	tonnes	480 679	378 146	225 998	204 721	231 124
Unwrought	tonnes	625 469	721 430	796 479	628 038	648 764
Unwrought alloys	tonnes	976 513	945 177	1 099 136	1 170 875	1 121 715
Scrap	tonnes	419 586	483 052	462 320	462 580	438 066
<b>Antimony</b>						
Ores & concentrates	tonnes	494	—	—	15	—
Metal	tonnes	599	309	149	178	148
Oxide	tonnes	6 384	6 915	6 707	7 072	6 560
<b>Arsenic</b>						
Metallic arsenic	tonnes	8	5	5	4	2
<b>Asbestos</b>						
Asbestos	tonnes	168	199	59	69	98
<b>Barytes</b>						
Barytes	tonnes	251 884	221 000	218 811	226 706	231 471
<b>Bentonite and fuller's earth</b>						
Bentonite	tonnes	230 303	227 785	253 998	218 349	253 226
Fuller's earth	tonnes	7 476	7 315	8 483	11 202	9 571
<b>Bismuth</b>						
Compounds	tonnes	1 295	...	...	...	...
Metal	tonnes	2 038	1 517	1 689	1 693	1 508

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Bromine	kilograms	2 121 000	1 775 500	1 835 400	1 626 600	1 304 000
Cadmium						
Metal	tonnes	8	8	11	39	16
Oxide	tonnes	149	152	143	139	231
Sulphide	tonnes	11	8	8	6	18
Cement						
Cement clinkers	tonnes	494 930	523 967	325 302	370 454	289 600
Portland cement	tonnes	2 003 309	1 197 165	906 718	1 002 404	934 865
Other cement	tonnes	413 249	321 014	277 349	343 597	380 858
Chromium						
Ores & concentrates	tonnes	130 485	114 806	126 278	128 886	141 483
Metal	tonnes	2 257	3 291	4 063	5 599	5 428
Coal						
Anthracite	tonnes	846 310	775 851	1 143 311	1 413 902	991 877
Other coal	tonnes	27 397 137	26 629 962	25 164 977	31 047 441	29 452 512
Brown coal	tonnes	1 936 950	1 040 979	49 433	10 570	9 890
Briquettes	tonnes	159 991	154 033	178 993	95 446	110 971
Cobalt						
Metal	tonnes	2 408	2 349	2 568	2 602	2 990
Oxides	tonnes	301	346	439	448	542
Copper						
Ores & concentrates	tonnes	1 034 722	1 037 247	880 332	1 141 843	1 149 088
Matte & cement	tonnes	3 070	2 389	33 896	15 085	25 931
Unwrought, unrefined	tonnes	26 579	38 455	17 319	11 635	36 671
Unwrought, refined	tonnes	527 947	459 451	516 590	584 852	624 688
Unwrought alloys	tonnes	35 661	26 887	38 410	24 066	26 657
Scrap	tonnes	390 731	438 312	379 726	426 995	432 147
Diamond						
Gem, cut	carats	476 717	556 534	431 612	481 924	439 171
Industrial	carats	2 278 364	1 074 120	454 003	762 967	1 572 864
Dust	carats	67 250 000	49 500 000	69 000 000	82 500 000	38 500 000
Diatomite	tonnes	35 286	34 820	43 406	48 644	40 224
Feldspar	tonnes	51 965	43 033	50 809	70 064	101 931
Fluorspar	tonnes	266 764	272 913	234 067	302 071	264 896
Gold						
Metal	kilograms	71 600	44 400	40 100	49 800	56 500
Waste & scrap	kilograms	1 583 000	2 021 200	1 153 500	1 375 800	1 923 600
Graphite	tonnes	49 720	42 706	41 161	53 602	55 843
Gypsum						
Crude	tonnes	225 631	186 338	100 269	102 596	66 590
Calcined	tonnes	34 767	59 707	91 143	116 628	73 647
Iodine	kilograms	1 752 800	1 208 000	1 318 400	1 422 800	1 302 300
Iron ore						
Iron ore	tonnes	40 094 653	44 297 518	33 876 167	43 317 039	39 061 160
Burnt pyrites	tonnes	55 380	44 838	56 249	37 194	20 496
Iron, steel and ferro-alloys						
Pig iron	tonnes	280 829	229 592	221 451	342 152	320 481
Sponge & powder	tonnes	288 427	80 690	142 967	180 615	156 048
Ferro-chrome	tonnes	381 746	383 712	478 203	440 993	454 703
Ferro-silico-chrome	tonnes	6 087	2 740	8 354	11 367	1 429
Ferro-silico-magnesium	tonnes	12 538	12 651	1 103	1 722	6 831
Ferro-manganese	tonnes	198 415	183 336	178 917	175 176	170 967
Ferro-silico-manganese	tonnes	130 975	147 113	144 637	172 164	172 967
Ferro-molybdenum	tonnes	11 104	12 126	10 369	13 214	15 594
Ferro-nickel	tonnes	80 666	89 782	82 618	90 614	157 091
Ferro-niobium	tonnes	3 268	3 746	3 197	3 864	4 361
Ferro-phosphorus	tonnes	5 285	5 807	4 728	4 131	4 985
Ferro-silicon	tonnes	209 195	195 233	231 346	237 700	238 120
Ferro-titanium & Fe-Si-Ti	tonnes	8 310	11 188	8 862	6 845	10 302
Ferro-tungsten & Fe-Si-W	tonnes	561	498	486	400	600
Ferro-vanadium	tonnes	6 832	4 767	5 471	4 006	4 843
Other ferro-alloys	tonnes	33 594	43 225	25 367	22 754	25 139
Silicon metal	tonnes	94 338	108 062	120 821	130 408	156 690
Ingots, blooms, billets	tonnes	1 310 471	1 160 168	1 306 210	1 945 817	2 331 264
Scrap	tonnes	3 560 264	3 804 881	4 364 130	5 411 710	5 026 286

## Germany

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Kaolin	tonnes	749 260	750 621	771 902	774 307	803 001
Lead						
Ores & concentrates	tonnes	267 848	228 055	193 156	202 309	171 533
Unwrought	tonnes	189 697	158 048	159 860	112 975	108 533
Scrap	tonnes	19 056	19 472	9 075	11 757	15 419
Lithium						
Oxides	tonnes	5 100	3 198	4 405	3 699	4 209
Carbonate	tonnes	4 187	4 825	6 018	7 189	8 101
Magnesite and magnesite						
Magnesite	tonnes	16 285	19 665	7 724	4 684	6 353
Magnesia	tonnes	451 522	453 680	348 042	348 766	515 089
Manganese						
Ores & concentrates (a)	tonnes	7 380	6 629	6 917	8 034	7 645
Metal	tonnes	45 296	45 208	21 229	22 435	29 449
Mercury	kilograms	68 300	19 900	39 500	80 600	36 200
Mica						
Unmanufactured	tonnes	387	227	205	237	89
Ground	tonnes	21 498	23 488	24 993	28 784	30 820
Waste	tonnes	468	345	840	1 212	1 101
Molybdenum						
Ores & concentrates	tonnes	10 814	8 663	9 800	12 221	11 537
Metal	tonnes	2 364	2 406	1 878	3 043	2 569
Oxides	tonnes	318	397	545	703	725
Nickel						
Mattes, sinters etc.	tonnes	9 525	23 006	4 030	7 264	6 902
Unwrought	tonnes	81 674	84 677	72 571	72 788	87 939
Unwrought alloys	tonnes	1 660	1 625	1 933	1 646	2 182
Scrap	tonnes	9 254	11 197	10 889	11 347	11 672
Oxides	tonnes	590	668	563	517	502
Crude petroleum	tonnes	104 631 624	104 331 841	107 268 878	112 096 299	113 067 864
Phosphates	tonnes	155 278	167 297	120 231	148 082	104 335
Platinum metals						
Platinum	kilograms	39 800	34 300	44 800	39 600	58 400
Palladium	kilograms	25 200	45 000	31 600	20 700	56 000
Other platinum metals	kilograms	4 600	5 600	6 100	6 400	9 100
Waste & scrap	kilograms	5 274 800	4 500 100	3 837 500	3 713 700	6 574 600
Potash						
Chloride	tonnes	86 916	89 067	85 597	97 924	75 483
Other potassic fertilisers	tonnes	5 724	6 206	5 810	4 996	10 029
Rare earths						
Cerium compounds	tonnes	1 351	1 208	1 115	1 082	1 082
Other rare earth compounds	tonnes	7 555	7 811	7 810	7 776	6 961
Ferro-cerium & other pyrophoric alloys	tonnes	27	15	...	214	6
Metals	tonnes	564	218	358	285	402
Salt	tonnes	1 824 730	2 391 447	2 366 521	2 467 276	2 558 898
Sillimanite	tonnes	56 821	62 654	63 602	60 782	58 047
Silver						
Metal	kilograms	1 894 000	1 844 300	2 185 300	1 434 200	1 861 800
Sulphur and pyrites						
Pyrites	tonnes	77 260	51 479	42 170	53 264	62 686
Sulphur	tonnes	31 498	31 481	45 962	56 272	46 127
Sulphur, sublimed & precipitated	tonnes	1 837	1 121	1 448	12 782	4 389
Talc	tonnes	244 678	263 988	307 374	352 177	376 618
Tantalum and niobium						
Tantalum	tonnes	259	274	239	281	164
Tin						
Unwrought	tonnes	23 984	20 524	20 904	21 258	20 438
Unwrought alloys	tonnes	847	744	381	453	554
Scrap	tonnes	681	400	505	408	506
Titanium						
Ilmenite	tonnes	272 849	307 791	349 819	315 214	333 603
Other titanium minerals	tonnes	132 952	131 844	175 660	225 849	224 675
Titanium slag	tonnes	137 542	52 787	41 319	—	—
Metal	tonnes	9 774	10 532	10 044	14 756	15 978
Oxides	tonnes	189 674	192 414	211 539	237 464	240 554



## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Tungsten						
Ores & concentrates	tonnes	378	129	195	389	493
Metal	tonnes	4 914	3 024	4 874	4 976	5 515
Carbide	tonnes	1 664	1 103	1 419	1 520	1 802
Vanadium						
Pentoxide	tonnes	657	538	802	648	741
Metal	tonnes	60	88	106	159	193
Zinc						
Ores & concentrates	tonnes	316 009	319 996	340 244	480 355	401 829
Unwrought	tonnes	261 517	231 495	253 892	248 654	245 794
Unwrought alloys	tonnes	79 743	77 600	100 172	83 556	76 981
Scrap	tonnes	21 487	34 083	26 647	23 997	22 480
Zirconium						
Concentrates (b)	tonnes	82 728	76 921	85 178	80 328	79 729
Metal	tonnes	409	456	632	516	503

## Note(s):-

- (a) Including manganiferous Iron ore  
(b) Including niobium and tantalum concentrates

## Greece

### Production

Commodity	Units	2001	2002	2003	2004	2005
Bauxite	tonnes	1 903 280	2 492 000	2 418 000	2 396 065	2 441 443
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	463 000	490 000	496 000	514 000	511 000
Primary aluminium	tonnes	164 000	165 262	167 797	166 634	165 300
Asbestos	tonnes	*1 000	—	*13 000	*4 000	—
Bentonite and fuller's earth						
Bentonite	tonnes	1 258 872	1 056 598	1 156 642	1 030 556	1 124 795
Cement clinker	tonnes	13 210 781	8 947 394	...	...	...
Cement, finished	tonnes	15 562 654	*15 500 000	(b) 17 546 281	(b) 14 761 437	(b) 14 830 944
Coal						
Lignite	tonnes	66 621 437	71 087 609	69 410 756	71 237 228	71 700 000
Feldspar	tonnes	126 400	124 100	102 800	88 274	100 586
Gypsum	tonnes	808 890	890 148	731 785	856 606	865 216
Crude steel	tonnes	1 281 000	1 835 000	1 701 000	1 967 000	2 266 000
Ferro-alloys						
Ferro-nickel	tonnes	88 755	96 000	90 000	91 000	96 000
Kaolin	tonnes	60 075	57 885	59 680	53 438	49 912
Lead, mine	tonnes (metal content)	26 588	29 300	2 000	—	3 000
Lead, refined	tonnes	*6 000	*6 000	*6 000	*6 000	*6 000
Magnesite	tonnes	442 800	553 700	542 800	552 300	471 000
Nickel, mine	tonnes (metal content)	20 742	22 700	19 100	19 000	20 400
Nickel, smelter/refinery	tonnes	17 675	19 230	18 000	18 116	19 235
Perlite	tonnes	840 660	838 997	1 079 036	1 053 388	*1 100 000
Crude petroleum	tonnes	293 000	207 000	162 000	132 890	100 678
Natural gas	million m <sup>3</sup>	32	36	27	23	16
Salt	tonnes	208 776	126 118	192 161	187 522	198 024
Silver, mine	kilograms (metal content)	62 400	74 800	7 000	—	6 000
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	153 000	157 000	162 000	160 000	162 000
Talc	tonnes	2 073	670	500	200	250
Zinc, mine	tonnes (metal content)	31 737	35 000	3 000	—	4 000

Note(s):-

(1) Greece is believed to produce gold

(a) From petroleum refining and/or natural gas

(b) Portland cement, excluding white cement

### Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	33 971	18 672	12 670	108 042	43 306
Aluminium and bauxite						
Bauxite	tonnes	567 470	535 074	701 911	925 282	1 136 505
Alumina	tonnes	279 120	327 476	358 955	404 852	439 374
Alumina hydrate	tonnes	34 493	12 261	11 568	3 760	2 944
Unwrought	tonnes	6 368	56 730	58 714	61 846	60 964
Unwrought alloys	tonnes	9 457	6 142	8 880	8 597	15 017
Scrap	tonnes	9 444	12 794	10 731	13 777	15 205
Antimony						
Metal	tonnes	54	22	49	3	141
Asbestos	tonnes	252	29	12 576	4 256	—
Bentonite and fuller's earth						
Bentonite	tonnes	80 669	25 969	27 395	15 612	1 283
Cement						
Cement clinkers	tonnes	549 377	400 700	742 540	257 136	304 750
Portland cement	tonnes	4 165 718	2 312 090	2 507 359	2 679 607	3 502 085
Other cement	tonnes	221 294	142 068	110 674	170 640	242 957
Chromium						
Ores & concentrates	tonnes	5 067	...	...	21	249
Coal						
Briquettes	tonnes	404	40 046	71 510	67 701	51 752
Copper						
Scrap	tonnes	6 558	6 520	9 460	8 517	15 126

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Feldspar	tonnes	67	16 764	25 176	8 515	4 755
Gold						
Metal	kilograms	219	509	4 714	15	3
Gypsum						
Crude	tonnes	56 967	44 953	112 510	106 082	88 187
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	10 175	7 976	1 742	5 528	1 044
Ingots, blooms, billets	tonnes	5 083	1 157	2 908	64 105	48
Scrap	tonnes	47 721	39 806	56 047	59 502	37 164
Kaolin	tonnes	723	884	976	131	129
Lead						
Unwrought	tonnes	6 127	1 712	107	...	4 017
Magnesite and magnesia						
Magnesite	tonnes	18 555	35 594	40	—	—
Magnesia	tonnes	128 124	94 668	65 673	130 910	140 083
Mica	tonnes	121	179	4 239	2 769	5 653
Crude petroleum	tonnes	596 613	4	—	—	—
Potash						
Potassic fertilisers	tonnes	451	2 119	2 107	4 083	2 894
Salt	tonnes	34 429	36 450	42 976	44 664	50 390
Silver						
Metal	kilograms	215	71	351	3 299	152
Talc	tonnes	31 989	1 853	990	2 566	3 479
Titanium						
Oxides	tonnes	1 380	1 412	1 624	1 835	2 373
Zinc						
Ores & concentrates	tonnes	57 166	65 084	0	0	3 276
Unwrought (a)	tonnes	82 848	671	1 076	709	334
Scrap	tonnes	120	172	683	709	517

Note(s):-

(a) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	29 123	105 277	324 882	199 144	22 026
Aluminium and bauxite						
Bauxite	tonnes	252 246	246 155	375 275	247 358	206 870
Alumina	tonnes	3 711	952	889	905	1 049
Unwrought	tonnes	78 683	79 463	98 093	116 074	121 266
Unwrought alloys	tonnes	44 151	39 444	46 193	51 522	68 958
Scrap	tonnes	19 148	17 329	15 127	16 631	18 083
Antimony						
Metal	tonnes	98	40	40	46	24
Arsenic						
Metallic arsenic	tonnes	15	31	16	21	35
Asbestos	tonnes	1 016	1 988	91	—	...
Barytes	tonnes	1 657	839	791	858	996
Bentonite and fuller's earth						
Bentonite	tonnes	3 654	3 639	14 280	8 902	22 164
Fuller's earth	tonnes	362	1 068	898	633	844
Bismuth						
Metal	tonnes	8	3	17	23	6
Cement						
Portland cement	tonnes	79 052	56 424	302	1 754	425
Other cement	tonnes	2 989	2 628	3 322	3 497	4 548
Chromium						
Ores & concentrates	tonnes	231	360	218	122	477
Coal						
Anthracite	tonnes	22 618	47 356	51 753	37 633	35 475
Other coal	tonnes	1 334 625	238 619	803 239	753 949	724 600

## Greece

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Cobalt						
Metal	tonnes	33	34	30	89	31
Copper						
Unwrought	tonnes	129 818	126 027	107 425	120 088	90 557
Unwrought alloys	tonnes	590	699	843	550	488
Scrap	tonnes	2 627	2 672	1 979	1 864	930
Diamond						
Unsorted	carats	£223 000	£367 000	£340 000	£625 000	£597 000
Gem, rough	carats	£6 000	£83 000	£166 000	£145 000	£357 000
Gem, cut	carats	£1 824 000	£1 437 000	£1 130 000	£1 701 000	£1 893 000
Industrial	carats	£58 000	£220 000	£456 000	£771 000	£959 000
Dust	carats	6 825 000	9 520 000	6 205 000	8 390 000	...
Diatomite	tonnes	504	529	556	610	645
Feldspar	tonnes	7 466	4 599	5 216	499	3 032
Fluorspar	tonnes	11 210	12 582	10 579	20 720	10 681
Gold						
Metal	kilograms	757	1 497	8 276	37 484	56 572
Waste & scrap	kilograms	5 149	1 126	79 288	—	...
Graphite	tonnes	54	75	77	127	91
Gypsum						
Crude	tonnes	504	350	362	826	801
Calcined	tonnes	26 386	1 501	1 361	13 614	5 270
Iodine	kilograms	1 766	1 000	2 593	1 673	2 247
Iron ore						
Burnt pyrites	tonnes	125 242	58 666	132	4 601	180
Iron, steel and ferro-alloys						
Pig iron	tonnes	14 682	15 085	10 844	15 494	6 415
Ferro-manganese	tonnes	2 188	1 695	2 454	2 604	1 293
Ferro-silico-manganese	tonnes	15 462	24 110	19 505	23 808	31 657
Ferro-silicon	tonnes	11 059	3 990	7 353	7 899	6 339
Other ferro-alloys	tonnes	163	642	540	1 022	1 148
Silicon metal	tonnes	873	856	1 140	1 055	1 126
Ingots, blooms, billets	tonnes	505 889	148 798	211 021	229 854	90 412
Scrap	tonnes	776 523	1 179 017	1 138 900	1 178 451	1 545 912
Kaolin	tonnes	23 933	43 586	52 833	56 380	54 293
Lead						
Unwrought	tonnes	5 970	5 309	4 633	28 460	5 112
Scrap	tonnes	882	3 349	5 496	1 284	85
Magnesite and magnesia						
Magnesite	tonnes	13 087	19 308	23 470	20 579	14 250
Magnesia	tonnes	11 507	7 442	10 427	11 985	17 232
Manganese						
Ores & concentrates	tonnes	22 329	2	24 985	1	22 001
Metal	tonnes	681	1 289	389	1 510	905
Mercury	kilograms	125 335	291	11 617	187	954
Mica	tonnes	48	114	203	94	131
Molybdenum						
Metal	tonnes	12	21	1	13	2
Nickel						
Ores & concentrates	tonnes	31 111	...	10 480	6	29 153
Unwrought	tonnes	126	67	60	61	56
Crude petroleum	tonnes	20 112 238	18 653 052	18 976 807	18 390 500	18 926 138
Phosphates	tonnes	328 110	338 443	336 893	364 398	378 931
Platinum metals						
Platinum & platinum metals	kilograms	1 001	449	156	179	181
Potash						
Sulphate	tonnes	25 433	59 315	55 208	92 816	28 334
Chloride	tonnes	27 415	32 834	36 469	29 191	46 667
Other potassic fertilisers	tonnes	2 251	3 057	5 256	6 411	4 387
Rare earths						
Metals	tonnes	...	...	...	...	138
Salt	tonnes	98 438	102 103	218 991	173 729	162 669
Silver						
Metal	kilograms	25 686	38 516	49 225	95 318	...
Sulphur and pyrites						
Sulphur, crude	tonnes	90 126	90 577	106 897	83 711	68 761

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Talc	tonnes	6 528	4 206	5 316	10 061	9 937
Tin						
Unwrought (a)	tonnes	503	382	598	671	615
Titanium						
Titanium minerals	tonnes	529	816	313	563	528
Oxides	tonnes	18 389	17 646	22 801	27 241	25 592
Zinc						
Unwrought (a)	tonnes	31 737	26 052	24 982	29 255	20 110

Note(s):-

(a) Including alloys

# Hungary

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	32 252 000	35 407 000	40 530 145	46 354 829	69 027 609
Crushed rock	tonnes	8 621 080	9 792 782	10 090 547	13 037 471	15 078 440
Bauxite	tonnes	1 000 044	720 000	665 904	646 726	535 337
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	330 000	293 700	300 000	304 000	*300 000
Primary aluminium	tonnes	34 600	35 294	34 000	34 300	31 000
Bentonite and fuller's earth						
Bentonite	tonnes	30 441	3 700	87 200	9 300	4 900
Cement, finished	tonnes	3 452 000	3 510 000	3 573 000	3 349 000	3 371 000
Coal						
Bituminous	tonnes	635 200	660 000	667 126	280 000	—
Lignite	tonnes	8 043 062	7 573 971	8 564 000	8 470 258	8 153 968
Brown coal	tonnes	5 392 000	4 530 000	4 128 000	2 500 000	1 426 000
Diatomite	tonnes	1 323	1 656	1 770	1 640	2 190
Gypsum (a)	tonnes	231 000	108 000	62 000	55 000	19 000
Pig iron	tonnes	1 225 714	1 334 000	1 332 000	1 350 000	1 329 000
Crude steel	tonnes	2 064 507	2 138 146	2 044 526	1 944 017	2 004 250
Kaolin	tonnes	...	...	...	3 300	1 300
Manganese ore	tonnes	43 000	43 000	48 000	49 000	50 000
Perlite	tonnes	89 900	72 196	95 100	65 000	69 900
Crude petroleum	tonnes	1 058 060	1 049 770	1 134 245	1 076 844	947 542
Natural gas	million m <sup>3</sup>	3 286	3 130	3 145	3 112	3 041
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	43 000	52 000	51 000	35 000	65 000

Note(s):-

(1) Hungary is believed to produce antimony and arsenic

(2) In addition to the countries producing sillimanite minerals, synthetic mullite is known to be produced in Hungary

(a) Including anhydrite

(b) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	590 064	743 157	598 056	729 270	736 586
Aluminium and bauxite						
Alumina	tonnes	258 945	241 441	216 200	250 978	218 696
Unwrought (a)	tonnes	10 894	11 730	16 231	25 475	22 635
Scrap	tonnes	29 656	24 428	27 022	38 684	41 192
Bentonite and fuller's earth						
Bentonite	tonnes	5 784	2 118	1 030	897	442
Cement						
Cement clinkers	tonnes	44	125 482	41 006	78 590	27 328
Portland cement	tonnes	492 397	433 217	440 285	244 276	274 262
Coal						
Lignite	tonnes	...	...	13 966	81 047	366 132
Copper						
Scrap	tonnes	19 952	17 867	27 405	31 741	34 861
Diatomite	tonnes	264	308	284	452	12
Gold						
Metal	kilograms	1 110	928	...	826	200
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	651	694	436	701	234
Ingots, blooms, billets	tonnes	47 954	87 994	32 452	24 042	24 923
Scrap	tonnes	462 209	553 847	618 827	887 069	761 464
Kaolin	tonnes	3 121	3 539	2 388	7 180	6 252
Lead						
Scrap	tonnes	1 944	1 421	1 237	2 377	2 987
Potash						
Potassic fertilisers	tonnes	6 617	221	61	2 512	1 253
Salt	tonnes	232	629	2 987	576	49 578

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Sillimanite						
Mullite	tonnes	...	2 728	3 869	6 108	6 922
Silver						
Metal	kilograms	1 204	962	1 300	2 516	300
Sulphur and pyrites						
Sulphur	tonnes	...	28 389	...	22 607	36 472
Talc	tonnes	...	15	314	1 533	—
Tungsten						
Metal	tonnes	53	74	56	64	24
Zinc						
Unwrought	tonnes	1 032	997	921	3 798	415
Scrap	tonnes	2 837	2 202	2 794	3 571	3 938

Note(s):-

(a) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	57 443	241 929	104 705	254 800	446 504
Aluminium and bauxite						
Bauxite	tonnes	88 950	116 037	164 930	189 528	279 660
Alumina	tonnes	2 609	3 188	17 819	8 751	15 638
Unwrought	tonnes	175 645	199 392	199 978	337 995	109 382
Unwrought alloys	tonnes	27 701	25 328	27 925	32 021	54 362
Scrap	tonnes	7 016	17 071	16 764	13 111	17 164
Antimony						
Oxide	tonnes	180	178	150	186	180
Asbestos	tonnes	2 167	740	574	...	...
Barytes	tonnes	1 455	1 878	1 704	3 453	...
Bentonite and fuller's earth	tonnes	3 797	4 440	5 914	5 214	2 369
Bromine	kilograms	17 687	26 838	24 921	5 636	12 000
Chromium						
Ores & concentrates	tonnes	549	651	593	367	388
Metal	tonnes	85	65	82	68	0
Cement						
Portland cement	tonnes	401 168	303 249	342 107	451 613	565 366
Other cement	tonnes	174 362	466 700	536 445	579 735	508 067
Coal						
Hard coal (b)	tonnes	...	874 393	1 108 289	1 347 232	498 369
Brown coal	tonnes	247 929	259 129	311 845	403 297	710 417
Copper						
Unwrought	tonnes	19 937	18 994	14 327	11 365	3 269
Scrap	tonnes	5 370	3 483	502	512	500
Diamond						
Dust	carats	1 269 915	...	...	...	...
Diatomite	tonnes	2 845	1 633	1 593	1 390	1 158
Feldspar	tonnes	19 213	20 250	19 131	19 205	20 184
Fluorspar	tonnes	6 006	3 626	3 907	4 366	...
Gold						
Metal	kilograms	194	127	...	...	1 000
Graphite	tonnes	474	528	517	234	191
Gypsum						
Crude & calcined	tonnes	48 842	53 147	59 741	64 726	60 336
Iron ore	tonnes	1 702 510	1 718 394	1 864 033	1 063 931	1 210 543
Iron, steel and ferro-alloys						
Pig iron	tonnes	23 983	23 881	19 312	14 429	8 808
Ferro-manganese	tonnes	10 441	10 908	11 503	9 152	2 898
Ferro-silicon	tonnes	5 736	5 173	5 530	5 295	5 013
Other ferro-alloys	tonnes	5 764	6 406	4 089	4 376	5 417
Silicon metal	tonnes	2 772	3 567	4 686	5 196	2 260
Ingots, blooms, billets	tonnes	168 833	82 919	91 664	82 336	102 861
Scrap	tonnes	111 440	135 594	112 463	62 753	45 860

## Hungary

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Kaolin	tonnes	34 000	30 130	28 472	23 417	33 075
Lead						
Unwrought	tonnes	10 117	6 552	7 148	4 545	5 028
Magnesite and magnesia	tonnes	12 032	32 296	10 463	7 003	6 251
Manganese						
Metal	tonnes	476	677	568	111	889
Molybdenum						
Metal	tonnes	114	105	121	129	129
Crude petroleum	tonnes	...	5 029 814	...	5 001 714	—
Phosphates	tonnes	14 793	14 730	9 140	...	4
Platinum metals						
Platinum & platinum metals	kilograms	117	140	274	168	300
Potash						
Potassic fertilisers	tonnes	112 995	124 330	121 815	143 465	141 013
Rare earths						
Rare earth compounds	tonnes	216	202	114	158	...
Salt	tonnes	395 106	468 704	557 050	486 695	592 522
Sillimanite	tonnes	...	1 370	2 045	2 396	4 519
Silver						
Metal	kilograms	19 541	15 444	17 695	33 178	15 200
Sulphur and pyrites						
Sulphur	tonnes	4 339	1 853	1 426	1 088	1 079
Sulphur, sublimed & precipitated	tonnes	287	134	67	296	362
Talc	tonnes	9 698	9 576	10 070	9 178	...
Tin						
Unwrought (a)	tonnes	292	219	91	155	192
Titanium						
Metal	tonnes	49	215	367	387	107
Oxides	tonnes	6 976	7 941	8 247	8 677	7 523
Zinc						
Unwrought	tonnes	(a) 23 615	(a) 23 295	(a) 16 900	(a) 15 779	14 529
Unwrought alloys	tonnes	...	...	...	...	4 326

Note(s):-

(a) Including alloys

(b) Including anthracite



# Irish Republic

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	33 000 000	34 000 000	40 000 000	*40 000 000	*40 000 000
Crushed rock	tonnes	77 000 000	78 000 000	60 000 000	*60 000 000	*94 000 000
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	1 448 730	1 400 000	1 500 000	*1 500 000	*1 800 000
Cement, finished	tonnes	2 600 000	2 500 000	2 500 000	*2 500 000	*2 500 000
Gypsum	tonnes	*500 000	*500 000	*600 000	*650 000	*700 000
Crude steel	tonnes	150 000	—	—	—	—
Lead, mine	tonnes (metal content)	44 500	41 700	50 300	63 800	72 200
Lead, refined	tonnes	9 800	6 600	7 800	19 600	22 500
Natural gas	million m <sup>3</sup>	816	839	673	848	570
Silver, mine	kilograms (metal content)	8 700	7 500	8 500	5 200	10 500
Zinc, mine	tonnes (metal content)	298 100	276 700	419 000	438 300	445 400

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	380 067	703 054	563 286	135 579	62 729
Aluminium and bauxite						
Alumina	tonnes	1 891 293	1 564 481	2 405 797	1 388 723	1 459 036
Alumina hydrate	tonnes	20 746	22 656	51 149	44 645	85 062
Unwrought alloys	tonnes	3 287	4 389	4 569	3 776	3 542
Scrap	tonnes	14 470	19 240	12 307	15 367	16 475
Cement						
Cement clinkers	tonnes	6 447	...	2 650	...	...
Portland cement	tonnes	220 581	263 254	439 876	1 133 469	942 655
Coal						
Briquettes	tonnes	20 787	20 130	21 151	18 049	13 103
Cobalt						
Oxides	tonnes	49	119	118	11	—
Copper						
Scrap	tonnes	8 835	9 043	17 824	16 118	13 152
Diamond						
Gem, rough	carats	5 525 000	7 285 000	5 040 000	...	...
Industrial	carats	5 140 000	7 120 000	2 275 000	3 395 000	1 610 000
Gold						
Metal	kilograms	£35 000	£389 000	£784 000	£1 076 000	£942 000
Waste & scrap	kilograms	£3 850 000	£1 623 000	£1 520 000	£1 672 000	£1 429 000
Gypsum						
Crude	tonnes	820	817	873	919	1 022
Calcined	tonnes	37 919	22 181	33 382	40 636	42 212
Iodine	kilograms	2 500	2 000	9 600	—	1 462
Iron, steel and ferro-alloys						
Scrap	tonnes	133 287	228 807	292 971	347 479	352 028
Lead						
Ores & concentrates	tonnes	58 150	21 069	56 141	84 115	92 813
Magnesite and magnesia						
Magnesite	tonnes	635	...	52	6	...
Magnesia	tonnes	22 816	65 483	65 549	69 105	82 417
Nickel						
Scrap	tonnes	674	701	664	797	641
Platinum metals						
Waste & scrap	kilograms	12 292	22 983	5 544	13 100	7 900
Rare earths						
Rare earth compounds	tonnes	182	64	107	85	14
Ferro-cerium & other pyrophoric alloys	tonnes	142	...	362	...	...
Tin						
Unwrought (a)	tonnes	281	77	29	103	67
Scrap	tonnes	304	109	21	140	...

Irish Republic

Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Tungsten						
Metal	tonnes	96	38	41	72	963
Zinc						
Ores & concentrates	tonnes	381 072	161 452	439 247	564 018	522 312
Scrap	tonnes	296	235	298	450	684

Note(s):-

(a) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	989 926	1 121 763	1 036 886	1 269 673	1 444 893
Aluminium and bauxite						
Bauxite	tonnes	3 493 883	3 732 789	3 418 940	3 740 006	3 606 983
Alumina	tonnes	7 768	7 544	6 718	6 626	4 252
Unwrought (a)	tonnes	11 474	6 750	6 503	6 603	4 092
Scrap	tonnes	695	503	294	490	117
Antimony						
Metal	tonnes	12	31	15	13	0
Arsenic						
Metallic arsenic	tonnes	31	127	47	...	158
Asbestos	tonnes	1	19	—	475	2 794
Barytes	tonnes	176	318	332	411	894
Bentonite and fuller's earth						
Bentonite	tonnes	1 064	966	869	2 042	2 658
Bismuth						
Metal	tonnes	30	33	54	2	6
Bromine	kilograms	22 000	5 739	33 238	602	...
Cement						
Cement clinkers	tonnes	66 661	56 199	88 669	226 116	245 955
Portland cement	tonnes	430 990	373 759	259 703	281 044	335 055
Other cement	tonnes	3 092	2 968	4 105	9 132	8 958
Chromium						
Metal	tonnes	26	19	27	25	40
Coal						
Anthracite	tonnes	282 790	163 733	164 270	100 792	60 325
Other coal	tonnes	1 682 981	1 337 469	1 307 994	2 930 298	2 641 074
Briquettes	tonnes	42 480	28 105	46 789	48 348	35 959
Cobalt						
Metal	tonnes	527	398	282	273	390
Oxides	tonnes	45	6	3	5	13
Copper						
Scrap	tonnes	1 080	1 087	514	16	27
Diamond						
Unsorted	carats	48 655 000	19 505 000	22 665 000	33 525 000	39 900 000
Gem, rough	carats	2 140 000	...	8 225 000	1 815 000	3 815 000
Gem, cut	carats	45 300 000	30 805 000	23 370 000	21 175 000	36 975 000
Industrial	carats	46 820 000	95 650 000	3 930 000	26 740 000	30 680 000
Dust	carats	£18 208 000	£27 972 000	£41 933 000	£29 021 000	£42 591 000
Diatomite	tonnes	286	450	729	594	641
Gold						
Metal	kilograms	£8 002 196	£6 057 000	£9 565 000	£7 480 000	£7 227 000
Waste & scrap	kilograms	6 158	120	2 322	4 880	2 567
Graphite	tonnes	108	541	248	288	177
Gypsum						
Crude	tonnes	8 615	10 931	373	536	1 056
Calcined	tonnes	444	914	2 228	6 015	20 024
Iodine	kilograms	44 664	5 000	8 712	18 215	11 921

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Iron, steel and ferro-alloys						
Pig iron	tonnes	3 401	5 120	4 808	3 812	3 215
Ferro-alloys	tonnes	3 772	663	224	286	474
Silicon metal	tonnes	1 032	219	431	367	221
Ingots, blooms, billets	tonnes	1 203	1 601	1 291	1 487	1 637
Scrap	tonnes	26 285	1 420	786	1 277	1 137
Kaolin	tonnes	11 505	20 919	19 186	22 213	22 764
Lead						
Unwrought	tonnes	24 432	35 376	28 438	26 896	30 999
Scrap	tonnes	9 163	9 985	7 798	18 290	28 530
Magnesite and magnesia						
Magnesite	tonnes	108	1 500	15 449	25 886	12 653
Magnesia	tonnes	47 947	59 905	43 802	49 664	49 466
Manganese						
Ores & concentrates (b)	tonnes	38 977	27 456	19 306	268	285
Metal	tonnes	49	23	9	5	5
Mercury	kilograms	2 401	1 008	11 604	61	72
Mica	tonnes	639	463	364	551	889
Nickel						
Unwrought (a)	tonnes	1 834	1 361	1 558	1 493	1 775
Crude petroleum	tonnes	2 475 545	1 112 511	1 378 494	2 128 991	3 226 383
Phosphates	tonnes	2 144	9 717	440	1 159	219
Platinum metals						
Platinum & platinum metals	kilograms	3 694	2 342	1 829	2 620	3 865
Potash						
Chloride	tonnes	36 186	17 160	3 790	30 456	113 476
Other potassic fertilisers	tonnes	2 170	2 483	6 156	4 924	5 747
Rare earths						
Rare earth compounds	tonnes	46	44	245	74	32
Metals	tonnes	66	63	64	4	14
Salt	tonnes	107 438	110 654	77 992	83 789	83 746
Sillimanite	tonnes	14 377	5 795	10	89	1
Silver						
Metal	kilograms	2 940	2 960	2 247	2 709	2 386
Sulphur and pyrites						
Sulphur, sublimed & precipitated	tonnes	1 281	194	898	1 371	2 327
Talc	tonnes	1 848	2 224	2 008	2 508	2 632
Tantalum and niobium						
Tantalum	tonnes	7	2	2	2	8
Tin						
Unwrought (a)	tonnes	655	271	171	462	307
Titanium						
Oxides	tonnes	3 931	5 070	5 095	5 685	5 059
Tungsten						
Metal	tonnes	45	152	331	177	292
Zinc						
Unwrought (a)	tonnes	3 668	5 699	4 241	2 956	3 629

Note(s):-

(a) Including alloys

(b) Including manganiferous iron ore

# Italy

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	215 622 251	200 776 836	212 169 204	176 252 243	206 149 140
Crushed rock	tonnes	51 224 533	46 512 344	44 562 447	54 195 444	61 639 848
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	993 000	1 010 000	1 021 000	1 064 000	1 070 000
Primary aluminium	tonnes	187 500	190 400	191 400	195 400	192 900
Barytes	tonnes	10 809	10 215	12 214	9 608	*10 000
Bentonite and fuller's earth						
Bentonite	tonnes	579 029	463 231	474 475	437 659	...
Fuller's earth	tonnes	19 815	24 595	250	300	...
Bromine	kilograms	*300 000	*300 000	*300 000	*300 000	*300 000
Cadmium	tonnes	352	362	22	—	—
Cement clinker	tonnes	30 893 082	30 770 167	32 077 055	33 048 546	...
Cement, finished	tonnes	40 190 597	41 722 254	43 580 047	45 342 868	*48 000 000
Coal						
Lignite	tonnes	130 000	100 000	...	...	...
Copper, refined	tonnes	30 200	32 400	26 700	33 600	32 200
Feldspar	tonnes	3 240 457	3 159 569	2 972 187	2 941 272	*3 000 000
Fluorspar	tonnes	70 160	53 260	26 387	17 915	...
Gold, mine	kilograms (metal content)	522	631	*100	—	—
Gypsum	tonnes	1 558 882	1 531 477	1 783 903	1 615 287	...
Pig iron	tonnes	10 581 000	9 746 000	10 123 000	10 566 000	11 392 000
Crude steel	tonnes	26 544 000	26 302 000	27 058 000	28 477 000	29 319 000
Ferro-alloys						
Ferro-manganese	tonnes	*40 000	*40 000	*40 000	*40 000	*40 000
Ferro-silico-manganese	tonnes	*100 000	*100 000	*100 000	*100 000	*100 000
Kaolin	tonnes	295 263	174 990	224 755	246 608	...
Lead, mine	tonnes (metal content)	2 700	3 200	2 700	800	*800
Lead, refined	tonnes	226 500	196 000	214 100	201 600	211 000
Manganese ore	tonnes	803	867	763	714	...
Perlite	tonnes	*60 000	*60 000	*60 000	*60 000	*60 000
Crude petroleum	tonnes	4 097 000	5 531 000	5 570 000	5 445 000	6 100 000
Natural gas	million m <sup>3</sup>	15 242	14 623	13 885	12 961	11 977
Salt						
Rock salt & brine salt	tonnes	3 301 173	3 342 992	2 922 251	2 876 469	...
Silver, mine	kilograms (metal content)	*1 000	*1 000	200	100	100
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	203 000	142 000	127 000	113 000	92 000
Recovered (b)	tonnes (sulphur content)	540 000	560 000	565 000	575 000	650 000
Talc	tonnes	126 868	125 040	122 849	138 367	*140 000
Slab zinc	tonnes	178 600	175 800	123 100	118 400	121 200

Note(s):-

(1) Germanium is believed to be recovered from imported or domestic material

(a) From metal sulphide processing

(b) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	1 443 143	1 638 314	1 333 675	1 556 414	1 734 620
Aluminium and bauxite						
Bauxite	tonnes	69 646	49 307	9 291	40 512	121 029
Alumina	tonnes	646 064	721 558	682 587	606 416	651 704
Alumina hydrate	tonnes	29 901	35 623	34 820	24 895	26 652
Unwrought	tonnes	2 639	5 986	3 385	4 203	8 742
Unwrought alloys	tonnes	28 817	35 982	31 082	43 578	57 573
Scrap	tonnes	19 416	17 707	20 358	26 630	35 904
Antimony						
Metal	tonnes	36	70	1	3	10
Oxide	tonnes	200	504	340	207	94

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Arsenic						
Metallic arsenic	tonnes	—	—	—	—	16
Asbestos	tonnes	...	...	...	...	20
Barytes	tonnes	390	2 076	224	1 951	505
Bentonite and fuller's earth						
Bentonite	tonnes	209 107	215 834	221 353	257 596	245 515
Bromine	kilograms	16 000	2 259	1 296	505	1 000
Cadmium						
Metal	tonnes	739	377	239	54	18
Sulphide	tonnes	5	4	0	—	—
Cement						
Cement clinkers	tonnes	99 472	82 835	55 289	8 965	19 427
Portland cement	tonnes	2 078 455	1 940 114	1 816 975	1 903 368	2 379 941
Other cement	tonnes	168 039	174 484	181 086	130 920	130 120
Chromium						
Ores & concentrates	tonnes	5 558	3 014	2 638	3 803	4 673
Metal	tonnes	815	407	1 993	4 184	1 070
Coal						
Hard coal (b)	tonnes	54 884	33 141	17 124	92 227	66 115
Cobalt						
Metal	tonnes	86	98	174	236	97
Oxides	tonnes	126	49	63	123	63
Copper						
Matte & cement	tonnes	4 377	5 982	561	366	...
Unwrought	tonnes	28 074	7 528	13 371	22 988	6 387
Unwrought alloys	tonnes	16 851	12 631	12 110	16 772	14 128
Scrap	tonnes	55 930	46 184	53 184	97 964	110 711
Diamond						
Gem, cut	carats	£15 342 000	£15 982 000	£21 938 000	£26 708 000	£30 464 000
Industrial	carats	£111 000	£607 000	£228 000	£565 000	£666 000
Dust	carats	57 190 000	104 155 000	42 170 000	49 130 000	48 455 000
Diatomite	tonnes	1 776	1 194	1 217	1 745	1 138
Feldspar	tonnes	128 544	159 403	165 128	204 096	302 715
Fluorspar	tonnes	20 709	31 142	28 222	20 607	28 699
Gold						
Metal	kilograms	31 299	32 091	36 047	44 180	60 480
Graphite	tonnes	199	313	222	625	274
Gypsum						
Crude	tonnes	47 185	24 560	1 032	8 040	12 641
Calcined	tonnes	74 209	54 393	38 778	42 223	41 404
Iodine	kilograms	2 892	3 000	2 065	3 080	14 499
Iron ore						
Burnt pyrites	tonnes	57 643	46 294	30 848	11 086	9 410
Iron, steel and ferro-alloys						
Pig iron	tonnes	47 031	58 982	40 069	41 068	15 740
Sponge & powder	tonnes	2 095	651	130	62	163
Ferro-chrome	tonnes	1 843	9 576	7 290	8 411	3 753
Ferro-silico-magnesium	tonnes	10	2 119	1 673	3 163	30
Ferro-manganese	tonnes	17 472	5 382	6 322	8 857	10 380
Ferro-silico-manganese	tonnes	3 371	2 055	1 392	3 167	3 511
Ferro-molybdenum	tonnes	525	351	352	162	90
Ferro-nickel	tonnes	...	...	...	...	3 967
Ferro-silicon	tonnes	3 143	2 697	3 287	3 594	5 035
Ferro-vanadium	tonnes	1 023	2 873	817	63	3
Other ferro-alloys	tonnes	1 107	975	488	2 859	1 023
Silicon metal	tonnes	743	1 092	583	1 667	3 931
Ingots, blooms, billets	tonnes	770 001	786 800	546 474	402 967	698 402
Scrap	tonnes	151 196	153 190	173 616	211 385	185 688
Kaolin	tonnes	58 835	47 652	37 357	29 995	40 800
Lead						
Unwrought	tonnes	8 646	20 987	26 711	28 295	18 244
Scrap	tonnes	2 716	4 792	5 652	1 262	2 477
Lithium						
Oxides	tonnes	8	58	47	11	6
Carbonate	tonnes	87	138	162	206	269

## Italy

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Magnesite and magnesia						
Magnesite	tonnes	2 521	3 170	2 141	2 868	3 489
Magnesia	tonnes	57 158	52 206	17 414	9 779	12 130
Manganese						
Metal	tonnes	62	120	37	113	241
Mercury	kilograms	21 968	274 624	20 153	6 952	18 244
Mica	tonnes	349	667	371	623	738
Molybdenum						
Metal	tonnes	98	57	250	171	132
Nickel						
Unwrought (a)	tonnes	2 102	2 701	2 923	1 637	1 720
Scrap	tonnes	1 057	552	351	644	1 923
Crude petroleum	tonnes	250 353	871 391	802 524	824 206	986 121
Phosphates	tonnes	794	513	475	4 417	4 883
Platinum metals						
Platinum	kilograms	31 775	3 546	10 430	6 277	6 555
Platinum metals	kilograms	6 133	13 337	8 310	4 207	6 458
Waste & scrap	kilograms	23 155	61 441	96 968	105 220	206
Potash						
Potassic fertilisers	tonnes	804	1 502	2 415	1 169	1 270
Rare earths						
Metals	tonnes	18	19	15	81	168
Salt	tonnes	170 027	326 123	325 395	289 415	317 124
Silver						
Metal	kilograms	399 772	442 900	677 683	616 861	564 308
Sulphur and pyrites						
Pyrites	tonnes	9 455	9 547	8 185	7 384	4 763
Sulphur, crude	tonnes	179 324	155 173	14 358	8 785	41 534
Sulphur, refined	tonnes	(c) ...	(c) ...	136 717	156 833	183 869
Sulphur, sublimed & precipitated	tonnes	352	251	5 693	930	2 159
Talc	tonnes	89 839	108 467	116 739	118 131	120 920
Tantalum and niobium						
Tantalum	tonnes	3	50	1	2	1
Tin						
Unwrought (a)	tonnes	268	497	458	406	503
Scrap	tonnes	222	191	201	180	17
Titanium						
Metal	tonnes	5 102	3 727	3 159	4 439	4 130
Oxides	tonnes	24 393	28 434	28 323	28 476	25 433
Tungsten						
Metal	tonnes	245	129	191	357	233
Vanadium						
Ores & concentrates	tonnes	3 964	2 401	1 691	1 267	1 092
Zinc						
Ores & concentrates	tonnes	37 107	21 429	61 273	93 317	96 439
Unwrought	tonnes	6 624	2 250	2 761	2 331	9 230
Unwrought alloys	tonnes	5 002	6 520	6 914	3 523	2 854
Scrap	tonnes	9 793	12 762	17 313	15 157	13 652
Zirconium						
Concentrates	tonnes	15 906	20 510	22 050	25 633	21 760
Metal	tonnes	1 604	775	424	441	455

Note(s):-

(a) Including alloys

(b) Including anthracite

(c) Included with crude

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	4 014 635	3 324 865	3 368 905	4 102 477	4 331 596
Aluminium and bauxite						
Bauxite	tonnes	2 324 849	2 256 065	2 169 206	2 407 108	2 602 224
Alumina	tonnes	126 284	126 299	123 514	142 931	147 537
Alumina hydrate	tonnes	145 496	134 724	128 280	151 086	155 718
Unwrought	tonnes	307 267	381 046	425 165	434 802	426 721
Unwrought alloys	tonnes	362 897	400 139	446 358	468 500	463 411
Scrap	tonnes	429 647	300 058	327 721	346 736	326 901
Antimony						
Ores & concentrates	tonnes	446	727	786	879	1 005
Metal	tonnes	1 929	1 551	1 377	743	164
Oxide	tonnes	4 366	5 037	4 314	5 528	5 543
Arsenic						
Metallic arsenic	tonnes	48	91	111	84	54
Barytes	tonnes	93 733	79 605	87 501	86 874	84 178
Bentonite and fuller's earth						
Bentonite	tonnes	112 094	103 545	139 576	153 410	138 973
Fuller's earth	tonnes	12 920	12 954	10 982	5 760	7 893
Bismuth						
Metal	tonnes	391	301	151	175	203
Bromine	kilograms	113 000	104 414	139 908	355 734	281 000
Cadmium						
Metal	tonnes	45	46	48	87	72
Oxide	tonnes	76	95	62	96	55
Cement						
Cement clinkers	tonnes	1 018 494	1 777 159	2 322 710	2 720 499	2 828 906
Portland cement	tonnes	1 915 641	1 796 508	2 033 657	2 130 079	2 014 905
Other cement	tonnes	314 706	304 329	168 008	146 033	152 325
Chromium						
Ores & concentrates	tonnes	82 769	56 835	26 802	30 872	39 999
Metal	tonnes	549	544	520	677	958
Coal						
Anthracite	tonnes	155 092	193 308	243 578	338 706	369 840
Other coal	tonnes	20 068 964	19 682 422	21 029 014	25 382 339	24 714 768
Cobalt						
Ore	tonnes	1	41	495	122	5
Metal	tonnes	624	649	449	440	468
Oxides	tonnes	1 004	1 256	966	1 004	1 128
Copper						
Unwrought, unrefined	tonnes	1 455	636	310	216	955
Unwrought, refined	tonnes	649 687	643 386	650 757	700 101	652 089
Unwrought alloys	tonnes	21 575	19 779	21 862	16 723	8 053
Scrap	tonnes	168 541	188 238	164 700	128 501	124 737
Diamond						
Unsorted	carats	£1 087 000	£1 680 000	£1 138 000	£1 655 000	£2 576 000
Gem, rough	carats	£890 000	£1 425 000	£1 241 000	£928 000	£1 591 000
Gem, cut	carats	£236 885 000	£176 777 000	£180 528 000	£210 629 000	£235 326 000
Industrial	carats	£6 802 000	£6 699 000	£4 647 000	£5 949 000	£5 236 000
Dust	carats	101 940 000	147 020 000	117 845 000	135 820 000	142 000 000
Diatomite	tonnes	7 047	8 990	10 429	14 744	9 141
Feldspar	tonnes	1 865 170	1 871 798	2 291 993	2 693 951	2 623 428
Fluorspar	tonnes	209 672	162 510	226 780	212 975	249 756
Gold						
Metal	kilograms	398 542	358 654	281 157	274 841	250 938
Waste & scrap	kilograms	15 694	7 584	1 685	3 612	904
Graphite	tonnes	11 319	11 302	10 845	10 699	11 102
Gypsum						
Crude	tonnes	2 479	2 391	1 947	5 024	6 134
Calcined	tonnes	23 487	22 706	17 681	22 515	22 076
Iodine	kilograms	1 049 291	1 218 000	1 167 573	1 127 906	854 831
Iron ore						
Iron ore	tonnes	10 263 020	9 283 941	8 842 872	10 578 006	11 244 293
Burnt pyrites	tonnes	55 502 623	5 614 311	6 445 903	6 136 765	6 307 527

## Italy

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
<b>Iron, steel and ferro-alloys</b>						
Pig iron	tonnes	1 308 092	1 121 250	1 209 778	1 304 367	1 729 086
Sponge & powder	tonnes	220 836	289 728	316 524	206 956	424 810
Ferro-chrome	tonnes	303 726	378 402	368 649	400 159	428 716
Ferro-silico-chrome	tonnes	...	189	30	5	32
Ferro-silico-magnesium	tonnes	4 570	7 651	6 601	7 826	5 409
Ferro-manganese	tonnes	74 801	77 121	69 901	79 827	84 920
Ferro-silico-manganese	tonnes	95 270	151 140	150 805	182 945	174 391
Ferro-molybdenum	tonnes	5 063	3 866	4 954	7 289	7 294
Ferro-nickel	tonnes	36 887	60 680	59 367	82 107	141 603
Ferro-niobium	tonnes	1 431	1 523	1 408	1 403	2 457
Ferro-phosphorus	tonnes	917	1 021	662	830	987
Ferro-silicon	tonnes	134 547	114 779	130 582	119 820	141 789
Ferro-titanium & Fe-Si-Ti	tonnes	3 120	2 462	3 065	3 379	3 978
Ferro-tungsten & Fe-Si-W	tonnes	177	108	123	229	208
Ferro-vanadium	tonnes	2 014	2 180	1 759	1 890	1 945
Other ferro-alloys	tonnes	14 245	17 338	15 096	17 062	17 384
Silicon metal	tonnes	42 596	37 799	48 298	46 108	49 129
Ingots, blooms, billets	tonnes	2 270 890	2 138 491	2 510 222	3 874 346	4 310 404
Scrap	tonnes	4 348 543	4 045 986	4 380 744	5 606 124	5 367 259
Kaolin	tonnes	1 020 131	952 526	947 116	939 832	956 948
<b>Lead</b>						
Ores & concentrates	tonnes	109 714	98 430	86 985	99 015	107 685
Unwrought	tonnes	90 537	111 214	88 333	114 546	72 181
Scrap	tonnes	6 346	4 737	3 669	3 877	3 333
<b>Lithium</b>						
Oxides	tonnes	168	209	237	148	223
Carbonate	tonnes	1 659	1 581	1 686	1 505	2 263
<b>Magnesite and magnesia</b>						
Magnesite	tonnes	32 911	18 687	17 326	9 429	23 536
Magnesia	tonnes	106 250	120 820	129 672	163 273	161 432
<b>Manganese</b>						
Ores & concentrates (a)	tonnes	100 908	111 716	100 796	206 249	76 278
Metal	tonnes	10 089	4 723	3 673	4 970	8 494
Mercury	kilograms	32 672	15 389	27 140	135 119	32 471
<b>Mica</b>						
Unmanufactured	tonnes	62	52	106	65	118
Ground	tonnes	2 594	2 586	2 759	3 473	3 405
<b>Molybdenum</b>						
Ores & concentrates	tonnes	4 065	4 097	4 119	4 719	5 109
Metal	tonnes	284	163	122	105	203
Oxides	tonnes	74	141	172	247	117
<b>Nickel</b>						
Mattes, sinters etc.	tonnes	225	515	306	353	32
Unwrought	tonnes	50 142	49 803	51 276	41 944	37 708
Unwrought alloys	tonnes	1 845	1 577	1 211	2 664	1 455
Scrap	tonnes	2 141	559	2 248	3 075	5 119
Crude petroleum	tonnes	83 971 514	81 043 087	84 724 010	87 208 954	89 007 151
Phosphates	tonnes	263 295	278 389	296 497	359 090	279 693
<b>Platinum metals</b>						
Platinum	kilograms	9 394	17 518	10 551	12 087	15 586
Platinum metals	kilograms	30 150	26 602	20 085	21 430	19 183
Waste & scrap	kilograms	988	5	39	278	20 085
<b>Potash</b>						
Sulphate	tonnes	87 150	84 724	102 855	96 904	96 415
Chloride	tonnes	425 575	445 906	422 469	392 833	334 324
Other potassic fertilisers	tonnes	17 701	21 604	16 491	29 902	13 203
<b>Rare earths</b>						
Rare earth compounds	tonnes	669	637	656	932	987
Ferro-cerium & other pyrophoric alloys	tonnes	3	23	1	1	17
Metals	tonnes	17	4	102	108	38
Salt	tonnes	771 298	685 681	745 388	833 790	773 507
Sillimanite	tonnes	15 859	18 193	14 669	15 132	27 476
<b>Silver</b>						
Metal	kilograms	2 030 362	1 705 431	1 724 000	1 776 385	1 635 765



## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Sulphur and pyrites						
Pyrites	tonnes	9 174	15 021	12 067	8 929	15 548
Sulphur, crude	tonnes	43 335	53 623	11 975	8 646	3 150
Sulphur, refined	tonnes	8 086	8 330	8 478	10 279	10 497
Sulphur, sublimed & precipitated	tonnes	3 939	820	483	281	328
Talc	tonnes	133 646	117 688	127 855	126 745	125 913
Tin						
Unwrought	tonnes	6 171	6 507	6 201	5 610	5 899
Unwrought alloys	tonnes	204	190	105	95	135
Titanium						
Titanium minerals	tonnes	112 828	99 830	123 862	88 361	85 607
Metal	tonnes	6 126	5 052	4 738	6 580	5 186
Oxides	tonnes	149 841	157 476	149 238	158 592	154 950
Tungsten						
Metal	tonnes	301	236	258	321	257
Carbide	tonnes	363	324	318	299	337
Vanadium						
Pentoxide	tonnes	199	153	129	134	156
Zinc						
Ores & concentrates	tonnes	311 767	283 804	191 369	249 978	219 491
Unwrought	tonnes	175 658	201 905	226 245	273 146	261 192
Unwrought alloys	tonnes	42 197	31 361	28 659	35 835	34 929
Scrap	tonnes	21 985	15 509	14 095	15 991	14 172
Zirconium						
Concentrates	tonnes	137 649	136 504	130 207	149 787	147 435
Metal	tonnes	936	85	823	122	120

Note(s):-

(a) Including manganiferous iron ore

# Latvia

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	2 283 102	2 534 837	3 584 055	3 194 361	2 344 138
Cement clinker	tonnes	*200 000	*200 000	*200 000	250 000	...
Cement, finished	tonnes	*300 000	260 397	295 205	283 645	280 000
Gypsum	tonnes	*100 000	(a) 220 000	(a) 160 000	(a) 230 000	(a) *230 000
Crude steel	tonnes	515 000	507 000	546 000	550 000	550 000

Note(s):-

(a) Including anhydrite

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	173 112	118 698	12 108	10 278	13 178
Aluminium and bauxite						
Unwrought (a)	tonnes	26 973	37 243	34 081	39 368	34 697
Scrap	tonnes	2 389	1 477	747	748	910
Cement						
Portland cement	tonnes	53 352	42 492	42 644	26 144	10 762
Copper						
Scrap	tonnes	8 160	7 775	6 329	7 153	9 207
Gold						
Waste & scrap	kilograms	137	1	72	...	...
Gypsum	tonnes	35 302	55 225	58 186	24 782	48 896
Iron, steel and ferro-alloys						
Ferro-chrome	tonnes	24 000	11 000	20	19	...
Scrap	tonnes	37 885	6 328	6 415	64 936	217 361
Nickel						
Scrap	tonnes	2 293	1 004	853	170	538
Crude petroleum	tonnes	10 999	10 477	10 162	19 892	6 085
Platinum metals						
Waste & scrap	kilograms	2	407	567	716	1 002
Salt	tonnes	730	668	411	5 169	10 205
Titanium						
Metal	tonnes	180	16	45	61	6
Tungsten						
Metal	tonnes	...	42	84	32	4

Note(s):-

(a) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	543 479	623 854	676 383	629 613	1 320 287
Aluminium and bauxite						
Unwrought (a)	tonnes	2 634	2 052	4 940	6 100	1 810
Scrap	tonnes	11 977	24 125	22 149	27 340	16 970
Asbestos	tonnes	664	...	...	34	4
Bentonite and fuller's earth						
Bentonite	tonnes	438	1 087	1 710	1 917	1 629
Cement						
Cement clinkers	tonnes	3 255	...	...	...	38 589
Portland cement	tonnes	87 609	112 025	138 488	204 353	234 862
Coal						
Hard coal (b)	tonnes	86 754	101 680	123 844	94 896	115 720
Diatomite	tonnes	263	236	392	592	389
Gypsum						
Crude & calcined	tonnes	3 459	3 138	3 232	2 931	3 563

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Iron, steel and ferro-alloys						
Pig iron	tonnes	14 209	14 351	79 359	75 448	54 639
Ferro-alloys	tonnes	7 585	8 980	10 920	16 240	12 222
Silicon metal	tonnes	1 895	2 572	5 638	2 220	1 711
Ingots, blooms, billets	tonnes	91 262	99 588	172 092	195 467	206 550
Scrap	tonnes	178 503	160 459	174 272	171 941	161 538
Kaolin	tonnes	3 386	4 933	4 962	5 096	5 016
Magnesite and magnesia	tonnes	3 071	3 021	3 518	5 297	3 344
Potash						
Potassic fertilisers	tonnes	20 692	17 241	22 764	26 368	21 343
Salt	tonnes	91 525	100 542	100 459	122 251	139 662
Titanium						
Oxides	tonnes	998	1 132	2 032	1 232	726
Zinc						
Unwrought (a)	tonnes	747	753	895	1 172	654

Note(s):-

(a) Including alloys

(b) Including anthracite

# Lithuania

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	4 018 341	5 770 428	4 793 670	5 835 729	7 034 402
Crushed rock	tonnes	1 576 587	2 145 727	2 896 045	3 683 266	4 757 023
Cement, finished	tonnes	529 193	605 784	596 857	753 069	832 076
Crude petroleum	tonnes	470 000	433 700	382 400	301 874	216 634
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	47 000	49 824	48 515	67 094	74 268

Note(s):-

(1) Small amounts of steel are believed to be produced in Lithuania

(a) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	258 802	255 405	228 171	460 569	957 488
Aluminium and bauxite						
Unwrought (a)	tonnes	4 767	4 083	5 222	3 943	3 922
Scrap	tonnes	22 873	24 276	15 140	11 953	7 210
Asbestos	tonnes	139	0	0	...	...
Cement						
Portland cement	tonnes	213 851	224 544	212 730	247 918	299 782
Copper						
Scrap	tonnes	10 016	9 719	8 383	7 611	5 821
Gold						
Waste & scrap	kilograms	10 140	20	100	...	...
Iodine	kilograms	13 000	1 832	827	7 502	33
Iron, steel and ferro-alloys						
Scrap	tonnes	563 394	704 948	618 231	677 727	599 084
Lead						
Scrap	tonnes	1 129	931	3 239	6 613	7 848
Nickel						
Scrap	tonnes	739	759	996	770	411
Crude petroleum	tonnes	349 491	134 180	273 187	197 709	148 031
Platinum metals						
Waste & scrap	kilograms	9 867	2 982	7 980	6 019	...
Potash						
Potassic fertilisers	tonnes	9 243	7 705	7 128	8 037	10 463
Salt	tonnes	1 822	2 887	3 377	5 457	5 895
Sulphur and pyrites						
Sulphur	tonnes	5 660	14 094	16 724	13 960	3 851

Note(s):-

(a) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	964 300	1 096 672	993 051	1 069 921	1 289 117
Aluminium and bauxite						
Alumina	tonnes	5 338	9 431	6 673	10 388	13 079
Scrap	tonnes	1 654	7 907	4 435	1 131	1 841
Bentonite and fuller's earth	tonnes	2 124	1 762	2 642	2 475	2 716
Cement						
Cement clinkers	tonnes	...	14 459	...	22 496	...
Portland cement	tonnes	88 783	128 201	206 317	183 712	265 103

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Coal						
Hard coal (a)	tonnes	105 625	222 485	294 938	260 684	290 058
Diatomite	tonnes	319	503	1 499	917	520
Feldspar	tonnes	5 065	3 259	3 380	7 461	4 166
Gypsum						
Crude	tonnes	22 275	36 355	1 495	39 653	58 859
Calcined	tonnes	16 723	11 630	45 996	16 245	20 990
Iodine	kilograms	7 000	1 376	1 050	1 796	6 929
Iron, steel and ferro-alloys						
Scrap	tonnes	32 421	96 950	30 508	82 325	74 816
Kaolin	tonnes	...	...	...	...	802
Crude petroleum	tonnes	6 117 000	6 219 137	7 075 694	837 578	9 746 806
Phosphates	tonnes	485 429	899 042	1 079 502	1 082 901	1 178 816
Potash						
Fertiliser salts	tonnes	6 264	...	...	...	...
Chloride	tonnes	116 995	141 946	160 334	172 622	123 782
Other potassic fertilisers	tonnes	450	6 767	7 384	12 978	12 086
Salt	tonnes	157 181	166 252	187 050	204 839	198 994
Silver						
Metal	kilograms	...	3 058	1 771	5 885	3 943
Sulphur and pyrites						
Sulphur	tonnes	66 675	269 602	316 359	255 917	306 635

Note(s):-

(a) Including anthracite

## Malta

### Exports

Commodity	Units	2001	2002	2003	2004	2005
Iron, steel and ferro-alloys Scrap	tonnes	18 594	20 322	23 093	12 424	5 252

### Imports

Commodity	Units	2001	2002	2003	2004	2005
Gold						
Metal	kilograms	5 926	3 835	3 927	3 607	14 001
Salt	tonnes	1 722	...	...	...	5 423
Cement						
Portland cement	tonnes	260 812	275 627	275 736	179 533	334 107

# Netherlands

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	113 917 000	81 490 000	74 200 000	66 200 000	63 579 000
Primary aluminium	tonnes	293 068	284 364	282 800	330 000	333 800
Cadmium	tonnes	455	485	495	572	*570
Cement clinker	tonnes	...	900 000	800 000	825 000	...
Cement, finished	tonnes	3 380 000	3 080 000	2 450 000	2 380 000	*2 400 000
Pig iron	tonnes	5 305 000	5 367 000	5 846 000	6 011 000	6 000 000
Crude steel	tonnes	5 902 000	6 117 000	6 561 000	6 848 000	6 919 000
Lead, refined	tonnes	20 000	18 000	17 000	17 000	17 000
Magnesite (a)	tonnes	250 000	226 000	261 194	245 495	285 336
Crude petroleum	tonnes	2 263 590	3 073 924	3 076 398	2 890 979	2 268 746
Natural gas	million m <sup>3</sup>	74 323	71 786	69 114	81 499	74 460
Salt	tonnes	5 717 000	5 773 000	5 980 000	5 896 000	6 155 000
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	126 000	124 000	131 000	137 000	141 000
Recovered (c)	tonnes (sulphur content)	384 000	373 000	408 000	410 000	440 000
Slab zinc	tonnes	204 794	203 460	224 000	224 000	227 500

Note(s):-

(a) Chloride produced from solution mining

(b) From metal sulphide processing

(c) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	11 540 000	12 743 000	12 427 000	(b) *14 300 000	(b) *14 100 000
Aluminium and bauxite						
Bauxite	tonnes	76 216	35 719	58 848	96 740	93 993
Alumina	tonnes	144 613	125 292	51 228	267 947	264 116
Alumina hydrate	tonnes	24 904	37 548	48 026	42 398	48 643
Unwrought	tonnes	169 741	356 282	408 302	314 462	304 993
Unwrought alloys	tonnes	300 275	225 385	227 283	320 583	304 675
Scrap	tonnes	153 947	186 791	187 522	234 761	265 755
Antimony						
Metal	tonnes	186	115	315	212	570
Oxide	tonnes	872	345	270	652	664
Arsenic						
Metallic arsenic	tonnes	39	45	64	115	50
Barytes	tonnes	88 229	98 393	91 083	77 269	52 444
Bentonite and fuller's earth						
Bentonite	tonnes	165 460	178 006	180 736	203 897	186 286
Fuller's earth	tonnes	8 123	4 019	3 752	9 085	2 931
Bismuth						
Metal	tonnes	6	100	327	136	97
Bromine	kilograms	9 091 000	11 625 600	5 219 900	634 000	1 593 000
Cadmium						
Metal	tonnes	891	741	572	621	553
Cement						
Cement clinkers	tonnes	1 259	1 325	2 326	1 585	4 610
Portland cement	tonnes	215 827	108 209	209 122	326 234	295 457
Other cement	tonnes	158 864	86 102	53 743	30 013	18 513
Chromium						
Ores & concentrates	tonnes	58 219	46 386	52 636	58 623	72 062
Metal	tonnes	812	1 282	1 817	2 655	3 543
Coal						
Anthracite	tonnes	272 320	162 820	206 426	161 320	165 918
Other coal	tonnes	13 104 257	6 539 589	5 574 363	8 624 870	8 445 919
Briquettes	tonnes	977	13 472	1 362	71 710	58 241

## Netherlands

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Cobalt						
Metal	tonnes	2 737	690	2 247	1 954	1 326
Oxides	tonnes	459	271	150	953	1 323
Copper						
Unwrought	tonnes	5 444	10 075	18 605	32 548	39 638
Scrap	tonnes	100 488	101 624	109 595	140 909	207 551
Diamond						
Unsorted	carats	£2 026 000	£1 672 000	£1 490 000	£1 883 000	£928 000
Gem, rough	carats	£3 000	£64 000	£437 000	—	—
Gem, cut	carats	£7 891 000	£10 491 000	£8 511 000	£9 806 000	£8 687 000
Industrial	carats	£2 887 000	£758 000	£813 000	£188 000	£842 000
Dust	carats	...	£505 000	£776 000	£724 000	£44 000
Diatomite	tonnes	1 105	6 583	1 212	1 569	804
Feldspar	tonnes	693	808	749	81	17
Fluorspar	tonnes	7 399	12 752	19 186	3 019	37 113
Gold						
Metal	kilograms	28 356	9 601	8 094	24 557	11 603
Waste & scrap	kilograms	31 500	108 000	276 600	62 212	72 427
Graphite	tonnes	4 877	2 851	5 209	5 987	3 240
Gypsum						
Crude	tonnes	22 169	24 263	32 752	37 920	53 351
Calcined	tonnes	2 350	26 463	7 905	11 088	61 508
Iodine	kilograms	...	147 664	527 769	58 633	59 228
Iron ore	tonnes	29 724	42 244	20 881	1 384 740	1 977 963
Iron, steel and ferro-alloys						
Pig iron	tonnes	62 667	5 131	7 377	31 821	40 552
Sponge & powder	tonnes	76 545	107 474	15 255	15 794	46 464
Ferro-chrome	tonnes	27 898	9 122	38 469	70 272	81 105
Ferro-silico-chrome	tonnes	32	5	68	18	508
Ferro-manganese	tonnes	26 335	23 131	25 842	53 367	49 203
Ferro-silico-manganese	tonnes	25 958	7 037	20 830	16 109	13 994
Ferro-molybdenum	tonnes	3 401	1 242	1 610	2 712	4 304
Ferro-nickel	tonnes	10 796	4 159	4 112	9 855	23 252
Ferro-niobium	tonnes	7 512	130	131	47	126
Ferro-silicon	tonnes	4 937	9 899	27 511	27 328	95 845
Ferro-titanium & Fe-Si-Ti	tonnes	780	225	213	660	6 235
Ferro-tungsten & Fe-Si-W	tonnes	380	217	264	193	624
Ferro-vanadium	tonnes	2 194	910	2 838	2 901	22 495
Other ferro-alloys	tonnes	9 767	9 379	10 519	5 925	9 700
Silicon metal	tonnes	14 014	8 819	15 957	10 319	40 393
Ingots, blooms, billets	tonnes	312 200	538 825	239 603	309 454	152 593
Scrap	tonnes	3 072 052	3 064 283	3 242 779	3 859 394	4 140 362
Kaolin	tonnes	282 035	234 669	335 299	307 337	441 248
Lead						
Unwrought	tonnes	1 256	1 263	23 942	34 426	24 382
Scrap	tonnes	26 188	5 670	8 732	12 395	11 950
Lithium						
Oxides	tonnes	590	203	190	187	115
Carbonate	tonnes	205	104	89	199	224
Magnesite and magnesite						
Magnesite	tonnes	2 502	2 944	12 352	8 704	1 452
Magnesia	tonnes	448 602	438 407	384 711	431 175	492 077
Manganese						
Ores & concentrates	tonnes	9 889	14 115	12 041	15 143	14 903
Metal	tonnes	9 614	3 869	7 365	12 548	13 585
Mercury	kilograms	298 000	344 400	105 100	183 998	188 220
Mica	tonnes	1 397	4 384	5 359	6 084	2 912
Molybdenum						
Ores & concentrates	tonnes	16 092	52 237	17 141	30 424	47 395
Metal	tonnes	829	81	161	120	59
Oxides	tonnes	2 014	1 920	1 640	2 010	2 708
Nickel						
Mattes, sinters etc.	tonnes	(b) *8 200	(b) *19 300	(b) *8 100	37 108	41 174
Unwrought (a)	tonnes	54 127	25 214	33 096	24 467	21 895
Scrap	tonnes	1 365	1 494	3 602	2 745	2 009
Oxides	tonnes	...	2 528	0	28 549	6 017



## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Crude petroleum	tonnes	177 964	849	54 938	136 202	145 541
Phosphates	tonnes	65 689	181 928	94 541	94 150	91 592
Platinum metals						
Platinum	kilograms	£21 776 000	£17 686 000	£19 007 000	£18 570 000	£9 061 000
Platinum metals	kilograms	...	£634 000	£1 015 000	£1 377 000	£8 211 000
Waste & scrap	kilograms	23 800	10 900	9 200	201 129	876
Potash						
Chloride	tonnes	74 347	243 242	219 413	197 731	163 072
Rare earths						
Rare earth compounds	tonnes	68	53	95	87	171
Ferro-cerium & other pyrophoric alloys	tonnes	2	14	...	...	0
Metals	tonnes	15	17	58	124	13
Salt	tonnes	2 689 600	3 641 444	3 679 323	3 212 606	3 749 442
Sillimanite	tonnes	10 932	5 604	6 400	10 097	11 444
Silver						
Metal	kilograms	...	...	119 012	99 221	93 668
Sulphur and pyrites						
Pyrites	tonnes	93 095	16 401	...	76 812	82 502
Sulphur, crude	tonnes	186 059	118 053	223 880	133 553	55 758
Sulphur, refined	tonnes	105 723	143 272	98 196	170 473	192 922
Sulphur, sublimed & precipitated	tonnes	26	38	105	2	10
Talc	tonnes	145 951	164 515	177 554	225 528	183 270
Tantalum and niobium						
Tantalum	tonnes	31	21	23	24	3
Tin						
Unwrought	tonnes	1 845	4 138	4 278	3 921	5 330
Unwrought alloys	tonnes	102	205	240	1 430	1 790
Scrap	tonnes	511	643	344	685	297
Titanium						
Titanium minerals	tonnes	1 935	1 093	3 611	4 050	1 390
Metal	tonnes	1 532	2 344	2 015	1 846	2 181
Oxides	tonnes	(b) *68 100	80 663	(b) *65 100	92 050	84 310
Tungsten						
Ores & concentrates	tonnes	55	16	1	16	—
Metal	tonnes	380	469	237	777	502
Vanadium						
Vanadiferous residues	tonnes	207	...	...	...	...
Pentoxide	tonnes	253	87	219	1 167	381
Metal	tonnes	179	71	379	5	11
Zinc						
Unwrought	tonnes	252 993	187 416	277 262	265 840	273 832
Unwrought alloys	tonnes	90	4 234	7 571	19 867	9 364
Scrap	tonnes	21 496	16 093	24 856	32 684	41 593
Zirconium						
Concentrates	tonnes	1 430	5 361	7 011	8 548	8 178

Note(s):-

(a) Including alloys

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

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	36 200 000	44 000 000	45 300 000	37 100 000	40 800 000
Aluminium and bauxite						
Bauxite	tonnes	95 110	92 667	120 787	231 213	169 012
Alumina	tonnes	726 542	554 967	634 626	671 167	654 487
Alumina hydrate	tonnes	131 097	141 991	191 165	181 328	223 823
Unwrought	tonnes	350 467	332 873	367 227	349 481	370 979
Unwrought alloys	tonnes	170 095	193 099	216 251	249 182	287 504
Scrap	tonnes	206 963	150 466	138 051	174 969	189 722
Antimony						
Metal	tonnes	775	268	511	817	705
Oxide	tonnes	2 293	1 424	1 481	2 932	3 717
Arsenic						
Metallic arsenic	tonnes	137	77	61	110	85
Barytes	tonnes	111 042	103 133	136 981	155 325	116 512
Bentonite and fuller's earth						
Bentonite	tonnes	236 201	247 142	298 369	358 305	199 692
Fuller's earth	tonnes	24 615	14 975	76 241	76 177	70 482
Bismuth						
Compounds	tonnes	360	...	...	...	...
Metal	tonnes	278	108	274	166	85
Bromine (a)	kilograms	1 253	2 017 929	981 870	147 994	5 019 459
Cadmium						
Metal	tonnes	544	...	357	284	233
Cement						
Cement clinkers	tonnes	706 124	52 231	679 330	581 267	388 146
Portland cement	tonnes	1 551 824	370 170	1 614 917	1 812 884	1 632 872
Other cement	tonnes	934 043	229 933	826 513	774 050	846 622
Chromium						
Ores & concentrates	tonnes	73 730	62 992	52 353	88 660	80 622
Metal	tonnes	1 359	562	310	612	1 838
Coal						
Anthracite	tonnes	1 293 055	190 633	363 692	293 892	186 936
Other coal	tonnes	26 951 400	18 685 529	20 158 178	22 241 661	21 958 859
Brown coal	tonnes	38 959	36 923	23 782	18 294	30 769
Briquettes	tonnes	16 111	13 474	24 574	15 510	58 737
Cobalt						
Metal	tonnes	1 451	478	551	1 340	1 532
Oxides	tonnes	510	570	215	369	351
Copper						
Unwrought, unrefined	tonnes	4	11	2 867	10 185	10 485
Unwrought, refined	tonnes	123 138	156 095	123 682	125 310	135 004
Unwrought alloys	tonnes	1 612	1 725	1 326	2 172	1 904
Scrap	tonnes	65 053	70 660	80 262	98 396	92 927
Diamond						
Unsorted	carats	£2 021 000	£2 276 000	£1 858 000	£3 327 000	£344 000
Gem, rough	carats	£2 135 000	£2 950 000	£828 000	£108 000	£79 000
Gem, cut	carats	£20 034 000	£17 776 000	£13 846 000	£14 630 000	£14 764 000
Industrial	carats	£850 000	£827 000	£940 000	£907 000	£2 009 000
Diatomite	tonnes	11 800	12 979	12 069	10 806	7 967
Feldspar	tonnes	7 531	11 603	11 084	9 606	7 721
Fluorspar	tonnes	65 422	55 212	63 896	108 312	45 073
Gold						
Metal	kilograms	19 215	11 825	10 318	16 275	24 679
Waste & scrap	kilograms	1 000	561	1 044	1	1
Graphite	tonnes	5 636	8 232	10 208	18 139	15 205
Gypsum						
Crude	tonnes	222 337	208 013	132 882	176 349	155 519
Calcined	tonnes	274 769	381 920	387 829	492 478	686 085
Iodine	kilograms	2 156 800	1 269 000	632 000	357 225	21 015
Iron ore						
Iron ore	tonnes	6 310 886	7 369 802	8 740 391	12 622 628	12 285 177
Burnt pyrites	tonnes	106 277	23 596	22 545	26 717	—

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
<b>Iron, steel and ferro-alloys</b>						
Pig iron	tonnes	132 065	144 375	63 821	71 664	107 828
Sponge & powder	tonnes	42 829	114 868	71 606	59 030	131 170
Ferro-chrome	tonnes	126 622	114 878	68 424	176 862	170 806
Ferro-silico-chrome	tonnes	2 487	398	6	616	621
Ferro-silico-magnesium	tonnes	318	3 212	1 305	...	...
Ferro-manganese	tonnes	42 022	42 054	72 916	112 073	115 972
Ferro-silico-manganese	tonnes	35 316	40 133	54 901	33 492	30 114
Ferro-molybdenum	tonnes	8 781	1 457	1 800	5 282	5 100
Ferro-nickel	tonnes	23 658	12 428	9 213	38 872	39 305
Ferro-niobium	tonnes	7 888	31	16	16	51
Ferro-phosphorus	tonnes	2 720	1 976	1 421	...	...
Ferro-silicon	tonnes	90 882	129 678	110 329	153 435	145 459
Ferro-titanium & Fe-Si-Ti	tonnes	1 736	1 565	2 083	4 272	11 496
Ferro-tungsten & Fe-Si-W	tonnes	370	393	405	625	1 148
Ferro-vanadium	tonnes	1 969	3 240	3 565	3 608	5 100
Other ferro-alloys	tonnes	4 798	6 654	4 002	5 680	7 412
Silicon metal	tonnes	32 276	33 395	43 195	36 792	52 931
Ingots, blooms, billets	tonnes	119 504	102 428	124 817	302 637	322 908
Scrap	tonnes	1 272 600	1 378 767	1 751 693	2 250 964	2 030 115
Kaolin	tonnes	455 737	444 622	560 878	646 638	564 518
<b>Lead</b>						
Unwrought	tonnes	9 316	17 070	66 405	83 391	36 051
Scrap	tonnes	8 427	8 824	8 034	7 818	9 700
<b>Lithium</b>						
Oxides	tonnes	539	217	237	270	178
Carbonate	tonnes	897	854	956	1 081	1 171
<b>Magnesite and magnesia</b>						
Magnesite	tonnes	2 242	5 758	13 139	20 619	3 057
Magnesia	tonnes	377 804	362 706	392 299	644 428	558 764
<b>Manganese</b>						
Ores & concentrates	tonnes	10 209	7 086	11 136	14 558	35 936
Metal	tonnes	9 661	4 533	9 112	14 347	61 240
Mercury	kilograms	908 200	517 600	143 200	616 057	670 022
Mica	tonnes	3 383	6 320	8 540	10 005	7 524
<b>Molybdenum</b>						
Ores & concentrates	tonnes	25 896	21 723	29 337	39 710	31 781
Metal	tonnes	192	285	459	141	287
Oxides	tonnes	1 958	1 891	1 577	2 032	1 509
<b>Nickel</b>						
Mattes, sinters etc.	tonnes	...	10 394	8 566	9 144	3 832
Unwrought	tonnes	59 920	61 898	65 504	61 516	76 469
Unwrought alloys	tonnes	401	47	266	321	343
Scrap	tonnes	3 083	4 398	5 585	6 582	6 738
Oxides	tonnes	1 728	6 764	7 683	4 632	5 654
Crude petroleum	tonnes	60 427 836	54 968 223	56 463 347	61 377 494	62 152 486
Phosphates	tonnes	822 583	964 035	922 349	724 960	776 661
<b>Platinum metals</b>						
Platinum	kilograms	£16 677 000	£13 377 000	£14 194 000	£11 484 000	£1 107 000
Platinum metals	kilograms	£7 361 000	£8 134 000	£5 463 000	£6 930 000	£1 093 000
<b>Potash</b>						
Sulphate	tonnes	...	12 505	12 777	23 765	26 208
Chloride	tonnes	(b) 215 193	180 033	467 219	387 637	445 767
Other potassic fertilisers	tonnes	...	4 949	6 018	4 321	2 486
<b>Rare earths</b>						
Cerium compounds	tonnes	138	44	135	103	141
Other rare earth compounds	tonnes	3 793	1 380	2 222	2 254	1 879
Ferro-cerium & other pyrophoric alloys	tonnes	406	27	2	7	3
Metals	tonnes	57	25	38	10	14
Salt	tonnes	224 608	432 437	489 369	535 581	630 738
Sillimanite	tonnes	29 657	37 966	24 106	12 975	20 001
<b>Silver</b>						
Metal	kilograms	...	131 021	140 415	139 218	139 625

## Netherlands

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Sulphur and pyrites						
Sulphur	tonnes	30 101	58 270	29 631	40 439	37 083
Sulphur, sublimed & precipitated	tonnes	34 161	55 027	210 984	104 982	37 484
Talc	tonnes	89 378	95 121	220 448	226 602	206 485
Tantalum and niobium						
Tantalum	tonnes	63	15	4	35	12
Tin						
Unwrought	tonnes	4 346	7 008	7 368	6 801	8 730
Unwrought alloys	tonnes	1 007	1 162	1 330	1 832	1 983
Scrap	tonnes	609	388	202	155	201
Titanium						
Ilmenite	tonnes	33 524	40 286	46 568	...	...
Other titanium minerals	tonnes	70 438	64 024	76 539	(c) 154 460	(c) 127 941
Titanium slag	tonnes	9 848	...	...	...	...
Metal	tonnes	3 099	2 806	2 676	2 835	1 857
Oxides	tonnes	47 008	44 525	33 290	47 957	92 334
Tungsten						
Ores & concentrates	tonnes	144	195	342	222	110
Metal	tonnes	584	80	217	210	204
Carbide	tonnes	77	44	18	56	99
Vanadium						
Vanadiferous residues	tonnes	251	...	...	...	...
Pentoxide	tonnes	653	815	865	1 718	714
Zinc						
Ores & concentrates	tonnes	299 374	375 646	430 349	408 032	484 472
Unwrought	tonnes	152 500	126 816	160 793	143 218	144 592
Unwrought alloys	tonnes	1 536	7 633	853	2 318	2 387
Scrap	tonnes	11 413	10 368	14 213	20 288	15 257
Zirconium						
Concentrates	tonnes	27 300	21 401	11 607	13 613	10 975
Metal	tonnes	53	42	52	105	88

## Note(s):-

- (a) May include some fluorine  
(b) Including sulphate  
(c) Including ilmenite

# Norway

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	15 000 000	14 000 000	15 000 000	15 000 000	15 000 000
Crushed rock	tonnes	36 000 000	36 000 000	36 000 000	37 000 000	38 000 000
Primary aluminium	tonnes	1 034 000	1 044 000	1 180 200	1 318 000	1 376 000
Cadmium	tonnes	371	215	323	141	153
Cement, finished	tonnes	1 870 000	1 850 000	1 860 000	1 870 000	...
Coal						
Bituminous (a)	tonnes	1 787 784	2 131 691	2 944 000	3 018 500	1 667 000
Cobalt metal	tonnes	3 300	4 000	4 556	4 670	5 021
Copper, smelter	tonnes	26 704	30 483	35 851	35 643	38 681
Copper, refined	tonnes	26 700	30 600	35 852	35 643	38 681
Feldspar	tonnes	79 510	75 184	70 000	67 000	*67 000
Graphite	tonnes	9 070	8 600	1 000	6 000	9 000
Iron ore	tonnes	395 000	490 000	410 000	586 100	713 000
Pig iron	tonnes	70 000	108 000	*110 000	*100 000	*100 000
Crude steel	tonnes	635 000	698 000	703 000	725 000	705 000
Ferro-alloys						
Ferro-chrome	tonnes	82 600	61 100	—	—	—
Ferro-manganese	tonnes	111 823	126 960	*130 000	*130 000	*130 000
Ferro-silico-manganese	tonnes	277 938	252 723	*250 000	*260 000	*290 000
Ferro-silicon	tonnes	427 590	359 944	...	389 599	...
Other ferro-alloys	tonnes	47 600	48 500	*50 000	*60 000	*60 000
Silicon metal	tonnes	134 958	152 981	...	193 566	178 572
Primary magnesium metal	tonnes	40 700	3 100	—	—	—
Nepheline syenite	tonnes	330 362	330 461	332 000	329 000	320 000
Nickel, mine	tonnes (metal content)	2 800	2 052	—	382	342
Nickel, smelter/refinery	tonnes	68 200	68 500	77 183	71 410	84 886
Crude petroleum	tonnes	162 099 000	157 847 000	153 508 000	150 974 000	139 802 000
Natural gas	million m <sup>3</sup>	53 895	65 501	72 905	78 351	84 702
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	*95 000	95 000	100 000	*100 000	*100 000
Recovered (c)	tonnes (sulphur content)	18 000	19 000	20 000	18 000	19 000
Talc	tonnes	24 626	23 564	*24 000	23 725	*24 000
Titanium minerals						
Ilmenite	tonnes	777 000	837 000	859 000	866 700	806 800
Slab zinc	tonnes	144 694	144 538	143 627	140 901	148 000

Note(s):-

(1) Norway is believed to produce gold

(a) Spitzbergen: not including production from mines controlled by the former Soviet Union

(b) From metal sulphide processing

(c) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	10 846 009	12 751 398	12 300 157	12 561 778	13 334 212
Aluminium and bauxite						
Unwrought	tonnes	156 506	135 792	150 101	150 479	147 295
Unwrought alloys	tonnes	1 031 140	992 055	1 212 372	1 333 251	1 365 929
Scrap	tonnes	37 376	40 797	37 566	39 742	38 218
Barytes	tonnes	9 227	5 234	11 105	15 888	1 482
Cadmium						
Metal	tonnes	357	117	237	304	132
Cement						
Cement clinkers	tonnes	156 911	98 557	(a) *109 000	(a) *108 000	(a) *179 000
Portland cement	tonnes	506 741	558 861	(a) *724 000	(a) *413 000	(a) *569 000
Chromium						
Metal	tonnes	3	13	141	413	116
Cobalt						
Metal	tonnes	3 322	3 941	4 635	4 744	4 997

## Norway

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
<b>Copper</b>						
Unwrought	tonnes	24 681	32 302	35 392	35 632	37 430
Unwrought alloys	tonnes	1 665	1 421	1 195	988	1 707
Scrap	tonnes	17 394	15 814	25 382	21 256	22 667
<b>Diamond</b>						
Gem, cut	carats	21 000	60 000	...	40 000	90 000
Feldspar	tonnes	82 030	74 549	68 076	60 972	58 821
<b>Gold</b>						
Metal	kilograms	2 647	2 554	2 527	2 293	2 415
Waste & scrap	kilograms	5 007	1 102	174	127	137
Graphite	tonnes	9 032	8 129	...	—	—
<b>Gypsum</b>						
Crude	tonnes	19 336	19 241	27 287	30 825	49 443
Iodine	kilograms	64	3 000	1 509	—	—
<b>Iron ore</b>						
Iron ore	tonnes	33 727	620 478	530 851	648 583	721 975
Burnt pyrites	tonnes	46 323	62 214	62 315	117 389	14 730
<b>Iron, steel and ferro-alloys</b>						
Pig iron (a)	tonnes	*46 600	*119 400	*118 400	*123 700	*66 800
Ferro-chrome (a)	tonnes	*76 100	*87 500	*1 900	*600	*200
Ferro-manganese (a)	tonnes	*193 000	*169 600	*213 700	*338 900	*272 100
Ferro-silico-manganese	tonnes	275 291	240 477	255 243	264 163	289 497
Ferro-silicon	tonnes	324 858	251 252	194 246	256 018	179 503
Other ferro-alloys	tonnes	48 994	49 366	53 913	59 696	55 564
Silicon metal	tonnes	153 017	150 681	151 476	176 458	168 790
Ingots, blooms, billets	tonnes	110 888	126 094	160 127	148 514	151 882
Scrap	tonnes	150 020	227 592	263 510	270 903	267 051
<b>Lead</b>						
Scrap	tonnes	15 693	5 188	987	601	1 013
Mica	tonnes	1 760	2 155	2 413	2 076	2 003
<b>Nickel</b>						
Ores & concentrates	tonnes	30 142	25 902	6 268	9 575	7 581
Unwrought	tonnes	65 829	67 718	78 389	71 982	84 012
Scrap	tonnes	255	139	264	909	897
Crude petroleum	tonnes	146 645 926	139 103 257	135 201 186	129 935 579	119 119 538
<b>Platinum metals</b>						
Platinum & platinum metals	kilograms	6 659	10 986	11 150	13 360	11 871
Waste & scrap	kilograms	2 639	76 801	616	384	342
<b>Potash</b>						
Potassic fertilisers	tonnes	12 006	3 869	10 964	10 107	7 611
Salt	tonnes	1 994	3 687	4 657	4 948	6 679
<b>Silver</b>						
Metal	kilograms	74 774	64 962	62 669	69 207	66 139
<b>Sulphur and pyrites</b>						
Sulphur, sublimed & precipitated	tonnes	11 504	11 630	12 194	2 671	—
Talc	tonnes	30 480	32 894	32 520	30 279	28 448
<b>Titanium</b>						
Titanium minerals	tonnes	429 000	443 833	500 000	(a) *416 000	(a) *382 000
Metal	tonnes	117	103	214	182	159
Oxides (a)	tonnes	*231 000	*240 000	*229 000	*193 000	*177 000
<b>Zinc</b>						
Unwrought	tonnes	113 170	133 006	125 896	127 410	134 690
Unwrought alloys	tonnes	13 990	6 704	6 245	6 710	5 600

Note(s):-

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

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	91 192	66 824	71 837	85 471	67 562
Aluminium and bauxite						
Bauxite	tonnes	34 811	20 898	22 147	9 035	16 601
Alumina	tonnes	1 977 187	2 063 999	2 267 237	2 620 149	2 723 588
Alumina hydrate	tonnes	37 426	42 984	42 487	42 775	45 957
Unwrought	tonnes	163 090	225 972	277 122	325 514	328 722
Unwrought alloys	tonnes	60 982	56 209	24 473	29 974	42 056
Scrap	tonnes	95 290	100 006	113 228	70 430	20 806
Antimony						
Metal	tonnes	9	3	8	0	71
Oxide	tonnes	157	234	351	775	305
Arsenic						
Metallic arsenic	tonnes	44	36	0	—	—
Barytes	tonnes	145 445	110 755	115 402	129 547	109 802
Bentonite and fuller's earth						
Bentonite	tonnes	11 476	11 618	13 963	13 667	10 000
Cement						
Portland cement	tonnes	192 678	186 529	188 442	236 622	373 788
Other cement	tonnes	7 224	5 549	5 026	10 738	12 319
Chromium						
Ores & concentrates (a)	tonnes	*176 000	*51 000	*600	*400	*500
Metal	tonnes	89	53	47	88	92
Coal						
Anthracite (b)	tonnes	105 585	56 263	84 858	71 785	92 673
Other coal (b)	tonnes	684 305	598 378	586 775	693 106	575 921
Lignite (b)	tonnes	35 000	1 308	9	67	0
Cobalt						
Metal	tonnes	2 196	3 131	4 773	9 629	5 775
Oxides	tonnes	113	41	22	4	9
Copper						
Unwrought	tonnes	3 500	3 645	1 190	2 594	3 190
Scrap	tonnes	7 647	7 609	12 591	11 270	12 420
Diamond						
Unsorted	carats	45 000	100 000	125 000	45 000	...
Gem	carats	1 965 000	2 330 000	2 165 000	2 430 000	2 895 000
Industrial	carats	90 000	80 000	80 000	75 000	135 000
Dust	carats	220 000	500 000	105 000	310 000	230 000
Diatomite	tonnes	2 021	1 400	1 596	2 500	2 044
Feldspar	tonnes	14 040	13 589	13 710	15 490	17 103
Fluorspar	tonnes	38 862	13 589	—	—	...
Gold						
Metal	kilograms	3 501	2 927	1 599	1 253	2 099
Waste & scrap	kilograms	1 115	1 613	776	987	1 049
Graphite	tonnes	347	615	502	548	423
Gypsum						
Crude	tonnes	36 175	59 945	49 398	109 069	119 962
Calcined	tonnes	308 328	315 517	295 160	259 001	274 006
Iodine	kilograms	118 903	684 000	1 105 811	1 294 934	1 748 110
Iron ore	tonnes	224 442	206 650	178 025	495 047	526 713
Iron, steel and ferro-alloys						
Pig iron	tonnes	18 207	16 844	14 639	8 823	10 841
Sponge & powder	tonnes	44 037	48 170	45 271	38 519	13 729
Ferro-chrome	tonnes	762	499	571	860	1 251
Ferro-manganese	tonnes	10 848	3 987	5 921	9 703	6 154
Ferro-silico-manganese	tonnes	19	716	3 560	933	1 071
Ferro-silicon	tonnes	13 610	14 177	19 180	11 684	25 663
Other ferro-alloys	tonnes	2 145	1 543	2 016	1 679	1 877
Silicon metal	tonnes	8 649	8 629	13 424	17 653	26 714
Ingots, blooms, billets	tonnes	161 217	132 220	101 819	150 611	142 986
Scrap	tonnes	334 136	347 080	381 683	416 062	345 634
Kaolin	tonnes	251 950	234 592	241 975	237 725	250 879
Lead						
Unwrought	tonnes	3 213	3 971	2 024	2 970	4 882
Magnesite and magnesia						
Magnesite	tonnes	4 013	3 148	3 736	2 587	2 125
Magnesia	tonnes	403	130	190	1 643	500

## Norway

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Manganese						
Ores & concentrates	tonnes	711 545	660 348	803 971	1 132 985	1 172 711
Metal	tonnes	1 699	2 155	3 069	3 610	2 976
Mercury	kilograms	347	99	38	42	65
Mica	tonnes	2 426	1 174	1 759	1 559	1 001
Nickel						
Mattes, sinters etc.	tonnes	131 096	145 072	158 897	136 200	176 657
Unwrought (c)	tonnes	134	138	46	222	80
Crude petroleum	tonnes	956 019	590 064	562 851	440 346	983 848
Phosphates	tonnes	638 449	664 834	666 188	646 319	710 528
Platinum metals						
Platinum & platinum metals	kilograms	1 231	984	747	973	1 076
Waste & scrap	kilograms	641	840	87	59	998
Potash						
Sulphate	tonnes	211 169	200 407	249 307	267 653	247 379
Chloride	tonnes	331 063	339 431	310 954	309 061	306 369
Rare earths						
Metals	tonnes	775	558	713	702	544
Salt	tonnes	718 394	725 887	702 713	741 959	910 846
Sillimanite	tonnes	4 793	2 537	2 004	3 605	2 400
Silver						
Metal	kilograms	84 784	60 995	72 647	86 037	90 331
Sulphur and pyrites						
Pyrites	tonnes	151 438	225 139	225 492	225 513	26 940
Sulphur	tonnes	1 542	1 567	628	4 559	16 413
Sulphur, sublimed & precipitated	tonnes	...	...	...	...	240
Talc	tonnes	8 762	11 557	14 737	14 522	16 488
Tin						
Unwrought	tonnes	560	458	382	47	21
Unwrought alloys	tonnes	111	176	71	79	57
Titanium						
Titanium minerals	tonnes	...	...	...	...	33 000
Metal	tonnes	623	386	557	505	636
Oxides	tonnes	9 617	7 931	8 729	10 026	11 924
Vanadium						
Metal	tonnes	51	41	55	32	10
Zinc						
Ores & concentrates	tonnes	233 797	220 879	221 754	231 563	255 158

## Note(s):-

- (a) BGS estimates, based on known exports from certain countries
- (b) Excludes coal imported from Spitzbergen
- (c) Including alloys



# Poland

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel (a)	tonnes	60 039 000	60 186 000	71 376 000	*60 000 000	*77 000 000
Crushed rock	tonnes	25 593 000	25 875 000	26 404 000	29 271 189	33 098 450
Primary aluminium	tonnes	52 600	52 200	52 600	54 200	53 600
Barytes	tonnes	—	2 708	3 030	3 183	2 357
Cadmium	tonnes	330	440	375	356	408
Cement clinker	tonnes	9 335 062	8 811 639	8 647 397	9 620 601	9 468 410
Cement, finished	tonnes	12 069 941	11 206 439	11 653 448	12 837 083	12 646 223
Coal						
Bituminous	tonnes	103 991 700	103 546 000	103 016 400	100 087 100	97 903 730
Lignite	tonnes	59 557 400	58 209 600	60 919 100	61 197 500	61 636 445
Copper, mine	tonnes (metal content)	474 000	502 800	503 544	530 768	511 799
Copper, smelter	tonnes	485 869	510 725	559 960	547 228	555 681
Copper, refined	tonnes	498 451	508 674	529 616	550 066	560 256
Diatomite	tonnes	*1 000	*1 000	*700	*800	*700
Feldspar	tonnes	145 980	209 226	276 264	373 459	426 914
Gold, mine (b)	kilograms (metal content)	349	296	356	527	713
Gypsum						
Gypsum	tonnes	793 684	866 674	1 030 693	970 786	(f) 1 242 875
Anhydrite	tonnes	300 356	280 031	297 088	301 161	...
Pig iron	tonnes	5 440 047	5 296 410	5 585 094	6 292 341	4 458 161
Crude steel	tonnes	8 809 211	8 367 434	9 107 384	10 578 482	8 335 898
Ferro-alloys						
Ferro-chrome	tonnes	—	106	188	—	—
Ferro-manganese	tonnes	497	602	979	46 898	7 782
Ferro-silico-manganese	tonnes	20 007	7 338	*7 000	—	10 242
Ferro-silicon	tonnes	48 608	41 759	92 687	83 552	65 118
Other ferro-alloys	tonnes	4 039	4 200	—	1 419	3 663
Kaolin (c)	tonnes	103 220	89 372	106 761	130 596	159 207
Lead, mine	tonnes (metal content)	52 600	56 600	54 700	52 700	50 900
Lead, refined	tonnes	66 000	65 800	74 300	73 900	87 800
Magnesite	tonnes	22 200	22 100	27 200	57 900	*58 000
Crude petroleum	tonnes	767 004	727 973	764 806	886 188	847 844
Natural gas	million m <sup>3</sup>	5 179	5 263	5 315	5 630	5 742
Salt						
Rock salt	tonnes	786 609	838 858	847 880	1 099 072	1 123 219
Brine salt	tonnes	2 688 929	2 719 131	2 790 996	2 940 169	2 889 941
Selenium metal	tonnes	65	68	78	83	82
Silver, mine	kilograms (metal content)	1 230 700	1 343 000	1 332 200	1 372 700	1 262 400
Sulphur and pyrites						
Frasch	tonnes (sulphur content)	942 252	760 320	762 689	821 489	801 799
Recovered (d)	tonnes (sulphur content)	*280 000	*275 000	293 700	289 100	*290 000
Recovered (e)	tonnes (sulphur content)	27 602	22 777	23 384	23 767	22 193
Zinc, mine	tonnes (metal content)	152 700	152 100	154 277	140 381	135 600
Slab zinc	tonnes	174 700	158 900	154 200	155 500	137 300

Note(s):-

(1) Poland is believed to produce strontium minerals

(a) Includes an estimate for small producers

(b) Metal production

(c) Washed

(d) From metal sulphide processing

(e) From petroleum refining and/or natural gas

(f) Including anhydrite

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	867 725	435 628	393 090	790 734	1 237 482
Aluminium and bauxite						
Unwrought (a)	tonnes	30 519	32 349	52 132	70 740	81 962
Scrap	tonnes	62 915	65 404	63 022	71 525	82 875

Poland

Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Bentonite and fuller's earth						
Bentonite	tonnes	...	...	...	...	12 002
Bromine	kilograms	3 000	2 000	...	...	3 000
Cadmium						
Metal	tonnes	198	49	697	665	610
Cement						
Cement clinkers	tonnes	2 894	6 461	87 470	226 981	256 621
Portland cement	tonnes	757 302	370 832	262 290	341 112	460 479
Other cement	tonnes	134 130	98 766	7 406	7 059	49 970
Chromium						
Ores & concentrates	tonnes	145	1 533	...	117	25
Metal	tonnes	140	73	181	0	1
Coal						
Anthracite	tonnes	79 908	6 677	71 646	8 599	23 331
Other coal	tonnes	22 946 136	22 608 910	20 044 204	19 684 005	20 816 121
Lignite	tonnes	14 789	41 287	35 824	26 929	8 211
Cobalt						
Metal	tonnes	57	1	...	26	19
Copper						
Unwrought	tonnes	226 889	279 803	278 113	275 089	290 462
Unwrought alloys	tonnes	4 680	5 020	5 329	5 007	6 183
Scrap	tonnes	22 351	22 529	40 542	42 763	47 463
Feldspar	tonnes	562	649	1 626	1 441	1 509
Gold						
Metal	kilograms	113	1 210	249	...	100
Waste & scrap	kilograms	2 767	3 239	8 477	4 074	1 100
Gypsum						
Crude & calcined	tonnes	21 449	21 259	24 706	29 467	33 277
Iron, steel and ferro-alloys						
Pig iron	tonnes	40 670	3 003	16 023	57 696	4 917
Ferro-manganese & Fe-Si-Mn	tonnes	20	3 637	1 451	66 666	22 713
Ferro-silicon	tonnes	50 649	43 021	84 406	85 538	64 974
Other ferro-alloys	tonnes	10 522	96	86	195	915
Ingots, blooms, billets	tonnes	948 473	1 034 776	975 777	1 585 494	1 249 618
Scrap	tonnes	1 269 594	1 535 305	1 804 181	1 973 116	1 426 831
Kaolin	tonnes	6 321	3 538	10 408	9 941	6 194
Lead						
Ores & concentrates	tonnes	73 989	77 493	86 395	94 126	92 226
Unwrought	tonnes	44 691	38 602	42 518	39 287	44 008
Scrap	tonnes	1 921	2 107	2 408	963	1 652
Mercury	kilograms	82 000	24 000	...	2	3 000
Nickel						
Oxides	tonnes	125	146	339	468	529
Crude petroleum	tonnes	439 625	450 000	161 074	138 253	216 256
Phosphates	tonnes	2 700	2 511	...	507	1
Platinum metals						
Platinum & platinum metals	kilograms	43	872	308	470	800
Waste & scrap	kilograms	27 622	6 543	52 366	33 019	1 000
Salt	tonnes	375 944	339 140	419 201	493 259	495 481
Silver						
Metal	kilograms	1 094 153	1 135 000	1 251 194	821 501	318 800
Sulphur and pyrites						
Sulphur	tonnes	773 373	597 905	530 180	560 340	575 796
Titanium						
Oxides	tonnes	24 215	30 457	23 977	20 818	24 394
Tungsten						
Metal	tonnes	113	1	34	89	84
Zinc						
Ores & concentrates	tonnes	29 223	61 378	64 486	44 257	63 913
Unwrought	tonnes	86 067	78 497	65 661	72 820	74 938
Unwrought alloys	tonnes	2 391	1 844	1 330	850	857
Scrap	tonnes	2 497	1 463	136	269	797

Note(s):-

(a) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	1 428 456	1 252 285	1 527 892	1 756 513	1 775 291
Aluminium and bauxite						
Bauxite	tonnes	37 835	49 504	67 966	82 233	59 758
Alumina	tonnes	109 044	97 085	120 733	124 274	102 845
Alumina hydrate	tonnes	25 766	25 562	25 572	26 927	29 538
Unwrought	tonnes	49 259	74 302	88 008	85 010	62 403
Unwrought alloys	tonnes	68 294	73 770	94 090	119 305	140 792
Scrap	tonnes	12 080	9 616	13 472	31 536	39 907
Antimony						
Metal	tonnes	53	10	49	80	28
Oxide	tonnes	611	711	920	1 042	1 231
Arsenic						
White arsenic	tonnes	63	36	32	...	...
Metallic arsenic	tonnes	11	30	—	14	39
Asbestos	tonnes	19	19	—	16	6
Barytes	tonnes	7 358	6 571	8 318	6 593	7 744
Bentonite and fuller's earth						
Bentonite	tonnes	64 986	68 020	93 915	126 127	115 208
Fuller's earth	tonnes	797	1 432	1 263	1 749	2 566
Bismuth						
Metal	tonnes	8	4	4	6	14
Bromine	kilograms	14 000	6 000	2 000	(a) 9 348	6 000
Cadmium						
Oxide	tonnes	4	38	...	...	...
Cement						
Cement clinkers	tonnes	251 458	66 800	70 207	13 746	33 673
Portland cement	tonnes	328 347	630 256	699 379	540 342	444 855
Other cement	tonnes	17 313	23 531	16 352	2 323	5 537
Chromium						
Ores & concentrates	tonnes	26 128	8 461	10 977	13 053	9 391
Metal	tonnes	20	18	29	242	54
Coal						
Anthracite	tonnes	41 730	37 788	49 745	168 095	263 929
Other coal	tonnes	1 857 741	2 729 972	2 506 316	2 231 606	3 112 462
Cobalt						
Metal	tonnes	53	44	49	44	35
Oxides	tonnes	38	33	16	37	121
Copper						
Ores & concentrates	tonnes	...	5 397	...	30	43 504
Unwrought	tonnes	2 135	1 484	2 257	3 071	7 118
Scrap	tonnes	3 722	5 203	6 001	14 973	5 855
Diamond						
Gem	carats	10 000	15 000	50 000	...	...
Industrial	carats	165 000	105 000	75 000	...	...
Diatomite	tonnes	7 284	6 961	6 394	6 387	6 465
Feldspar	tonnes	144 145	168 167	155 283	201 509	215 185
Fluorspar	tonnes	4 789	5 609	5 858	7 501	6 290
Gold						
Metal	kilograms	985	774	588	2 301	100
Graphite	tonnes	2 856	2 700	3 150	3 089	3 028
Gypsum						
Crude	tonnes	22 813	46 123	101 589	163 227	150 622
Calcined	tonnes	125 354	124 727	123 919	100 886	91 356
Iodine	kilograms	20 000	13 312	23 875	18 687	10 200
Iron ore						
Iron ore	tonnes	6 378 630	5 674 667	6 817 467	8 627 650	5 785 200
Burnt pyrites	tonnes	1 322 662	1 273 170	1 764 657	2 303 655	1 003 456

## Poland

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
<b>Iron, steel and ferro-alloys</b>						
Pig iron	tonnes	146 508	103 349	86 108	150 163	239 240
Sponge & powder	tonnes	1 876	13 193	34 091	34 456	24 490
Ferro-chrome	tonnes	7 729	7 716	8 073	10 352	10 863
Ferro-manganese	tonnes	43 277	42 851	37 530	46 414	29 230
Ferro-silico-manganese	tonnes	28 401	40 023	53 968	64 985	51 197
Ferro-molybdenum	tonnes	809	833	829	1 138	1 178
Ferro-silicon	tonnes	24 657	25 664	27 132	29 551	22 769
Ferro-vanadium	tonnes	386	308	228	393	313
Other ferro-alloys	tonnes	6 424	6 431	6 322	7 454	11 871
Silicon metal	tonnes	5 665	6 208	10 586	9 967	9 243
Ingots, blooms, billets	tonnes	48 142	31 962	85 027	191 722	298 314
Scrap	tonnes	104 820	69 947	96 426	278 271	238 113
Kaolin	tonnes	66 759	77 155	81 181	89 139	90 931
<b>Lead</b>						
Unwrought	tonnes	33 400	43 821	47 030	50 189	53 095
<b>Lithium</b>						
Oxides	tonnes	39	69	74	132	136
Carbonate	tonnes	46	55	56	117	128
Magnesite and magnesite	tonnes	69 772	73 266	77 830	82 164	71 774
<b>Manganese</b>						
Ores & concentrates	tonnes	43 603	14 597	10 037	205 290	38 845
Metal	tonnes	1 834	821	432	652	499
Mercury	kilograms	7 000	21 976	3 875	4 456	15 700
Mica	tonnes	820	557	486	878	547
<b>Molybdenum</b>						
Ores & concentrates	tonnes	111	16	1	8	1
Metal	tonnes	54	84	36	142	102
<b>Nickel</b>						
Unwrought (b)	tonnes	2 307	1 561	1 589	2 207	1 683
Crude petroleum	tonnes	17 558 327	16 400 000	17 448 290	17 316 135	17 639 489
Phosphates	tonnes	1 636 053	1 407 541	1 452 726	1 885 350	1 558 007
<b>Platinum metals</b>						
Platinum & platinum metals	kilograms	293	208	402	...	...
<b>Potash</b>						
Fertiliser salts	tonnes	...	1 245	948	2 264	621
Sulphate	tonnes	...	18 752	19 967	24 143	21 770
Chloride	tonnes	(c) 742 114	754 473	821 469	1 098 679	1 041 798
Other potassic fertilisers	tonnes	...	2 877	5 223	4 174	4 726
<b>Rare earths</b>						
Rare earth compounds	tonnes	70	77	245	61	118
Metals	tonnes	1	1	...	3	6
Salt	tonnes	95 520	156 461	156 406	294 590	376 829
<b>Sillimanite</b>						
Sillimanite	tonnes	11 872	16 182	17 682	14 928	9 975
Mullite	tonnes	963	659	1 974	1 355	2 207
<b>Silver</b>						
Metal	kilograms	22 372	18 297	36 266	34 563	40 100
<b>Sulphur and pyrites</b>						
Pyrites	tonnes	402	504	1 933	1 061	1 013
Sulphur	tonnes	70 246	98 279	88 544	78 292	78 274
Sulphur, sublimed & precipitated	tonnes	239	120	97	11	3
Talc	tonnes	14 274	17 989	18 342	16 155	20 536
<b>Tantalum and niobium</b>						
Tantalum	tonnes	14	0	...	1	1
<b>Tin</b>						
Unwrought (b)	tonnes	1 010	1 344	1 077	1 367	1 437
Scrap	tonnes	...	...	...	697	705
<b>Titanium</b>						
Titanium minerals	tonnes	95 674	73 655	101 284	98 214	100 539
Metal	tonnes	182	163	151	271	328
Oxides	tonnes	24 027	30 029	30 546	29 710	33 417
<b>Tungsten</b>						
Metal	tonnes	276	68	42	46	108

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Zinc						
Ores & concentrates	tonnes	118 106	112 193	113 990	114 800	78 746
Unwrought (b)	tonnes	10 113	14 789	22 182	31 603	26 670
Scrap	tonnes	261	251	656	4 636	3 899
Zirconium						
Concentrates	tonnes	2 002	1 207	1 056	1 085	870
Metal	tonnes	29	13	2	23	6

## Note(s):-

(a) May include some fluorine

(b) Including alloys

(c) Including sulphate and fertiliser salts

# Portugal

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	9 852 769	7 514 159	6 483 435	...	...
Crushed rock	tonnes	61 453 129	86 055 000	83 462 955	...	...
White arsenic	tonnes	*50	*50	*50	*50	*50
Cement clinker	tonnes	...	...	845 594	1 082 678	1 629 687
Cement, finished	tonnes	(b) 10 162 310	(c) 9 760 964	(c) 8 485 826	(c) 8 764 316	(c) 8 279 418
Copper, mine	tonnes (metal content)	82 965	77 227	77 581	95 700	89 500
Diatomite	tonnes	387	—	—	—	—
Feldspar	tonnes	112 923	141 125	129 366	98 262	*100 000
Gypsum	tonnes	787 646	579 143	419 799	...	...
Pig iron	tonnes	82 000	—	—	—	—
Crude steel	tonnes	727 000	894 000	1 000 000	1 400 000	1 400 000
Kaolin	tonnes	148 706	147 448	169 669	*170 000	...
Lead, refined	tonnes	*6 000	*6 000	*6 000	*6 000	*6 000
Lithium minerals						
Lepidolite	tonnes	11 571	16 325	24 606	28 696	...
Salt						
Rock salt	tonnes	625 785	604 969	602 035	661 704	...
Sea salt	tonnes	76 653	40 139	86 603	75 400	92 495
Silver, mine	kilograms (metal content)	23 100	19 500	21 100	24 400	23 700
Sulphur and pyrites						
Recovered	tonnes (sulphur content)	35 000	28 000	27 000	25 000	30 000
Talc	tonnes	8 362	8 279	5 460	6 231	...
Tin, mine	tonnes (metal content)	1 201	345	203	200	200
Tungsten, mine (a)	tonnes (metal content)	700	693	715	746	850
Uranium, mine	tonnes (metal content)	4	2	—	—	—

Note(s):-

(1) Portugal is a small producer of tantalum bearing tin slags but no detailed information is available

(a) Wolframite and scheelite

(b) Portland cement only

(c) Portland cement, excluding white cement

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	54 077	31 516	31 257	53 451	138 939
Aluminium and bauxite						
Unwrought alloys	tonnes	96 207	84 709	111 732	105 837	140 505
Scrap	tonnes	19 266	24 671	19 513	28 576	41 797
Cement						
Cement clinkers	tonnes	...	41 626	117 332	148 984	1 271 578
Portland cement	tonnes	35 442	59 628	114 182	286 819	1 110 739
Other cement	tonnes	5 109	5 815	6 081	13 267	17 301
Copper						
Ores & concentrates	tonnes	368 150	196 709	286 781	346 534	375 312
Unwrought	tonnes	36	415	747	1 165	9 356
Scrap	tonnes	14 353	18 236	24 440	35 927	33 583
Diamond						
Gem, rough	carats	£37 983 000	£1 793 000	£3 650 000	£96 000	—
Gem, cut	carats	£26 769 000	£23 412 000	£37 983 000	£45 779 000	£17 981 000
Diatomite	tonnes	...	...	2 050	7 755	11
Feldspar	tonnes	147	603	5	—	1 546
Gold						
Waste & scrap	kilograms	...	...	...	192 759	4 800
Iron, steel and ferro-alloys						
Ingots, blooms, billets	tonnes	44 980	15 058	33 032	184 547	159 868
Scrap	tonnes	246 777	231 761	201 189	259 297	330 536
Kaolin	tonnes	11 944	15 318	10 131	11 383	31 484

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Lead						
Unwrought	tonnes	567	3 769	2 367	1 988	1 269
Scrap	tonnes	3 506	2 733	3 502	3 452	4 127
Salt	tonnes	3 656	4 413	3 952	4 444	6 130
Sulphur and pyrites						
Sulphur	tonnes	14 009	20 172	9 847	10 838	28 122
Sulphur, sublimed & precipitated	tonnes	1	509	408	121	80
Talc	tonnes	93	150	204	1 117	1 614
Tantalum and niobium						
Tantalum	tonnes	24	...	18	42	15
Tin						
Concentrates	tonnes	2 395	537	266	147	—
Tungsten						
Ores & concentrates	tonnes	914	588	...	900	1 425
Metal	tonnes	415	693	143	217	12
Zinc						
Scrap	tonnes	682	1 001	1 198	1 855	2 050

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	750 486	867 165	641 696	790 615	698 717
Aluminium and bauxite						
Alumina	tonnes	10 638	9 820	10 152	9 257	6 250
Unwrought	tonnes	5 072	5 276	7 903	10 903	13 941
Unwrought alloys	tonnes	169 878	167 619	185 279	200 335	224 631
Scrap	tonnes	2 746	9 043	1 755	4 214	2 651
Antimony						
Metal	tonnes	3	10	10	6	5
Oxide	tonnes	331	254	147	242	137
Asbestos	tonnes	5 505	7 137	1 568	474	356
Barytes	tonnes	2 721	2 607	3 589	2 630	5 382
Bentonite and fuller's earth						
Bentonite	tonnes	16 376	16 115	14 208	17 907	16 881
Fuller's earth	tonnes	47	351	936	662	483
Cement						
Cement clinkers	tonnes	917 322	5 421	7 715	8 775	17 084
Portland cement	tonnes	1 497 434	1 485 581	1 225 167	1 066 969	669 272
Other cement	tonnes	17 671	11 842	50 576	65 793	10 479
Chromium						
Ores & concentrates	tonnes	2 569	2 334	2 062	1 547	2 599
Coal						
Anthracite	tonnes	209 725	211 583	276 685	30 630	48 785
Other coal	tonnes	4 459 459	5 627 373	5 084 416	5 241 255	5 386 968
Copper						
Unwrought	tonnes	3 637	4 307	6 245	7 740	4 572
Scrap	tonnes	1 265	838	1 383	1 874	3 329
Diamond						
Gem, rough	carats	£20 914 000	£24 832 000	£26 362 000	£18 757 000	£10 968 000
Gem, cut	carats	£8 758 000	£5 367 000	£3 926 000	£11 608 000	£7 015 000
Industrial	carats	£738 000	£874 000	£803 000	£669 000	£565 000
Dust	carats	740 000	750 000	690 000	710 000	...
Diatomite	tonnes	1 771	1 537	3 223	2 263	3 946
Feldspar	tonnes	72 198	87 177	79 521	96 049	115 286
Fluorspar	tonnes	1 243	1 196	574	158	1 633
Gold						
Metal	kilograms	4 791	3 303	1 893	655	6 074
Graphite	tonnes	1 297	1 436	1 129	1 317	1 722
Gypsum						
Crude	tonnes	40 509	33 696	60 120	82 603	79 370
Calcined	tonnes	374 719	371 705	338 228	340 665	361 284

## Portugal

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Iodine	kilograms	76 686	25 000	28 807	14 717	12 000
Iron ore	tonnes	141 064	829	421	448	118
Iron, steel and ferro-alloys						
Pig iron	tonnes	23 395	25 139	12 763	16 089	19 713
Ferro-manganese	tonnes	603	490	779	889	885
Ferro-silico-manganese	tonnes	3 204	2 331	5 757	1 742	10 021
Ferro-molybdenum	tonnes	168	126	85	193	759
Ferro-silicon	tonnes	3 439	2 296	2 339	1 881	3 028
Other ferro-alloys	tonnes	5 774	4 636	3 809	2 788	8 440
Ingots, blooms, billets	tonnes	73 499	123 087	5 829	7 167	10 538
Scrap	tonnes	184 327	218 978	353 646	292 753	653 988
Kaolin	tonnes	151 525	125 201	135 681	124 508	143 943
Lead						
Unwrought	tonnes	20 604	16 952	15 624	18 885	21 198
Magnesite and magnesia						
Magnesite	tonnes	1 888	909	885	969	1 012
Magnesia	tonnes	18 635	6 078	5 855	4 808	5 998
Mercury	kilograms	7 546	533	523	291	0
Mica	tonnes	56	113	198	311	193
Molybdenum						
Metal	tonnes	14	15	15	24	14
Nickel						
Unwrought (a)	tonnes	315	293	184	310	602
Crude petroleum	tonnes	12 517 253	11 635 480	12 544 785	13 081 242	12 941 851
Phosphates	tonnes	158 684	134 664	141 740	149 365	137 423
Potash						
Sulphate	tonnes	1 950	2 144	4 457	7 526	3 631
Chloride	tonnes	55 972	73 748	55 775	79 232	65 682
Other potassic fertilisers	tonnes	737	1 570	1 630	1 752	2 774
Salt	tonnes	116 508	119 892	139 720	121 621	70 266
Sillimanite	tonnes	566	405	330	337	160
Silver						
Metal	kilograms	599	64	2 520	2 237	200
Sulphur and pyrites						
Sulphur	tonnes	3 306	5 981	6 333	3 532	5 878
Sulphur, sublimed & precipitated	tonnes	103	5	5	431	28
Talc	tonnes	14 354	16 685	17 721	20 203	23 583
Tantalum and niobium						
Tantalum	tonnes	99	171	69	68	115
Tin						
Unwrought	tonnes	780	1 223	781	434	971
Unwrought alloys	tonnes	210	29	63	71	100
Titanium						
Oxides	tonnes	17 341	20 230	18 922	20 120	17 458
Tungsten						
Metal	tonnes	...	28	103	153	179
Carbide	tonnes	82	79	96	109	105
Zinc						
Unwrought	tonnes	12 701	13 649	18 113	13 450	11 862
Unwrought alloys	tonnes	6 907	10 678	10 616	14 675	11 573
Zirconium						
Concentrates	tonnes	3 990	2 924	2 802	2 045	5 918

Note(s):-

(a) Including alloys



# Romania

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	1 075 191	1 568 994	1 013 386	1 458 266	1 394 414
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	319 403	361 047	332 853	560 243	688 829
Primary aluminium	tonnes	181 830	187 052	196 844	222 347	243 605
Barytes	tonnes	2 851	100	23	—	—
Bentonite and fuller's earth						
Bentonite	tonnes	24 779	15 389	17 637	18 161	18 190
Bismuth, mine	tonnes (metal content)	*40	*40	*40	*40	*40
Cement, finished	tonnes	5 702 000	5 679 776	5 991 962	6 238 584	7 032 100
Coal						
Anthracite & bituminous	tonnes	4 033 000	3 976 000	3 309 000	*3 000 000	*3 000 000
Brown coal & lignite	tonnes	30 750 000	28 015 000	31 121 000	31 792 000	31 122 000
Copper, mine	tonnes (metal content)	19 185	19 323	23 389	20 380	14 868
Copper, smelter	tonnes	3 000	3 000	3 000	61	—
Copper, refined	tonnes	17 654	11 453	16 739	24 526	20 739
Diatomite	tonnes	9 743	20 922	33 296	20 626	1 402
Feldspar	tonnes	43 037	51 959	72 827	60 924	74 927
Fluorspar	tonnes	*15 000	*15 000	*15 000	*15 000	*15 000
Gold, mine	kilograms (metal content)	1 600	1 137	1 878	1 430	*500
Graphite	tonnes	1 176	1 001	1 014	395	486
Gypsum	tonnes	282 985	421 235	409 516	490 372	532 867
Iron ore	tonnes	221 000	248 000	244 000	231 417	220 788
Pig iron	tonnes	3 242 994	3 979 346	4 101 409	4 243 956	4 097 921
Crude steel	tonnes	4 935 623	5 490 434	5 692 496	6 076 600	5 631 566
Ferro-alloys						
Ferro-manganese	tonnes	384	—	—	191	18 625
Ferro-silico-manganese	tonnes	71 921	84 720	141 899	194 754	100 957
Ferro-silicon	tonnes	5 823	—	—	—	—
Kaolin	tonnes	21 867	22 517	25 741	22 338	26 772
Lead, mine	tonnes (metal content)	19 676	17 500	15 747	18 297	11 610
Lead, refined	tonnes	22 000	23 000	28 000	32 590	32 903
Manganese ore	tonnes	73 276	59 148	72 931	79 130	72 000
Crude petroleum	tonnes	6 011 000	5 810 000	5 651 000	5 462 000	5 212 000
Natural gas	million m <sup>3</sup>	14 090	13 647	13 174	13 246	12 472
Salt	tonnes	2 225 052	2 257 886	2 416 970	2 399 956	2 442 640
Silver, mine	kilograms (metal content)	*18 000	*18 000	*18 000	*18 000	*18 000
Sulphur and pyrites						
Pyrites	tonnes (sulphur content)	1 835	—	—	—	—
Recovered	tonnes (sulphur content)	41 000	29 000	49 000	53 000	79 000
Talc	tonnes	7 270	7 310	10 082	9 725	6 760
Uranium, mine	tonnes (metal content)	85	90	90	90	*90
Zinc, mine	tonnes (metal content)	29 786	21 512	22 081	23 599	13 784
Slab zinc	tonnes	48 000	38 000	51 000	52 746	49 447

Note(s):-

(1) Romania is also believed to produce asbestos, mica and molybdenum

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	1 953	18 927	35 924	23 073	63 110
Aluminium and bauxite						
Alumina	tonnes	196 600	5 128	155 094	209 950	261 862
Unwrought (a)	tonnes	73 320	88 022	35 094	79 508	39 254
Scrap	tonnes	6 577	6 963	5 787	4 703	4 829
Bentonite and fuller's earth						
Bentonite	tonnes	12 748	4 430	4 056	8 810	7 154
Cement						
Cement clinkers	tonnes	512 590	572 684	360 639	669 204	465 660
Portland cement	tonnes	1 133 414	1 020 819	963 978	701 686	739 215

## Romania

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Copper						
Ores & concentrates	tonnes	64 002	87 299	94 668	81 485	84 084
Unwrought	tonnes	14 740	3 826	1 185	815	614
Scrap	tonnes	9 417	19 432	16 683	15 979	22 665
Feldspar	tonnes	2 977	15 465	33 265	28 820	28 859
Gypsum	tonnes	6 115	6 473	10 539	14 277	15 089
Iron, steel and ferro-alloys						
Pig iron	tonnes	2 548	2 686	6 367	3 339	...
Sponge & powder	tonnes	7 264	7 797	6 886	9 187	12 522
Ferro-silico-manganese	tonnes	(b) ...	(b) ...	124 557	179 788	142 617
Other ferro-alloys	tonnes	66 286	88 368	2 529	3 891	8 657
Ingots, blooms, billets	tonnes	435 748	162 991	130 415	161 438	100 515
Scrap	tonnes	1 679 265	2 070 119	2 386 017	2 394 490	1 661 747
Lead						
Ores & concentrates	tonnes	15 585	36 089	30 390	25 092	25 012
Unwrought	tonnes	16 142	16 544	23 388	20 894	22 120
Scrap	tonnes	1 483	1 518	964	1 689	3 295
Salt	tonnes	349 112	393 787	546 390	497 826	598 154
Sulphur and pyrites						
Sulphur	tonnes	79	5 505	12 974	20 682	54 917
Titanium						
Metal	tonnes	23	80	94	277	255
Zinc						
Ores & concentrates	tonnes	60 681	59 456	99 978	31 665	26 611
Unwrought	tonnes	44 984	34 261	49 234	42 968	42 013
Scrap	tonnes	...	...	...	...	1 073

Note(s):-

(a) Including alloys

(b) Included with 'other ferro-alloys'

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	123 702	218 348	213 091	370 184	197 911
Aluminium and bauxite						
Bauxite	tonnes	1 152 415	843 557	821 036	1 532 335	1 655 045
Alumina	tonnes	81 407	31 763	223 466	125 902	29 350
Unwrought (a)	tonnes	224	...	3 145	7 449	2 849
Antimony						
Metal	tonnes	70	64	65	62	55
Asbestos	tonnes	13 644	12 137	11 859	13 036	9 077
Barytes	tonnes	8 198	16 869	2 943	9 943	5 747
Bentonite and fuller's earth	tonnes	9 861	14 733	3 383	4 652	4 126
Cement						
Portland cement	tonnes	9 680	20 478	123 332	228 506	167 686
Chromium						
Ores & concentrates	tonnes	2 405	3 869	2 701	2 562	2 828
Metal	tonnes	22	60	70	58	245
Coal						
Anthracite	tonnes	...	14 124	18 267	74 708	82 683
Other coal	tonnes	(b) 3 015 063	3 658 335	3 251 154	3 584 413	3 681 406
Lignite	tonnes	...	153	18 554	44 787	367 781
Copper						
Unwrought	tonnes	25 611	12 248	2 225	7 255	9 723
Diatomite	tonnes	2 980	2 909	3 267	3 294	3 183
Feldspar	tonnes	34 378	35 924	41 385	38 470	39 448
Fluorspar	tonnes	7 314	6 653	5 547	4 117	6 285
Gypsum	tonnes	109 719	102 708	48 336	37 805	69 027
Iron ore	tonnes	3 874 940	6 198 085	6 977 977	6 609 026	6 601 393

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	59 826	66 087	69 411	92 302	88 454
Silicon metal	tonnes	1 759	1 590	5 888	3 401	2 813
Ingots, blooms, billets	tonnes	648 391	724 751	510 940	559 793	448 454
Kaolin	tonnes	71 015	71 628	82 981	71 987	55 653
Lead						
Ores & concentrates	tonnes	30 678	32 043	14 899	26 920	31 085
Unwrought	tonnes	3 767	2 811	1 111	1 667	1 620
Magnesite and magnesia	tonnes	31 707	35 478	23 255	26 209	27 243
Manganese						
Ores & concentrates	tonnes	128 961	209 891	380 043	534 014	357 327
Metal	tonnes	158	230	297	303	427
Mica						
Mica	tonnes	72	...	590	828	886
Nickel						
Unwrought (a)	tonnes	671	457	280	563	745
Crude petroleum	tonnes	5 543 644	5 690 063	5 216 636	7 314 284	8 688 818
Phosphates	tonnes	278 348	249 271	264 547	303 713	283 192
Potash						
Sulphate	tonnes	71	2 174	41 698	8 070	757
Chloride	tonnes	76 450	58 108	33 920	53 008	41 974
Salt	tonnes	23 077	59 231	99 679	120 787	131 683
Sulphur and pyrites						
Sulphur	tonnes	22 311	357	5 660	2 075	964
Sulphur, sublimed & precipitated	tonnes	146	13	30	9	113
Talc	tonnes	1 038	1 200	1 187	1 609	1 962
Tin						
Unwrought (a)	tonnes	333	245	291	188	216
Titanium						
Titanium minerals	tonnes	2 544	1 993	2 192	2 334	2 111
Oxides	tonnes	4 621	4 742	5 454	6 378	7 600
Zinc						
Ores & concentrates	tonnes	87 597	55 758	113 683	109 019	150 282
Unwrought (a)	tonnes	11 747	15 482	16 030	19 555	14 640
Zirconium						
Concentrates	tonnes	685	678	827	809	552
Metal	tonnes	48	12	22	30	22

Note(s):-

- (a) Including alloys  
(b) Including anthracite

# Slovakia

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	2 033 600	2 238 400	2 627 200	3 174 400	6 807 116
Crushed rock	tonnes	8 067 600	8 847 900	9 212 400	9 717 300	12 575 266
Primary aluminium	tonnes	110 062	111 600	132 089	156 893	158 400
Barytes	tonnes	14 450	25 820	12 000	27 063	26 589
Bentonite and fuller's earth						
Bentonite	tonnes	73 000	65 500	74 700	73 280	75 860
Cement, finished	tonnes	3 122 665	3 140 581	3 147 478	3 158 308	3 498 685
Coal						
Brown coal	tonnes	3 421 100	3 406 400	3 076 100	2 578 273	2 513 030
Copper, refined	tonnes	10 584	6 989	600	—	—
Gold, mine	kilograms (metal content)	157	77	79	107	109
Gypsum (a)	tonnes	168 800	121 680	93 800	127 100	107 500
Iron ore	tonnes	435 492	326 300	287 000	305 072	258 500
Pig iron	tonnes	3 254 600	3 533 150	3 892 000	3 765 000	3 681 000
Crude steel	tonnes	3 988 600	4 275 470	4 588 000	4 454 000	4 485 000
Ferro-alloys						
Ferro-chrome	tonnes	5 968	5 695	1 924	1 784	867
Ferro-silico-manganese	tonnes	46 288	62 084	52 733	64 862	47 843
Ferro-silicon	tonnes	55 577	35 920	41 539	34 684	16 512
Other ferro-alloys	tonnes	46 357	24 657	44 589	68 096	48 161
Kaolin	tonnes	34 730	24 600	24 800	89 424	34 830
Magnesite	tonnes	961 212	929 630	1 640 900	965 900	920 100
Perlite	tonnes	14 910	18 635	15 000	23 840	12 700
Crude petroleum	tonnes	54 115	51 921	47 953	42 410	33 150
Natural gas	million m <sup>3</sup>	212	212	201	178	151
Salt	tonnes	123 000	97 400	133 100	121 600	105 047
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	5 000	5 000	5 000	5 000	5 000
Recovered (c)	tonnes (sulphur content)	57 000	61 000	60 000	65 000	65 000
Talc	tonnes	2 600	2 290	4 200	7 100	200

Note(s):-

(1) Slovakia is believed to produce feldspar

(a) Including anhydrite

(b) From metal sulphide processing

(c) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	573 398	570 446	328 547	(a) *542 000	(a) *758 000
Aluminium and bauxite						
Unwrought	tonnes	1 345	2 225	3 098	6 827	15 302
Unwrought alloys	tonnes	146 730	156 343	169 698	183 346	159 134
Scrap	tonnes	4 744	5 417	5 722	7 594	8 042
Barytes	tonnes	14 215	11 037	6 642	7 919	7 876
Bentonite and fuller's earth						
Bentonite	tonnes	65 850	56 645	66 954	85 341	76 014
Fuller's earth	tonnes	1 091	1 007	856	*1 000	1 757
Cement						
Cement clinkers	tonnes	3 848	9 501	27 695	4 768	26 549
Portland cement	tonnes	1 697 104	1 584 379	1 476 998	1 470 728	1 433 926
Other cement	tonnes	58 301	18 992	15 958	24 408	44 670
Chromium						
Metal	tonnes	2 869	2 511	2 289	2 362	1 876
Copper						
Unwrought	tonnes	1 280	1 151	7 094	15 680	19 130
Scrap	tonnes	5 475	7 711	8 889	12 764	14 752
Gold						
Metal	kilograms	133	255	325	274	268
Waste & scrap	kilograms	494	1 600	1 012	357	986

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Gypsum						
Crude & calcined	tonnes	69	154	184	679	246
Iron ore	tonnes	112 227	127 174	76 957	135 398	8 581
Iron, steel and ferro-alloys						
Pig iron	tonnes	23 551	13 213	37 145	73 303	31 261
Ferro-manganese	tonnes	36 573	47 074	37 139	57 440	41 918
Ferro-silico-manganese	tonnes	47 734	56 484	54 945	66 902	51 623
Ferro-silicon	tonnes	53 701	39 550	42 018	40 135	29 130
Other ferro-alloys	tonnes	18 111	14 541	10 013	11 834	10 741
Ingots, blooms, billets	tonnes	202 645	191 414	125 822	286 072	289 090
Scrap	tonnes	375 552	450 126	497 645	544 714	390 620
Lead						
Unwrought	tonnes	2 873	984	3 124	(a) *2 000	1 662
Magnesite and magnesite	tonnes	377 755	343 123	396 477	414 176	385 949
Mercury	kilograms	34 000	1 188	2 437	0	6
Crude petroleum	tonnes	16 895	13 013	16 699	113 305	30 887
Platinum metals						
Platinum & platinum metals	kilograms	...	257	310	308	8
Salt	tonnes	50 441	45 612	47 199	51 539	53 451
Silver						
Metal	kilograms	...	8 498	7 985	6 465	1 872
Talc	tonnes	1 549	1 322	1 205	...	1 051

Note(s):-

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

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	194 367	188 874	208 515	294 267	682 608
Aluminium and bauxite						
Bauxite	tonnes	28 803	8 211	8 300	7 991	3 669
Alumina	tonnes	232 975	221 205	253 825	366 784	307 756
Unwrought (a)	tonnes	36 909	53 060	49 945	45 913	31 683
Scrap	tonnes	4 163	11 508	10 593	13 701	12 567
Barytes	tonnes	538	1 312	956	927	814
Bentonite and fuller's earth						
Bentonite	tonnes	4 861	4 008	3 912	6 040	6 863
Fuller's earth	tonnes	...	204	1 014	866	1 082
Cement						
Cement clinkers	tonnes	0	—	34 550	33 021	68 894
Portland cement	tonnes	80 356	82 114	113 926	85 834	88 403
Other cement	tonnes	2 629	2 320	3 379	19 636	49 619
Chromium						
Ores & concentrates	tonnes	28 803	16 766	12 624	24 479	12 475
Metal	tonnes	58	103	179	2	55
Coal						
Hard coal (b)	tonnes	4 974 806	4 630 110	4 944 486	5 181 166	5 343 468
Lignite	tonnes	763 850	710 943	805 556	717 562	700 503
Briquettes	tonnes	5 421	3 162	1 803	20 243	33 049
Copper						
Matte & cement	tonnes	...	170	104	758	4 342
Unwrought	tonnes	11 071	11 400	3 689	1 269	1 718
Scrap	tonnes	5 462	5 604	8 448	20 776	19 977
Diatomite	tonnes	1 406	1 283	1 067	865	675
Feldspar	tonnes	29 202	27 596	48 100	39 689	36 989
Fluorspar	tonnes	2 393	1 797	1 965	1 574	1 615
Gold						
Metal	kilograms	545	654	421	...	123
Graphite	tonnes	1 992	2 633	2 209	1 667	1 031
Gypsum						
Crude & calcined	tonnes	40 702	125 948	121 461	110 803	116 252

## Slovakia

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Iron ore	tonnes	3 269 165	4 990 546	5 704 522	2 745 925	5 510 508
Iron, steel and ferro-alloys						
Pig iron	tonnes	19 209	20 219	14 998	29 498	39 400
Sponge & powder	tonnes	26	15 318	11 704	11 141	13 832
Ferro-alloys	tonnes	24 870	31 332	36 038	35 878	44 534
Silicon metal	tonnes	50	6 496	7 593	8 199	6 279
Ingots, blooms, billets	tonnes	4 015	29 081	17 534	15 927	10 753
Scrap	tonnes	383 068	475 898	389 383	241 718	197 550
Kaolin	tonnes	93 735	111 841	88 513	76 440	94 705
Magnesite and magnesia	tonnes	36 609	32 571	31 606	27 698	23 379
Manganese						
Ores & concentrates	tonnes	...	186 061	176 511	257 331	273 270
Metal	tonnes	185	121	147	...	146
Mercury	kilograms	4 000	3 677	2 230	2 738	3 457
Crude petroleum	tonnes	5 408 523	5 554 324	5 603 952	5 858 911	5 421 866
Potash						
Potassic fertilisers	tonnes	821	39 452	30 582	36 256	28 913
Salt	tonnes	158 752	200 614	213 250	266 601	320 413
Sillimanite	tonnes	1 770	2 385	2 690	2 459	4 312
Silver						
Metal	kilograms	...	13 268	13 073	17 735	57 416
Sulphur and pyrites						
Sulphur	tonnes	21 142	18 738	7 439	3 582	3 669
Talc	tonnes	711	382	369	192	211
Tin						
Unwrought (a)	tonnes	624	800	1 091	2 034	2 610
Titanium						
Metal	tonnes	142	103	111	101	980
Oxides	tonnes	530	429	2 701	2 173	2 804
Zinc						
Unwrought (a)	tonnes	...	31 953	33 557	42 324	43 500

Note(s):-

(a) Including alloys

(b) Including anthracite

# Slovenia

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	12 546 000	11 661 000	11 277 000	11 012 000	11 466 000
Crushed rock	tonnes	12 200 746	13 049 675	15 040 340	13 719 888	12 176 491
Primary aluminium	tonnes	76 632	87 600	109 800	120 700	138 500
Cement, finished	tonnes	1 237 000	1 178 000	1 370 000	1 186 000	1 200 000
Coal						
Brown coal & lignite	tonnes	4 133 000	4 684 710	4 828 786	4 807 302	4 539 556
Crude steel	tonnes	462 000	481 000	541 000	566 000	583 000
Ferro-alloys						
Ferro-silicon	tonnes	*9 000	*9 000	*12 000	*18 000	*11 000
Lead, refined	tonnes	15 400	15 400	15 000	*15 000	15 000
Natural gas	million m <sup>3</sup>	6 100	5 704	4 926	5 500	5 500
Salt	tonnes	2 000	5 200	3 632	2 852	803

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	77 693	92 618	137 354	166 176	221 830
Aluminium and bauxite						
Alumina	tonnes	10 452	11 760	18 072	24 277	205 606
Unwrought alloys	tonnes	70 705	77 362	101 446	124 069	123 555
Scrap	tonnes	9 522	12 329	11 619	14 971	21 103
Cement						
Cement clinkers	tonnes	...	2 163	7 589	18 577	58 765
Portland cement	tonnes	184 683	171 993	166 323	101 842	56 776
Other cement	tonnes	...	...	...	16 154	63 732
Copper						
Scrap	tonnes	7 999	8 615	10 550	12 564	13 054
Gold						
Metal	kilograms	160	1 287	681	254	101
Waste & scrap	kilograms	5 973	—	1 012	1 649	—
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	27 200	31 083	34 420	37 714	51 410
Silicon metal	tonnes	...	40	188	1 608	252
Ingots, blooms, billets	tonnes	11 953	8 292	13 311	15 327	12 647
Scrap	tonnes	136 041	126 233	113 448	186 726	225 627
Lead						
Unwrought	tonnes	6 587	3 757	5 136	4 701	5 818
Lithium						
Carbonate	tonnes	91	68	64	89	96
Manganese						
Metal	tonnes	3	104	185	143	2 584
Mercury	kilograms	1 446	1 312	15 826	7 327	1 395
Nickel						
Unwrought (a)	tonnes	225	262	116	144	117
Platinum metals						
Platinum & platinum metals	kilograms	322	919	817	1 083	3
Salt	tonnes	3 513	4 400	4 814	5 253	8 034
Silver						
Metal	kilograms	1 775	1 367	3 948	2 699	6 382
Titanium						
Oxides	tonnes	32 782	38 484	35 655	38 497	44 123

Note(s):-

(a) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	491 305	447 327	541 189	532 614	364 091
Aluminium and bauxite						
Bauxite	tonnes	87 940	35 020	51 683	44 560	47 935
Alumina	tonnes	167 095	239 473	252 351	264 319	450 273
Alumina hydrate	tonnes	26 905	23 219	22 878	14 131	23 581
Unwrought	tonnes	79 091	51 670	63 688	57 362	73 137
Unwrought alloys	tonnes	28 897	33 274	40 332	43 403	46 782
Scrap	tonnes	13 739	13 262	13 676	27 390	47 381
Antimony						
Metal	tonnes	29	118	52	84	137
Asbestos	tonnes	...	...	...	10	25
Barytes	tonnes	1 026	1 075	931	896	845
Bentonite and fuller's earth	tonnes	3 738	4 122	4 322	3 591	3 639
Bismuth						
Metal	tonnes	35	54	42	43	69
Cement						
Cement clinkers	tonnes	21 066	16 279	95 002	61 151	1 343
Portland cement	tonnes	174 690	150 749	205 345	219 779	215 513
Other cement	tonnes	1 254	1 272	1 440	112	2 861
Chromium						
Ores & concentrates	tonnes	722	451	340	406	446
Metal	tonnes	18	10	26	31	122
Coal						
Hard coal (b)	tonnes	28 581	34 607	54 168	38 849	51 173
Lignite	tonnes	440 419	539 356	488 929	584 117	543 465
Cobalt						
Metal	tonnes	214	141	198	162	209
Copper						
Unwrought	tonnes	3 226	4 005	3 835	2 948	2 764
Scrap	tonnes	3 300	3 119	3 787	3 743	5 762
Diamond						
Gem, cut	carats	25 000	15 000	...	...	...
Industrial	carats	90 000	50 000	...	...	...
Dust	carats	1 505 000	2 040 000	...	...	...
Diatomite	tonnes	503	446	450	730	846
Feldspar	tonnes	5 232	4 870	8 605	10 045	5 852
Fluorspar	tonnes	939	1 148	1 113	1 178	1 031
Gold						
Metal	kilograms	1 539	2 696	612	382	374
Waste & scrap	kilograms	1	...	256	363	4 219
Gypsum	tonnes	70 509	74 660	59 685	46 703	36 817
Iodine	kilograms	2 200	150	180	172	387
Iron, steel and ferro-alloys						
Pig iron	tonnes	13 497	14 851	19 260	27 783	32 217
Ferro-alloys	tonnes	28 298	32 616	34 959	44 254	71 299
Silicon metal	tonnes	3 547	4 059	6 483	10 171	6 393
Ingots, blooms, billets	tonnes	5 800	3 620	3 312	3 199	3 505
Scrap	tonnes	249 517	262 294	316 188	386 832	434 585
Kaolin	tonnes	25 583	27 112	29 449	28 782	25 928
Lead						
Unwrought	tonnes	10 738	12 629	13 604	12 854	10 262
Scrap	tonnes	215	783	538	1 223	1 382
Lithium						
Oxides	tonnes	116	80	88	127	116
Magnesite and magnesia	tonnes	8 406	9 377	9 732	9 560	9 899
Manganese						
Metal	tonnes	42	154	152	296	316
Molybdenum						
Ores & concentrates	tonnes	95	0	42	524	5 674
Nickel						
Unwrought (a)	tonnes	2 954	1 595	992	959	931
Platinum metals						
Platinum & platinum metals	kilograms	1 411	1 018	1 033	430	12 262
Rare earths						
Metals	tonnes	74	71	80	107	139
Salt	tonnes	107 755	128 212	155 881	178 531	207 314



## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Silver						
Metal	kilograms	32 378	35 827	36 253	307 045	45 584
Sulphur and pyrites						
Pyrites	tonnes	379	426	399	375	400
Sulphur	tonnes	51 734	49 560	46 289	49 649	58 669
Talc	tonnes	3 990	4 706	5 251	5 628	5 383
Titanium						
Titanium minerals	tonnes	18 676	7 805	24 652	11 610	21 054
Metal	tonnes	68	127	118	300	614
Oxides	tonnes	2 282	2 936	3 219	3 033	3 157
Vanadium						
Metal	tonnes	18	27	22	21	89
Zinc						
Unwrought (a)	tonnes	20 516	18 031	19 925	21 146	21 740
Zirconium						
Concentrates	tonnes	440	440	529	416	625

Note(s):-

(a) Including alloys

(b) Including anthracite

# Spain

## Production

Commodity	Units	2001	2002	2003	2004	2005
<b>Primary aggregates</b>						
Sand and gravel	tonnes	85 000 000	97 857 003	118 746 034	113 947 729	115 000 000
Crushed rock	tonnes	200 000 000	237 379 504	254 100 000	273 555 490	280 000 000
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	1 199 000	1 350 000	1 380 000	*1 400 000	*1 400 000
Primary aluminium	tonnes	376 400	380 100	389 100	397 500	395 000
Barytes	tonnes	45 473	50 071	44 660	40 776	39 133
<b>Bentonite and fuller's earth</b>						
Bentonite	tonnes	*120 000	123 457	103 174	156 760	145 000
Attapulgite	tonnes	24 477	22 918	18 975	20 796	18 100
Sepiolite	tonnes	*600 000	564 610	548 728	655 346	631 033
Bromine	kilograms	*100 000	*100 000	*100 000	*100 000	*100 000
Cement, finished	tonnes	40 512 090	42 417 253	44 746 757	46 595 560	*48 000 000
<b>Coal</b>						
Anthracite	tonnes	4 693 831	4 399 365	3 857 364	3 692 220	3 888 638
Bituminous	tonnes	5 797 496	5 349 027	5 547 150	5 220 407	4 664 589
Sub-bituminous	tonnes	3 456 000	3 537 710	3 182 572	3 426 001	5 854 014
Lignite	tonnes	8 787 000	8 726 121	7 977 546	8 146 908	7 587 113
Copper, mine	tonnes (metal content)	9 800	1 248	635	1 306	2 459
Copper, smelter	tonnes	280 015	298 057	290 282	224 249	284 215
Copper, refined	tonnes	290 630	312 145	293 495	228 466	313 105
Diatomite (a)	tonnes	70 000	53 558	57 934	33 799	35 000
Feldspar	tonnes	*520 000	548 964	563 580	552 507	570 000
Fluorspar	tonnes	134 039	141 434	139 266	145 694	146 890
Gold, mine	kilograms (metal content)	4 277	5 559	5 212	5 248	2 260
Gypsum	tonnes	*10 920 000	11 218 410	11 366 375	12 533 972	12 500 000
Iron ore	tonnes	55 058	24 489	571	10 879	—
Pig iron	tonnes	4 094 000	3 973 000	3 645 000	4 036 000	4 200 000
Crude steel	tonnes	16 504 000	16 408 000	16 407 000	17 700 000	17 826 000
<b>Ferro-alloys</b>						
Ferro-manganese	tonnes	24 804	33 218	*35 000	*35 000	*35 000
Ferro-silico-manganese	tonnes	102 110	103 494	*100 000	*100 000	*100 000
Ferro-silicon	tonnes	53 427	56 994	*60 000	*60 000	*60 000
Silicon metal	tonnes	29 114	26 071	*25 000	*25 000	*25 000
Kaolin (b)	tonnes	*400 000	419 483	427 193	437 990	450 000
Lead, mine	tonnes (metal content)	35 573	6 171	1 765	—	—
Lead, refined	tonnes	121 600	115 552	99 100	105 600	110 000
Magnesite	tonnes	598 000	637 024	517 030	567 504	485 800
Mercury	kilograms	524 000	726 139	745 260	—	—
Mica (c)	tonnes	9 874	11 783	11 800	7 825	6 500
Nickel, mine	tonnes (metal content)	—	—	—	—	5 380
Crude petroleum	tonnes	344 074	326 197	329 171	262 707	173 253
Natural gas	million m <sup>3</sup>	557	553	268	370	174
<b>Potash</b>						
Chloride	tonnes (K <sub>2</sub> O content)	470 933	406 571	505 527	553 210	494 592
<b>Salt</b>						
Rock salt	tonnes	2 319 800	2 559 760	2 562 832	2 656 904	2 500 000
Sea salt	tonnes	1 420 000	1 234 679	1 327 108	1 227 625	1 250 000
Other salt	tonnes	100 000	97 945	97 730	108 733	100 000
<b>Sillimanite minerals</b>						
Andalusite	tonnes	*250	*250	*200	*200	*200
Silver, mine	kilograms (metal content)	55 000	12 792	2 173	3 583	5 227
Strontium minerals	tonnes	164 030	171 293	152 383	206 001	190 000
<b>Sulphur and pyrites</b>						
Pyrites	tonnes (sulphur content)	89 796	—	—	—	—
Recovered (d)	tonnes (sulphur content)	461 000	544 000	560 000	488 000	—
Recovered (e)	tonnes (sulphur content)	135 000	140 000	145 000	145 000	*150 000

## Production continued

Commodity	Units	2001	2002	2003	2004	2005
Talc						
Talc	tonnes	119 000	108 312	101 739	107 829	97 000
Pyrophyllite	tonnes	...	...	900	700	—
Zinc, mine	tonnes (metal content)	165 568	69 926	15 140	—	—
Slab zinc	tonnes	437 000	503 000	519 000	525 000	501 400

## Note(s):-

(1) Spain is believed to produce arsenic

(a) Including tripoli

(b) Washed

(c) Including mica recovered from mica schists and/or kaolin beneficiation

(d) From metal sulphide processing

(e) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	1 641 676	1 724 911	1 647 138	1 694 285	1 546 315
Aluminium and bauxite						
Alumina	tonnes	292 210	179 478	369 353	491 808	561 125
Alumina hydrate	tonnes	231 485	11 685	214 263	241 910	264 829
Unwrought	tonnes	5 191	2 429	915	1 024	3 002
Unwrought alloys	tonnes	86 974	68 484	87 356	102 146	111 992
Scrap	tonnes	30 251	37 236	41 646	35 021	36 688
Antimony						
Metal	tonnes	92	10	41	409	13
Oxide	tonnes	974	934	622	706	859
Asbestos	tonnes	36	1	—	—	—
Barytes	tonnes	39 910	44 570	37 141	33 930	27 389
Bentonite and fuller's earth						
Bentonite	tonnes	61 691	63 120	74 277	80 410	75 450
Sepiolite	tonnes	609 250	581 737	507 584	501 988	506 019
Fuller's earth	tonnes	14 370	14 721	12 417	11 362	9 828
Bismuth						
Compounds	tonnes	72	—	...	...	...
Metal	tonnes	7	13	10	2	9
Cadmium						
Metal	tonnes	1	0	0	0	0
Cement						
Cement clinkers	tonnes	6 538	45 657	18 350	9 491	13 259
Portland cement	tonnes	1 713 277	1 700 683	1 585 078	1 681 953	1 713 572
Other cement	tonnes	94 252	92 852	100 272	59 696	51 340
Chromium						
Ores & concentrates	tonnes	678	1 040	947	2 113	1 314
Metal	tonnes	1 569	2 679	1 126	905	709
Coal						
Anthracite	tonnes	7 146	12 173	47 185	48 710	49 563
Cobalt						
Metal	tonnes	49	16	14	35	7
Oxides	tonnes	2	122	8	33	59
Copper						
Ores & concentrates	tonnes	79 561	6 756	2 682	4 327	14 434
Unwrought, unrefined	tonnes	35 090	21 126	37 437	50 901	62 269
Unwrought, refined	tonnes	23 785	23 999	46 677	32 366	44 365
Unwrought alloys	tonnes	7 465	7 124	9 747	11 724	9 810
Scrap	tonnes	52 154	72 157	62 879	77 850	99 600
Diamond						
Unsorted	carats	375 000	...	...	25 000	80 000
Gem, cut	carats	£1 890 000	£3 291 000	£2 606 000	£1 855 000	£5 275 000
Industrial	carats	£1 481 000	£613 000	£245 000	£212 000	£325 000
Dust	carats	235 000	615 000	385 000	3 765 000	3 760 000
Diatomite	tonnes	4 467	6 829	5 385	5 278	6 694

## Spain

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Feldspar	tonnes	52 161	79 520	65 385	71 993	66 427
Fluorspar	tonnes	1 132	1 106	1 745	2 221	4 434
Gold						
Metal	kilograms	2 046	3 867	4 793	6 490	3 520
Waste & scrap	kilograms	14 030	1 126	784	2 908	38
Graphite	tonnes	14 299	8 521	9 288	27 634	11 972
Gypsum						
Crude	tonnes	2 590 879	2 818 090	2 732 211	2 820 367	3 228 806
Calcined	tonnes	460 778	517 466	473 180	470 437	391 274
Iodine	kilograms	300 485	115 000	27 811	31 156	21 089
Iron ore						
Burnt pyrites	tonnes	168 181	189 404	105 203	171 292	230 985
Iron, steel and ferro-alloys						
Pig iron	tonnes	2 900	4 177	2 751	3 258	12 709
Sponge & powder	tonnes	4 956	3 920	4 447	4 914	4 397
Ferro-chrome	tonnes	466	472	369	551	775
Ferro-manganese	tonnes	66 834	73 506	62 260	82 733	101 850
Ferro-silico-manganese	tonnes	34 622	29 297	44 214	40 130	42 916
Ferro-molybdenum	tonnes	120	326	342	60	331
Ferro-silicon	tonnes	5 826	14 730	13 140	19 332	11 843
Other ferro-alloys	tonnes	1 120	750	891	558	992
Silicon metal	tonnes	14 027	17 621	11 035	13 254	16 742
Ingots, blooms, billets	tonnes	263 813	241 944	182 247	130 079	118 414
Scrap	tonnes	45 419	93 970	103 413	205 298	140 200
Kaolin	tonnes	155 446	159 759	172 414	154 667	192 735
Lead						
Ores & concentrates	tonnes	97 594	13	5 057	6 057	2
Unwrought	tonnes	6 098	9 458	6 219	8 301	9 805
Scrap	tonnes	3 684	6 797	7 028	6 399	9 128
Lithium						
Carbonate	tonnes	1 617	639	373	3 157	1 123
Magnesite and magnesia						
Magnesite	tonnes	9 201	24 152	23 640	25 557	901
Magnesia	tonnes	150 632	154 661	158 844	185 811	189 005
Manganese						
Ores & concentrates	tonnes	11 474	1 208	855	989	776
Metal	tonnes	6 113	5 727	4 791	6 117	6 651
Mercury	kilograms	569 833	820 527	836 784	596 739	581 653
Mica	tonnes	1 856	2 001	3 996	3 075	2 591
Nickel						
Unwrought (a)	tonnes	169	609	126	177	572
Scrap	tonnes	385	208	420	363	528
Platinum metals						
Platinum & platinum metals	kilograms	256	285	104	1 054	152
Waste & scrap	kilograms	616	253	7 479	1 893	2 892
Potash						
Sulphate	tonnes	57 091	15 635	11 628	3 958	2 832
Chloride	tonnes	418 155	350 315	502 348	675 140	514 042
Rare earths						
Ferro-cerium & other pyrophoric alloys	tonnes	56	85	...	...	...
Salt	tonnes	785 056	617 170	695 177	744 750	750 180
Silver						
Metal	kilograms	14 145	51 246	115 059	43 448	11 665
Sulphur and pyrites						
Sulphur, crude	tonnes	49 385	39 389	29 959	45 034	32 557
Sulphur, refined	tonnes	19 318	13 476	12 746	8 704	13 133
Sulphur, sublimed & precipitated	tonnes	52	69	575	79	124
Talc	tonnes	63 657	67 921	67 748	60 832	56 493
Tin						
Unwrought (a)	tonnes	218	738	179	205	139
Scrap	tonnes	111	1 169	198	221	435
Titanium						
Metal	tonnes	434	376	697	483	903
Oxides	tonnes	79 643	73 320	70 052	85 867	83 905

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Tungsten						
Metal	tonnes	56	109	158	141	77
Zinc						
Ores & concentrates	tonnes	296 040	29 661	33 913	37 986	67 420
Unwrought	tonnes	93 738	79 286	245 702	294 548	333 966
Unwrought alloys	tonnes	36 413	42 647	75 497	54 670	32 673
Scrap	tonnes	5 861	4 577	3 561	5 125	11 981
Zirconium						
Concentrates	tonnes	7 449	7 852	13 669	10 844	9 805
Metal	tonnes	5	122	602	989	820

Note(s):-

(a) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	1 088 430	1 073 979	1 156 484	1 190 670	1 305 835
Aluminium and bauxite						
Bauxite	tonnes	3 059 122	2 887 349	2 781 769	3 329 441	3 224 101
Alumina	tonnes	61 147	53 469	50 403	55 184	58 627
Alumina hydrate	tonnes	35 064	19 509	14 595	30 429	43 246
Unwrought	tonnes	67 047	55 894	116 742	91 382	110 257
Unwrought alloys	tonnes	149 069	166 771	166 538	235 123	223 627
Scrap	tonnes	63 125	70 908	66 466	86 553	99 459
Antimony						
Metal	tonnes	2 277	2 314	1 516	2 270	1 881
Oxide	tonnes	828	544	519	5 656	808
Arsenic						
Metallic arsenic	tonnes	87	136	114	92	112
Asbestos	tonnes	13 349	3 085	130	192	23
Barytes	tonnes	39 311	51 952	50 596	59 378	47 923
Bentonite and fuller's earth						
Bentonite	tonnes	64 157	72 294	68 776	60 709	83 784
Fuller's earth	tonnes	578	1 067	488	271	238
Bismuth						
Metal	tonnes	125	139	188	206	179
Bromine	kilograms	233 000	166 487	122 194	73 493	53 000
Cadmium						
Metal	tonnes	94	4	23	22	2
Oxide	tonnes	56	70	29	28	53
Cement						
Cement clinkers	tonnes	3 975 430	4 646 090	5 897 219	6 266 470	7 852 531
Portland cement	tonnes	2 960 674	3 155 122	2 606 300	2 549 086	2 845 856
Other cement	tonnes	200 370	36 947	54 726	21 527	20 031
Chromium						
Ores & concentrates	tonnes	9 141	2 585	5 799	3 947	10 262
Metal	tonnes	1 202	666	921	1 519	1 308
Coal						
Anthracite	tonnes	1 741 429	1 729 758	2 015 985	2 376 019	2 534 019
Other coal	tonnes	17 174 707	22 792 868	19 537 014	22 098 156	22 222 316
Cobalt						
Metal	tonnes	228	131	171	181	158
Oxides	tonnes	1 336	1 436	1 401	1 249	1 352
Copper						
Ores & concentrates	tonnes	902 428	1 057 377	1 052 115	776 980	1 040 099
Unwrought, unrefined	tonnes	16 024	9 150	15 283	2 488	312
Unwrought, refined	tonnes	42 505	28 095	33 781	74 277	69 039
Unwrought alloys	tonnes	6 461	7 256	4 444	5 254	4 458
Scrap	tonnes	82 473	83 664	57 315	112 934	84 824

## Spain

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Diamond						
Unsorted	carats	£2 679 000	£4 900 000	£4 602 000	£5 431 000	£6 908 000
Gem, cut	carats	£27 660 000	£25 162 000	£25 111 000	£41 732 000	£37 408 000
Industrial	carats	£4 508 000	£1 674 000	£1 809 000	£1 412 000	£1 421 000
Dust	carats	6 555 000	3 435 000	5 545 000	...	8 490 229
Diatomite	tonnes	5 349	4 442	10 575	7 004	5 186
Feldspar	tonnes	501 395	593 452	760 473	955 039	1 231 861
Fluorspar	tonnes	18 819	17 878	8 538	15 006	8 575
Gold						
Metal	kilograms	30 100	26 690	27 662	29 702	20 594
Waste & scrap	kilograms	3 182	818	411	5 018	139
Graphite	tonnes	7 675	8 119	7 363	9 402	8 334
Gypsum						
Crude	tonnes	47 567	51 797	65 152	43 004	47 585
Calcined	tonnes	8 143	38 659	142 719	14 462	32 078
Iodine	kilograms	1 247 590	796 000	784 718	710 814	781 787
Iron ore	tonnes	6 641 053	6 158 325	5 765 648	6 118 975	6 248 366
Iron, steel and ferro-alloys						
Pig iron	tonnes	321 671	397 194	434 682	593 588	806 327
Sponge & powder	tonnes	738 608	640 298	593 176	670 063	516 423
Ferro-chrome	tonnes	246 756	229 425	579 714	221 156	200 543
Ferro-silico-chrome	tonnes	2 951	1 878	...	48	1 017
Ferro-silico-magnesium	tonnes	4 035	3 529	3 979	6 183	5 256
Ferro-manganese	tonnes	53 221	45 100	27 846	19 817	16 489
Ferro-silico-manganese	tonnes	26 375	28 237	56 110	75 061	66 531
Ferro-molybdenum	tonnes	3 077	3 486	4 042	3 456	6 327
Ferro-nickel	tonnes	49 769	51 626	60 141	58 664	59 113
Ferro-niobium	tonnes	271	335	348	491	906
Ferro-phosphorus	tonnes	2 127	2 051	2 020	2 072	2 036
Ferro-silicon	tonnes	50 862	43 230	56 258	56 736	39 623
Ferro-titanium & Fe-Si-Ti	tonnes	1 059	496	1 017	1 212	1 880
Ferro-vanadium	tonnes	1 688	971	1 050	1 077	824
Other ferro-alloys	tonnes	11 130	9 865	6 818	11 175	12 821
Silicon metal	tonnes	3 816	4 528	3 677	5 660	4 160
Ingots, blooms, billets	tonnes	855 775	1 062 109	1 524 971	1 495 840	1 219 342
Scrap	tonnes	6 290 607	5 533 584	6 389 902	7 093 195	6 975 101
Kaolin	tonnes	796 040	792 920	999 504	1 209 303	1 366 226
Lead						
Unwrought	tonnes	117 501	178 929	129 925	154 828	174 618
Scrap	tonnes	13 311	19 914	21 943	27 866	30 499
Lithium						
Oxides	tonnes	347	357	436	329	480
Carbonate	tonnes	713	1 046	983	759	1 553
Magnesite and magnesia						
Magnesite	tonnes	1 521	1 303	3 608	2 901	2 348
Magnesia	tonnes	112 201	101 620	367 117	102 418	103 747
Manganese						
Ores & concentrates	tonnes	352 275	431 720	437 088	575 518	415 959
Metal	tonnes	12 475	8 174	10 569	9 786	10 537
Mercury	kilograms	734 351	318 263	350 266	301 097	572 872
Mica	tonnes	1 185	5 447	1 810	1 641	1 917
Molybdenum						
Ores & concentrates	tonnes	3 811	4 226	3 917	3 805	3 317
Metal	tonnes	34	91	45	30	31
Nickel						
Unwrought (a)	tonnes	31 752	32 795	27 346	28 234	28 635
Oxides	tonnes	231	306	225	210	176
Crude petroleum	tonnes	56 824 754	57 489 130	57 578 507	59 343 873	59 510 408
Phosphates	tonnes	2 062 062	1 805 229	1 790 138	1 800 329	1 768 425
Platinum metals						
Platinum & platinum metals	kilograms	4 830	3 311	1 612	1 402	13 799
Waste & scrap	kilograms	166	32	31	298	122
Potash						
Sulphate	tonnes	32 543	71 719	37 444	48 174	47 561
Chloride	tonnes	268 306	245 620	249 881	269 278	243 017
Other potassic fertilisers	tonnes	2 862	9 304	10 427	22 019	4 665

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Rare earths						
Rare earth compounds	tonnes	522	523	548	692	824
Ferro-cerium & other pyrophoric alloys	tonnes	44	28	87	...	8
Metals	tonnes	59	92	90	84	20
Salt	tonnes	31 179	42 431	47 011	36 494	111 449
Sillimanite	tonnes	12 885	13 581	15 782	15 262	27 308
Silver						
Ores & concentrates	kilograms	43 638	75 862	59 205	54 295	59 653
Metal	kilograms	175 430	307 864	133 844	158 529	106 596
Sulphur and pyrites						
Sulphur, crude	tonnes	221 786	205 049	210 794	220 662	182 318
Sulphur, refined	tonnes	5 869	8 219	5 936	13 582	5 778
Sulphur, sublimed & precipitated	tonnes	220	238	753	533	243
Talc	tonnes	63 627	65 691	68 760	80 626	80 726
Tantalum and niobium						
Tantalum	tonnes	...	...	30	4	62
Tin						
Concentrates	tonnes	399	225	101	160	137
Unwrought	tonnes	6 313	6 967	8 072	7 860	7 109
Unwrought alloys	tonnes	175	58	90	292	170
Scrap	tonnes	2 830	4 842	2 400	2 111	1 919
Titanium						
Ilmenite	tonnes	130 991	153 688	128 692	172 431	121 204
Other titanium minerals	tonnes	1 844	2 315	2 296	2 316	1 746
Metal	tonnes	3 407	3 241	2 974	3 722	3 862
Oxides	tonnes	99 887	107 418	100 814	116 397	117 203
Tungsten						
Metal	tonnes	68	83	179	259	134
Carbide	tonnes	77	64	48	59	38
Zinc						
Ores & concentrates	tonnes	687 733	901 359	1 096 292	917 968	1 090 022
Unwrought	tonnes	4 529	4 939	7 448	3 862	8 203
Unwrought alloys	tonnes	9 499	10 398	12 477	16 601	17 858
Scrap	tonnes	2 850	2 506	4 103	4 062	3 927
Zirconium						
Concentrates	tonnes	133 013	145 970	142 949	143 860	153 619
Metal	tonnes	163	41	60	94	56

Note(s):-

(a) Including alloys

# Sweden

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	25 549 623	24 537 500	21 650 322	22 647 111	21 755 752
Crushed rock	tonnes	45 992 625	46 771 631	49 326 880	54 737 031	62 313 089
Primary aluminium	tonnes	101 420	100 125	100 707	100 591	102 107
Cement clinker	tonnes	2 421 693	2 364 724	2 235 138	2 385 509	*2 400 000
Cement, finished	tonnes	2 644 365	2 764 954	2 544 647	2 712 810	2 731 000
Copper, mine	tonnes (metal content)	74 269	71 991	83 143	82 415	87 068
Copper, smelter	tonnes	179 364	186 984	175 475	174 459	153 399
Copper, refined	tonnes	216 237	224 402	214 181	235 620	223 482
Feldspar	tonnes	40 000	37 000	44 000	38 000	30 000
Gold, mine	kilograms (metal content)	4 986	5 757	5 900	6 564	6 564
Graphite	tonnes	1 035	—	—	—	—
Iron ore	tonnes	19 486 000	20 281 000	21 498 000	22 272 000	23 255 000
Pig iron	tonnes	3 725 000	3 815 000	3 819 000	3 992 000	3 800 000
Crude steel	tonnes	5 518 100	5 753 300	5 707 300	5 978 100	5 725 700
Ferro-alloys						
Ferro-chrome	tonnes	107 036	118 800	106 100	127 300	127 500
Ferro-silicon	tonnes	21 197	21 500	17 100	18 500	9 800
Lead, mine	tonnes (metal content)	85 975	42 954	50 962	54 347	60 445
Lead, refined	tonnes	75 608	63 451	73 340	73 548	72 600
Selenium metal	tonnes	88	118	107	131	...
Silver, mine	kilograms (metal content)	306 029	320 823	340 701	319 563	309 933
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	160 100	177 600	180 200	185 800	180 000
Recovered (b)	tonnes (sulphur content)	54 530	51 065	62 454	62 238	59 839
Talc	tonnes	14 000	20 000	7 000	8 000	7 000
Zinc, mine	tonnes (metal content)	156 334	148 620	185 884	197 034	215 691

Note(s):-

(a) From metal sulphide processing

(b) From petroleum refining and/or natural gas

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	2 206 841	2 132 194	2 067 542	2 213 385	2 447 200
Aluminium and bauxite						
Alumina	tonnes	1 453	1 506	1 939	6 160	14 133
Unwrought	tonnes	3 183	2 529	101	22 096	9 390
Unwrought alloys	tonnes	62 986	78 675	75 903	105 752	88 311
Scrap	tonnes	63 869	70 721	109 170	79 433	69 166
Bentonite and fuller's earth						
Bentonite	tonnes	6 716	9 401	10 082	9 486	7 419
Bismuth						
Metal	tonnes	2	13	...	...	...
Cadmium						
Oxide	tonnes	54	78	120	139	140
Cement						
Portland cement	tonnes	1 241 183	1 285 376	1 064 305	867 450	1 295 834
Other cement	tonnes	2 341	1 469	2 818	2 492	2 555
Chromium						
Metal	tonnes	...	...	...	...	55
Cobalt						
Metal	tonnes	110	146	117	127	127
Oxides	tonnes	12	...	...	...	...
Copper						
Unwrought, refined	tonnes	70 682	91 869	77 216	81 878	99 824
Unwrought alloys	tonnes	8 827	6 486	7 104	5 040	5 247
Scrap	tonnes	29 680	34 747	35 982	44 366	43 816
Diatomite	tonnes	1 605	579	491	492	4 423
Feldspar	tonnes	27 662	25 400	23 847	23 752	16 515
Fluorspar	tonnes	5 603	5 998	8 981	8 702	8 206



## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Gold						
Metal	kilograms	6 000	12 000	10 000	19 000	18 000
Waste & scrap	kilograms	79 000	24 000	...	20 000	1 000
Graphite	tonnes	2 164	600	302	260	195
Gypsum						
Crude & calcined	tonnes	5 692	6 350	5 993	7 343	7 832
Iodine	kilograms	1 000	2 000	4 000	—	4 000
Iron ore	tonnes	13 619 293	14 233 450	15 559 741	17 336 835	17 597 351
Iron, steel and ferro-alloys						
Pig iron	tonnes	35 593	30 079	118 378	116 550	99 496
Sponge & powder	tonnes	11 324	11 356	9 311	12 306	9 064
Ferro-chrome	tonnes	1 023	617	1 070	1 830	1 801
Ferro-silico-magnesium	tonnes	1 102	392	479	235	60
Ferro-manganese & Fe-Si-Mn	tonnes	1 189	6 903	1 159	1 605	3 456
Ferro-molybdenum	tonnes	65	745	71	87	158
Ferro-phosphorus	tonnes	399	1 203	463	281	294
Ferro-silicon	tonnes	762	736	182	441	731
Ferro-vanadium	tonnes	24	427	27	99	249
Other ferro-alloys	tonnes	3 138	6 903	1 527	2 796	1 525
Silicon metal	tonnes	1 766	6 742	2 790	6 387	6 049
Ingots, blooms, billets	tonnes	197 800	297 913	166 876	367 562	232 958
Scrap	tonnes	560 297	722 509	708 654	741 254	863 474
Kaolin	tonnes	7 199	8 200	8 791	15 544	18 473
Lead						
Ores & concentrates	tonnes	118 723	63 204	59 340	60 105	62 155
Unwrought	tonnes	54 414	61 079	71 217	68 215	70 042
Scrap	tonnes	545	424	237	554	307
Manganese						
Metal	tonnes	99	425	352	196	143
Mercury	kilograms	23 000	...	...	0	1 000
Mica	tonnes	102	89	51	58	83
Nickel						
Unwrought	tonnes	613	1 887	384	126	112
Scrap	tonnes	432	1 661	1 096	1 138	4 369
Oxides	tonnes	125	142	181	317	291
Platinum metals						
Platinum & platinum metals	kilograms	£952 000	£610 000	£280 000	£1 037 000	£663 000
Waste & scrap	kilograms	46 465	27 536	27 000	29 000	25 000
Potash						
Sulphate	tonnes	141 298	136 917	127 687	70 066	54 841
Salt	tonnes	1 849	20 208	156 140	10 354	8 783
Silver						
Metal	kilograms	291 000	408 000	433 000	473 000	421 000
Sulphur and pyrites						
Sulphur	tonnes	1 453	493	9 572	4 542	16 883
Sulphur, sublimed & precipitated	tonnes	2	2	0	139	239
Talc	tonnes	5 138	14 370	8 061	9 388	10 080
Tin						
Unwrought (a)	tonnes	329	313	238	261	217
Scrap	tonnes	125	178	88	161	45
Titanium						
Metal	tonnes	1 494	1 256	1 004	1 737	1 955
Oxides	tonnes	13 653	11 058	11 713	13 912	14 306
Tungsten						
Metal	tonnes	32	364	334	102	414
Carbide	tonnes	561	385	68	114	37
Zinc						
Ores & concentrates	tonnes	261 909	283 701	305 058	379 155	372 925
Unwrought (a)	tonnes	494	629	496	280	165
Scrap	tonnes	13 546	23 833	42 715	21 598	16 134

Note(s):-

(a) Including alloys

Sweden

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	417 298	838 286	615 470	729 992	810 385
Aluminium and bauxite						
Bauxite	tonnes	28 463	1 920	3 317	28 758	3 171
Alumina	tonnes	133 786	172 761	196 834	205 734	191 504
Alumina hydrate	tonnes	54 262	55 379	54 825	66 156	62 549
Unwrought	tonnes	16 612	13 991	21 584	29 493	17 916
Unwrought alloys	tonnes	80 571	106 217	97 276	120 732	117 202
Scrap	tonnes	24 295	18 450	16 255	24 082	24 309
Antimony						
Metal	tonnes	108	176	269	234	199
Oxide	tonnes	401	485	232	328	377
Arsenic						
Metallic arsenic	tonnes	18	19	17	13	6
Barytes	tonnes	1 892	1 927	1 848	2 854	4 610
Bentonite and fuller's earth						
Bentonite	tonnes	136 742	125 852	140 176	82 414	48 564
Bismuth						
Metal	tonnes	16	12	8	13	11
Bromine	kilograms	—	...	0	5 000	13 000
Cadmium						
Metal	tonnes	65	150	402	330	282
Oxide	tonnes	10	—	26	71	35
Cement						
Portland cement	tonnes	210 732	208 113	209 882	218 928	242 326
Other cement	tonnes	25 186	25 151	27 286	27 286	34 597
Chromium						
Ores & concentrates	tonnes	200 000	280 000	215 000	457 000	240 000
Metal	tonnes	1 275	1 265	823	1 903	1 150
Coal						
Anthracite	tonnes	10 194	11 078	99 008	7 304	13 013
Other coal	tonnes	2 758 180	2 652 007	3 081 407	3 059 218	3 187 798
Cobalt						
Metal	tonnes	813	599	663	711	660
Copper						
Ores & concentrates	tonnes	324 398	349 409	300 566	340 858	311 085
Unwrought, unrefined	tonnes	29	36	3	2	15 452
Unwrought, refined	tonnes	49 088	36 976	48 468	34 912	40 106
Unwrought alloys	tonnes	3 815	4 622	2 947	2 762	2 926
Scrap	tonnes	31 373	43 544	52 091	76 672	50 940
Diamond						
Unsorted	carats	£84 000	£156 000	£203 000	£309 000	£220 000
Gem, cut	carats	£3 634 000	£2 337 000	£3 456 000	£3 205 000	£2 406 000
Industrial	carats	£116 000	£51 000	£30 000	£63 000	£258 000
Dust	carats	£5 248 000	£2 554 000	£2 374 000	£2 823 000	£2 573 000
Diatomite	tonnes	4 684	3 913	4 143	5 475	5 096
Feldspar	tonnes	6 430	6 765	5 960	7 019	9 387
Fluorspar	tonnes	16 103	16 978	19 117	14 640	15 790
Gold						
Metal	kilograms	£7 671 705	£7 655 000	£8 382 000	£8 498 000	£8 625 000
Waste & scrap	kilograms	£149 000	£1 126 000	—	£5 726	£180 000
Graphite	tonnes	1 026	1 022	1 428	1 473	1 539
Gypsum						
Crude	tonnes	177 264	211 432	269 711	269 060	206 972
Calcined	tonnes	87 144	82 831	103 481	160 784	97 746
Iodine	kilograms	1 000	5 000	5 000	1 000	2 000
Iron ore						
Iron ore	tonnes	108 597	115 528	110 920	102 101	100 072
Burnt pyrites	tonnes	15 763	41 970	29 658	36 351	6 095

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
<b>Iron, steel and ferro-alloys</b>						
Pig iron	tonnes	40 289	26 215	24 894	29 369	38 223
Sponge & powder	tonnes	3 704	2 667	2 746	3 074	2 091
Ferro-chrome	tonnes	92 574	109 391	85 830	72 926	86 040
Ferro-silico-chrome	tonnes	3 239	2 789	1 094	2 521	2 030
Ferro-silico-magnesium	tonnes	2 180	1 195	1 060	932	914
Ferro-manganese	tonnes	33 034	33 238	37 190	32 782	43 005
Ferro-silico-manganese	tonnes	17 309	13 357	19 493	17 887	18 995
Ferro-molybdenum	tonnes	3 585	3 728	3 797	4 369	5 364
Ferro-nickel	tonnes	12 418	8 765	8 738	948	7 431
Ferro-niobium	tonnes	623	747	732	809	1 156
Ferro-phosphorus	tonnes	777	1 553	739	920	314
Ferro-silicon	tonnes	42 809	41 278	41 098	38 534	48 950
Ferro-titanium & Fe-Si-Ti	tonnes	1 736	1 709	1 405	1 627	3 212
Ferro-tungsten & Fe-Si-W	tonnes	867	183	321	564	195
Ferro-vanadium	tonnes	855	1 037	1 059	1 375	1 316
Other ferro-alloys	tonnes	7 631	5 822	4 519	6 534	5 888
Silicon metal	tonnes	5 095	10 639	6 316	10 542	10 832
Ingots, blooms, billets	tonnes	366 264	426 018	495 734	491 102	294 616
Scrap	tonnes	376 456	429 341	351 024	271 041	254 358
Kaolin	tonnes	422 071	437 528	467 111	452 215	480 358
<b>Lead</b>						
Unwrought	tonnes	6 777	5 023	4 190	6 088	6 098
Scrap	tonnes	2 548	1 970	2 463	4 062	3 538
<b>Lithium</b>						
Oxides	tonnes	130	155	113	162	176
Carbonate	tonnes	183	179	186	208	259
<b>Magnesite and magnesia</b>						
Magnesia	tonnes	40 361	26 875	28 074	29 455	21 293
<b>Manganese</b>						
Ores & concentrates	tonnes	1 871	98	91	62	119
Metal	tonnes	8 072	6 660	3 618	2 641	2 632
Mercury	kilograms	2 096	4 004	3 022	4 000	3 000
Mica	tonnes	562	547	566	514	592
<b>Molybdenum</b>						
Ores & concentrates	tonnes	5 409	6 132	5 235	5 826	5 690
Metal	tonnes	249	219	252	458	280
Oxides	tonnes	659	791	784	594	392
<b>Nickel</b>						
Mattes, sinters etc.	tonnes	6 124	12 476	4 032	4 051	4 346
Unwrought	tonnes	24 547	24 982	25 423	27 687	26 931
Unwrought alloys	tonnes	942	863	857	1 076	1 324
Scrap	tonnes	13 495	18 399	12 543	10 523	8 946
Crude petroleum	tonnes	18 262 971	18 665 040	20 436 192	20 873 087	19 770 639
Phosphates	tonnes	81 983	66 930	18 346	129	156
<b>Platinum metals</b>						
Platinum & platinum metals	kilograms	£5 430 000	£6 134 000	£6 531 000	£4 985 000	£6 513 000
Waste & scrap	kilograms	1 000	265	339 000	273 000	577 000
<b>Potash</b>						
Sulphate	tonnes	3 958	4 755	884	2 819	4 911
Chloride	tonnes	54 531	44 086	33 748	68 457	43 106
Other potassic fertilisers	tonnes	4 651	2 285	9 862	4 409	1 119
<b>Rare earths</b>						
Rare earth compounds	tonnes	...	...	75	58	26
Metals	tonnes	28	39	48	56	41
Salt	tonnes	908 355	1 030 471	828 845	929 193	738 931
Sillimanite	tonnes	14 145	12 308	14 155	5 470	5 086
<b>Silver</b>						
Metal	kilograms	153 000	116 000	111 000	161 000	151 000
<b>Sulphur and pyrites</b>						
Pyrites	tonnes	482	386	291	699	319
Sulphur	tonnes	69 293	63 948	89 505	61 305	71 337
Sulphur, sublimed & precipitated	tonnes	7 141	5 010	5 632	2 693	16
Talc	tonnes	34 297	42 307	45 509	43 288	45 376

## Sweden

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Tin						
Unwrought	tonnes	608	596	421	468	551
Unwrought alloys	tonnes	364	400	379	256	210
Scrap	tonnes	130	57	71	39	60
Titanium						
Metal	tonnes	1 929	2 000	1 707	1 856	1 382
Oxides	tonnes	45 034	43 260	44 721	44 812	50 099
Tungsten						
Metal	tonnes	990	136	470	559	502
Carbide	tonnes	1 239	688	665	747	925
Vanadium						
Metal	tonnes	77	49	49	46	20
Zinc						
Unwrought	tonnes	27 156	25 562	22 320	29 682	29 847
Unwrought alloys	tonnes	11 170	12 145	13 496	18 009	16 812
Zirconium						
Concentrates	tonnes	435	424	480	564	588
Metal	tonnes	66	138	172	82	91

# Switzerland

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	...	...	...	26 000 000	46 500 000
Crushed rock	tonnes	...	...	...	3 000 000	5 300 000
Primary aluminium	tonnes	36 288	40 224	43 865	44 879	44 800
Cement, finished	tonnes	3 920 000	3 771 000	3 700 000	3 800 000	3 900 000
Gypsum	tonnes	*300 000	*300 000	*300 000	*300 000	*300 000
Pig iron	tonnes	*80 000	*80 000	*80 000	*80 000	*80 000
Crude steel	tonnes	*1 000 000	*1 000 000	*1 000 000	*1 000 000	1 160 000
Lead, refined	tonnes	10 250	8 700	9 600	9 300	9 600
Salt	tonnes	384 000	400 000	461 000	486 000	539 000

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	118 787	229 451	184 678	296 911	283 508
Aluminium and bauxite						
Unwrought (a)	tonnes	5 536	7 139	775	8 180	14 499
Scrap	tonnes	100 096	96 217	96 860	108 536	122 729
Cement						
Cement clinkers	tonnes	123 026	130 261	106 617	106 263	121 014
Portland cement	tonnes	20 968	12 942	14 396	33 524	46 939
Chromium						
Metal	tonnes	156	31	66	319	249
Cobalt						
Metal	tonnes	205	61	104	95	140
Copper						
Unwrought	tonnes	128	907	1 163	1 872	10 691
Scrap	tonnes	58 356	55 491	56 398	69 243	74 878
Diamond						
Gem, rough	carats	1 110 000	55 000	65 000	140 000	195 608
Gem, cut	carats	1 130 000	650 000	427 033	338 524	407 411
Industrial	carats	35 000	40 000	66 354	18 185	13 934
Dust	carats	80 615 000	81 580 000	95 290 000	120 790 000	126 190 000
Diatomite	tonnes	485	1 224	110	114	136
Gold						
Metal	kilograms	1 266 166	922 468	885 907	1 125 319	1 340 912
Waste & scrap	kilograms	27 274	16 868	14 039	55 166	2 823
Gypsum						
Crude	tonnes	25 122	1 709	44	158	7
Calcined	tonnes	1 738	1 667	1 680	1 002	1 088
Iron, steel and ferro-alloys						
Ingots, blooms, billets	tonnes	2 459	31 317	51 008	51 639	83 219
Scrap	tonnes	457 523	412 341	451 452	539 629	561 972
Lead						
Unwrought	tonnes	4 074	7 160	7 086	5 407	4 657
Scrap	tonnes	4 479	2 565	2 267	1 320	2 932
Lithium						
Oxides	tonnes	96	53	78	80	78
Mercury	kilograms	92 862	36 900	7 793	316 631	171 790
Nickel						
Unwrought (a)	tonnes	179	105	125	49	73
Scrap	tonnes	492	587	880	1 106	1 403
Platinum metals						
Platinum	kilograms	63 640	73 384	67 305	57 268	42 102
Palladium	kilograms	44 317	73 072	47 110	61 960	75 105
Other platinum metals	kilograms	324	829	203	1 703	2 047
Waste & scrap	kilograms	49 289	122 380	85 301	118 241	235 630
Salt	tonnes	10 146	28 394	52 482	41 044	30 461
Silver						
Metal	kilograms	1 627 403	1 306 190	1 544 676	1 085 657	1 044 011

Switzerland

Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Talc	tonnes	1 070	847	1 777	72	105
Tin						
Unwrought (a)	tonnes	84	25	112	72	29
Scrap	tonnes	105	60	73	107	157
Titanium						
Metal	tonnes	465	400	398	562	560
Oxides	tonnes	525	666	499	740	1 020
Tungsten						
Metal	tonnes	121	185	244	268	316
Zinc						
Scrap	tonnes	2 405	2 358	2 415	2 582	2 480

Note(s):-

(a) Including alloys

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	6 307 738	6 554 457	6 134 548	6 413 474	6 261 007
Aluminium and bauxite						
Bauxite	tonnes	4 669	7 653	5 881	8 066	9 929
Alumina	tonnes	65 877	81 002	93 357	87 235	88 358
Alumina hydrate	tonnes	19 621	17 953	15 340	16 945	16 823
Unwrought	tonnes	67 203	66 958	60 791	73 413	75 987
Unwrought alloys	tonnes	63 319	52 470	64 351	59 125	56 059
Scrap	tonnes	15 910	12 565	11 327	20 734	27 617
Antimony						
Ores & concentrates	tonnes	10	154	89	5 004	1 722
Metal	tonnes	44	52	50	93	58
Oxide	tonnes	1 033	720	927	1 174	1 026
Arsenic						
Metallic arsenic	tonnes	2	4	4	2	5
Barytes	tonnes	1 917	1 844	2 433	2 187	2 242
Bentonite and fuller's earth						
Bentonite	tonnes	21 715	21 128	20 540	20 027	20 861
Fuller's earth	tonnes	1 682	1 544	1 541	1 641	1 844
Bismuth						
Metal	tonnes	18	15	15	6	15
Cadmium						
Metal	tonnes	7	6	4	30	5
Cement						
Cement clinkers	tonnes	156 910	146 388	47 050	64 882	71 542
Portland cement	tonnes	180 860	198 607	319 539	313 292	352 409
Other cement	tonnes	86 391	56 272	41 949	58 671	48 309
Chromium						
Ores & concentrates	tonnes	818	525	716	671	624
Metal	tonnes	112	116	110	141	127
Coal						
Anthracite	tonnes	12 492	6 828	6 146	7 396	6 640
Other coal	tonnes	155 809	115 061	79 125	169 472	93 584
Cobalt						
Metal	tonnes	394	342	291	361	423
Copper						
Unwrought	tonnes	8 621	5 899	5 206	6 779	4 734
Unwrought alloys	tonnes	3 777	3 300	3 496	4 481	3 897
Scrap	tonnes	13 800	8 406	9 469	11 881	9 937
Diamond						
Gem, rough	carats	3 475 000	75 000	80 344	144 707	194 997
Gem, cut	carats	875 000	850 000	642 870	820 021	1 130 984
Industrial	carats	735 000	1 160 000	213 535	56 907	100 142
Dust	carats	89 730 000	94 935 000	103 005 000	126 815 000	142 000 000
Diatomite	tonnes	4 332	3 534	5 425	11 204	3 291

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Feldspar	tonnes	7 408	7 541	7 229	8 347	7 977
Fluorspar	tonnes	497	916	413	991	714
Gold						
Metal	kilograms	1 360 081	1 217 189	1 218 361	1 048 386	1 650 117
Waste & scrap	kilograms	45 122	48 626	32 454	52 053	72 764
Graphite	tonnes	538	918	863	395	652
Gypsum						
Crude	tonnes	65 203	64 517	50 760	64 677	76 460
Calcined	tonnes	66 156	72 876	75 394	81 971	88 511
Iodine	kilograms	28 203	14 000	27 226	7 428	7 949
Iron ore						
Burnt pyrites	tonnes	15 897	12 239	9 157	4 283	6 293
Iron, steel and ferro-alloys						
Pig iron	tonnes	33 986	19 466	22 120	22 954	24 628
Sponge & powder	tonnes	6 176	6 163	6 792	7 631	9 035
Ferro-aluminium	tonnes	1	48	24	...	...
Ferro-chrome	tonnes	1 020	978	1 504	1 161	1 203
Ferro-manganese	tonnes	6 161	7 567	7 406	7 884	9 033
Ferro-silico-manganese	tonnes	4 655	5 156	4 444	6 481	4 341
Ferro-silicon	tonnes	5 952	4 291	5 417	5 194	4 630
Other ferro-alloys	tonnes	1 511	1 198	1 070	1 203	1 602
Silicon metal	tonnes	701	1 168	716	694	1 135
Ingots, blooms, billets	tonnes	44 303	16 032	17 132	20 896	38 694
Scrap	tonnes	246 179	347 211	412 584	544 911	390 607
Kaolin	tonnes	37 383	37 298	45 012	41 350	37 368
Lead						
Unwrought	tonnes	7 098	5 943	6 047	7 831	8 067
Lithium						
Oxides	tonnes	91	97	89	89	81
Magnesite and magnesia						
Magnesite	tonnes	394	228	225	294	168
Magnesia	tonnes	4 600	4 521	5 744	6 538	6 708
Manganese						
Metal	tonnes	449	404	501	484	486
Mercury	kilograms	24 309	18 901	9 354	9 704	5 846
Mica	tonnes	300	289	357	426	601
Molybdenum						
Metal	tonnes	25	21	26	25	31
Nickel						
Unwrought (a)	tonnes	1 591	1 417	1 392	1 333	1 401
Crude petroleum	tonnes	4 773 040	4 869 479	4 551 511	5 086 184	4 744 965
Platinum metals						
Platinum	kilograms	68 461	56 039	69 111	47 742	51 377
Palladium	kilograms	94 074	106 412	54 805	96 530	46 565
Other platinum metals	kilograms	538	1 063	816	3 725	780
Waste & scrap	kilograms	19 435	49 569	129 698	161 433	156 229
Potash						
Sulphate	tonnes	1 815	2 496	2 621	2 170	3 325
Chloride	tonnes	19 144	23 053	15 792	19 185	18 971
Other potassic fertilisers	tonnes	1 922	3 983	3 721	3 039	3 411
Rare earths						
Rare earth compounds	tonnes	...	...	...	...	34
Salt	tonnes	7 216	7 692	13 984	9 299	48 114
Sillimanite	tonnes	350	246	253	315	413
Silver						
Metal	kilograms	1 476 601	1 028 138	746 184	1 082 664	1 484 207
Sulphur and pyrites						
Pyrites	tonnes	217	239	207	117	76
Sulphur	tonnes	40 754	30 140	25 968	24 940	24 977
Sulphur, sublimed & precipitated	tonnes	24	93	193	120	61
Talc	tonnes	15 385	12 916	11 490	9 579	10 254
Tin						
Unwrought (a)	tonnes	1 017	893	803	726	909
Titanium						
Metal	tonnes	641	621	535	735	1 273
Oxides	tonnes	17 678	18 265	18 689	19 349	19 055

## Switzerland

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Tungsten						
Metal	tonnes	220	152	139	170	235
Zinc						
Unwrought	tonnes	20 567	21 073	11 730	14 577	13 045
Unwrought alloys	tonnes	3 735	3 796	3 798	3 194	2 601
Zirconium						
Metal	tonnes	66	115	85	86	117

Note(s):-

(a) Including alloys



# Turkey

## Production

Commodity	Units	2001	2002	2003	2004	2005
Bauxite	tonnes	242 040	287 403	364 306	365 836	356 480
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	145 993	152 869	160 675	169 991	112 558
Primary aluminium	tonnes	61 730	62 501	63 140	64 002	—
Antimony, mine	tonnes (metal content)	*20	*20	*20	*20	*20
Barytes	tonnes	102 323	106 943	119 648	134 504	70 925
Bentonite and fuller's earth						
Bentonite	tonnes	674 178	559 224	831 146	643 153	582 735
Sepiolite	tonnes	10 253	...	...	...	...
Borates	tonnes	1 399 000	1 328 000	1 324 000	1 727 000	2 087 000
Cement, finished	tonnes	30 125 000	32 576 701	35 076 902	38 019 112	*38 000 000
Chromium ores and concentrates	tonnes	454 549	326 390	281 783	436 639	688 377
Coal						
Anthracite	tonnes	3 369 727	3 312 690	3 090 458	2 842 952	2 785 505
Bituminous	tonnes	55 860	118 235	336 714	738 915	737 701
Lignite	tonnes	58 172 982	49 626 612	43 749 420	43 754 159	60 867 574
Copper, mine	tonnes (metal content)	56 820	48 217	43 245	38 876	30 067
Copper, smelter	tonnes	23 751	19 375	14 426	6 998	—
Copper, refined	tonnes	58 400	41 000	36 900	63 000	95 000
Feldspar	tonnes	1 510 293	1 766 387	1 862 310	1 983 336	2 331 971
Fluorspar	tonnes	3 752	5 344	718	880	800
Gold, mine	kilograms (metal content)	*1 100	*4 500	5 370	3 260	—
Graphite	tonnes	...	1 393	942	*28	—
Gypsum	tonnes	328 656	264 038	196 668	250 099	24 421
Iron ore	tonnes	4 434 621	3 432 775	3 429 070	3 856 536	3 889 934
Pig iron	tonnes	5 289 000	5 003 000	5 693 764	5 835 889	6 371 084
Crude steel	tonnes	14 382 257	16 045 522	17 644 020	19 868 118	20 961 240
Ferro-alloys						
Ferro-chrome	tonnes	50 735	11 200	35 393	28 701	26 043
Ferro-silico-chrome	tonnes	5 895	7 245	6 805	5 526	—
Kaolin	tonnes	505 773	372 344	370 455	536 008	615 271
Lead, mine	tonnes (metal content)	17 884	17 277	17 483	18 792	11 341
Lead, refined	tonnes	*9 000	*9 000	*9 000	*9 000	*9 000
Magnesite	tonnes	2 738 086	3 044 440	3 224 278	3 732 952	2 372 206
Manganese ore	tonnes	20 000	20 000	18 000	13 751	4 751
Nickel, mine	tonnes (metal content)	—	—	640	—	700
Perlite	tonnes	154 515	151 902	136 683	133 829	156 935
Crude petroleum	tonnes	2 551 647	2 440 202	2 375 082	2 275 529	2 280 764
Natural gas	million m <sup>3</sup>	266	242	276	344	484
Salt						
Rock salt	tonnes	46 362	55 305	10 205	6 100	512
Sea salt	tonnes	522 364	411 646	556 652	582 440	529 235
Other salt	tonnes	1 202 025	1 729 686	1 675 915	1 569 178	1 196 486
Silver, mine	kilograms (metal content)	188 000	124 000	158 000	122 000	219 000
Strontium minerals	tonnes	63 635	*70 000	*70 000	*60 000	*60 000
Sulphur and pyrites						
Pyrites	tonnes (sulphur content)	26 000	34 000	28 000	20 000	55 000
Recovered (a) (b)	tonnes (sulphur content)	126 000	123 000	94 000	68 000	76 000
Zinc, mine	tonnes (metal content)	36 000	43 000	40 000	39 000	48 000

Note(s):-

(1) Turkey is believed to produce diatomite and wollastonite

(a) From petroleum refining and/or natural gas

(b) Other

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	174 436	401 071	619 130	758 169	1 631 232
Aluminium and bauxite						
Alumina	tonnes	29 123	23 425	25 573	29 915	45 838
Unwrought (a)	tonnes	6 289	3 745	4 429	8 076	27 039
Scrap	tonnes	12 098	10 582	8 036	9 955	12 534

## Turkey

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Antimony						
Metal	tonnes	50	...	7	25	63
Asbestos	tonnes	5	3	42 000	0	—
Barytes	tonnes	136 916	117 862	101 716	142 767	134 333
Bentonite and fuller's earth						
Bentonite	tonnes	106 104	106 712	153 691	210 328	211 926
Cement						
Cement clinkers	tonnes	3 275 087	4 546 480	2 898 730	2 359 071	2 893 665
Portland cement	tonnes	4 968 305	5 803 964	6 749 791	7 907 130	6 713 088
Other cement	tonnes	33 163	25 296	96 793	147 792	261 816
Chromium						
Ores & concentrates	tonnes	321 047	265 296	363 699	575 030	834 034
Metal	tonnes	279	249	20	33	238
Coal						
Anthracite	tonnes	35 713	12 062	9 540	11 077	10 324
Copper						
Ores & concentrates	tonnes	136 702	209 656	151 667	180 609	145 118
Unwrought	tonnes	20 176	22 324	18 709	12 846	13 187
Scrap	tonnes	6 855	9 897	18 492	4 529	14 977
Diatomite	tonnes	387	4 653	11 294	14 581	11 045
Feldspar	tonnes	1 208 808	2 162 841	3 027 769	3 971 725	3 001 789
Gold						
Metal	kilograms	4 670	11 263	11 455	9 722	29 624
Gypsum						
Crude	tonnes	9 073	320	1 282	7 859	4 346
Calcined	tonnes	151 055	210 898	308 189	434 910	477 710
Iodine	kilograms	2 307	2 570	209	117	1 250
Iron, steel and ferro-alloys						
Pig iron	tonnes	109 862	12 895	1 060	50 165	9 358
Ferro-chrome	tonnes	15 446	61 163	53 695	16 286	38 738
Other ferro-alloys	tonnes	673	1 156	5 361	5 092	5 474
Ingots, blooms, billets	tonnes	2 132 421	2 734 188	3 178 909	3 769 934	2 174 257
Scrap	tonnes	28 937	34 512	48 741	82 460	64 281
Kaolin	tonnes	227 159	190 404	299 843	267 817	146 562
Lead						
Ores & concentrates (b)	tonnes	11 172	42 390	18 619	27 179	24 590
Unwrought	tonnes	4 985	4 728	1 484	6 190	2 875
Magnesite and magnesia						
Magnesite	tonnes	37 723	52 446	45 534	39 670	41 353
Magnesia	tonnes	190 347	213 384	196 613	230 675	198 081
Manganese						
Ores & concentrates	tonnes	560	5 655	...	12 817	955
Mica	tonnes	338	503	546	15 975	565
Nickel						
Ores & concentrates	tonnes	...	...	43 600	3 511	51 703
Salt	tonnes	31 967	46 398	43 317	30 898	22 167
Silver						
Metal	kilograms	75	303	947	2 731	21 449
Sulphur and pyrites						
Sulphur	tonnes	2 722	2 530	1 251	534	638
Sulphur, sublimed & precipitated	tonnes	880	1 641	141	75	127
Talc	tonnes	120	249	436	1 963	2 768
Titanium						
Metal	tonnes	92	2	7	20	30
Vanadium						
Pentoxide	tonnes	...	...	680	900	940
Zinc						
Ores & concentrates	tonnes	85 661	100 445	97 605	110 692	138 288
Unwrought (a)	tonnes	2 367	2 579	315	302	227
Scrap	tonnes	...	...	4 293	2 318	53

Note(s):-

- (a) Including alloys  
(b) Complex lead-zinc ore

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	1 325	2 425	3 660	4 519	7 785
Aluminium and bauxite						
Bauxite	tonnes	25 323	33 361	39 129	34 592	46 016
Alumina	tonnes	14 164	16 311	26 096	19 341	19 665
Unwrought	tonnes	72 786	109 683	160 378	182 113	236 076
Unwrought alloys	tonnes	52 939	84 829	114 881	144 836	146 853
Scrap	tonnes	11 090	9 478	14 850	11 648	16 723
Antimony						
Metal	tonnes	20	98	141	87	40
Oxide	tonnes	209	314	294	460	377
Arsenic						
White arsenic	tonnes	10	...	...	...	...
Metallic arsenic	tonnes	23	49	78	48	82
Asbestos	tonnes	10 557	13 977	14 645	13 509	12 373
Barytes	tonnes	371	202	121	258	1 983
Bentonite and fuller's earth						
Bentonite	tonnes	1 213	1 715	1 702	832	4 127
Fuller's earth	tonnes	305	201	104	157	159
Bismuth						
Metal	tonnes	3	4	4	6	7
Bromine	kilograms	91 505	(b) 111 895	(b) 75 080	(b) 149 960	105 000
Cadmium						
Metal	tonnes	9	14	12	6	2
Oxide	tonnes	28	...	...	...	...
Cement						
Cement clinkers	tonnes	143 225	7 117	170 275	375 619	567 256
Portland cement	tonnes	27 109	19 014	9 922	9 096	66 260
Other cement	tonnes	5 914	5 800	3 675	105	4 693
Chromium						
Ores & concentrates	tonnes	101 278	68 832	82 452	56 836	89 844
Metal	tonnes	12	19	19	85	26
Coal						
Anthracite	tonnes	119 373	213 743	340 165	397 125	413 333
Other coal	tonnes	6 086 397	13 394 458	15 215 711	16 033 118	16 126 628
Cobalt						
Metal	tonnes	62	88	157	170	164
Oxides	tonnes	60	84	108	134	139
Copper						
Ores & concentrates	tonnes	45 075	61 302	54 573	10 370	44 633
Unwrought, unrefined	tonnes	12 815	7 117	100	29 555	53 214
Unwrought, refined	tonnes	135 015	205 955	229 159	217 290	223 978
Unwrought alloys	tonnes	321	1 107	3 768	4 685	3 212
Scrap	tonnes	5 522	7 061	29 803	34 975	9 629
Diamond						
Gem	carats	2 725 000	...	...	1 225 000	1 450 000
Dust	carats	4 725 000	...	...	15 900 000	26 765 000
Diatomite	tonnes	1 211	1 185	1 736	1 211	1 442
Feldspar	tonnes	19 803	5 269	26 977	40 733	40 739
Fluorspar	tonnes	16 100	13 790	18 208	31 908	30 446
Gold						
Metal	kilograms	111 958	142 013	225 021	262 519	403 415
Graphite	tonnes	6 431	7 010	7 429	10 212	11 956
Gypsum	tonnes	66 472	90 335	160 214	170 958	183 553
Iodine	kilograms	39 422	30 450	15 405	31 736	18 547
Iron ore						
Iron ore	tonnes	1 726 891	2 879 135	2 144 607	2 070 545	2 095 737
Burnt pyrites	tonnes	893 595	2 499 655	3 048 337	2 503 319	2 525 709

## Turkey

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Iron, steel and ferro-alloys						
Pig iron	tonnes	155 350	324 368	306 901	286 589	396 658
Sponge & powder	tonnes	22 674	84 443	75 798	18 084	68 952
Ferro-manganese	tonnes	34 409	48 178	70 866	44 406	43 631
Ferro-silico-manganese	tonnes	78 749	157 650	178 594	189 294	159 496
Ferro-molybdenum	tonnes	579	776	816	838	1 253
Ferro-niobium	tonnes	90	167	189	211	433
Ferro-silicon	tonnes	44 864	55 575	126 532	82 543	57 501
Other ferro-alloys	tonnes	9 372	10 644	11 063	13 926	18 373
Silicon metal	tonnes	1 468	2 730	7 968	4 649	4 794
Ingots, blooms, billets	tonnes	1 039 166	896 891	1 618 384	1 531 529	1 816 973
Scrap	tonnes	4 993 240	9 749 780	12 818 350	12 892 546	13 010 728
Kaolin	tonnes	117 550	149 559	197 684	218 838	265 530
Lead						
Unwrought	tonnes	41 970	64 513	71 665	71 606	71 680
Lithium						
Oxides	tonnes	70	136	120	179	183
Carbonate	tonnes	134	157	278	417	433
Magnesite and magnesia						
Magnesia	tonnes	23 373	50 238	56 000	38 084	52 432
Manganese						
Metal	tonnes	34	182	137	495	300
Mercury	kilograms	10 602	5 358	8 152	6 044	1 443
Mica	tonnes	136	33	169	215	248
Molybdenum						
Metal	tonnes	2	4	4	10	4
Oxides	tonnes	66	54	84	130	82
Nickel						
Unwrought (a)	tonnes	1 584	1 919	2 415	3 353	3 321
Oxides	tonnes	92	160	162	144	128
Crude petroleum	tonnes	23 141 640	21 626 643	24 028 666	23 917 019	23 393 477
Phosphates	tonnes	497 120	746 033	610 286	291 245	373 134
Platinum metals						
Platinum & platinum metals	kilograms	321	393	378	231	216
Potash						
Sulphate	tonnes	26 753	31 362	51 467	59 381	39 198
Chloride	tonnes	82 849	111 780	107 412	130 748	135 433
Rare earths						
Rare earth compounds	tonnes	104	155	201	171	155
Ferro-cerium & other pyrophoric alloys	tonnes	1	...	...	253	...
Salt	tonnes	12 118	78 204	202 349	307 039	320 147
Sillimanite	tonnes	3 920	3 386	3 486	5 110	5 504
Silver						
Metal	kilograms	90 014	169 098	199 226	269 009	409 844
Sulphur and pyrites						
Sulphur	tonnes	67 396	127 779	124 243	90 502	91 763
Sulphur, sublimed & precipitated	tonnes	73	2 008	4 899	138	110
Talc	tonnes	7 026	10 937	11 227	16 810	15 312
Tin						
Unwrought (a)	tonnes	1 275	1 801	1 966	2 314	2 731
Titanium						
Titanium minerals	tonnes	2 953	5 876	5 591	10 435	6 755
Oxides	tonnes	38 734	61 927	68 613	85 832	91 083
Zinc						
Unwrought	tonnes	(a) 84 091	(a) 110 773	(a) 126 315	(a) 148 897	139 156
Unwrought alloys	tonnes	...	...	...	...	6 121
Zirconium						
Concentrates	tonnes	2 263	3 914	3 954	3 881	4 539
Metal	tonnes	5	23	5	9	14

Note(s):-

(a) Including alloys

(b) May include some fluorine

# United Kingdom

## Production

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates						
Sand and gravel	tonnes	101 397 000	94 424 000	91 803 000	97 333 000	94 666 000
Crushed rock (a)	tonnes	153 023 000	144 337 000	140 417 000	147 067 000	141 636 000
Alumina	tonnes (Al <sub>2</sub> O <sub>3</sub> content)	83 900	73 800	—	—	—
Primary aluminium	tonnes	340 778	344 318	342 748	359 631	368 477
Barytes	tonnes	*66 000	*59 000	*57 000	*61 000	*62 000
Bentonite and fuller's earth						
Fuller's earth (b)	tonnes	52 000	44 200	33 900	27 540	6 200
Bromine	kilograms	27 854 000	24 542 000	*25 000 000	—	—
Cadmium	tonnes	425	292	22	—	—
Cement clinker	tonnes	10 183 000	10 327 000	10 146 000	10 402 000	10 074 000
Cement, finished	tonnes	11 090 000	11 089 000	11 215 000	11 405 000	11 216 000
Coal						
Bituminous (c)	tonnes	31 930 000	29 989 000	28 279 000	25 096 000	20 498 000
Feldspar (d)	tonnes	2 995	1 896	1 309	2 274	2 000
Fluorspar	tonnes	*50 000	*53 000	*56 000	50 080	60 980
Gypsum	tonnes	*1 700 000	*1 700 000	*1 700 000	1 686 000	*1 700 000
Iron ore	tonnes	510	464	*500	*500	*500
Pig iron	tonnes	9 870 400	8 560 600	10 277 800	10 179 600	10 200 000
Crude steel	tonnes	13 542 700	11 667 100	13 268 000	13 765 700	13 226 000
Kaolin (e) (f)	tonnes	2 204 156	2 162 815	2 097 137	1 944 955	1 908 000
Lead, mine	tonnes (metal content)	*800	*700	*700	*500	*500
Lead, refined	tonnes	366 305	374 646	364 574	245 938	305 350
Nickel, smelter/refinery	tonnes	33 800	33 800	24 200	38 600	37 100
Crude petroleum	tonnes	109 491 000	108 023 000	99 055 000	88 830 000	78 840 000
Natural gas	million m <sup>3</sup>	112 563	109 694	107 919	100 847	92 503
Potash						
Chloride	tonnes (K <sub>2</sub> O content)	531 900	540 100	621 400	539 500	439 200
Salt						
Rock salt	tonnes	*1 900 000	*1 500 000	*1 700 000	*2 000 000	*2 000 000
Brine salt	tonnes	*1 100 000	*1 000 000	*1 000 000	*1 000 000	*1 000 000
Salt in brine (g)	tonnes	*3 000 000	*3 200 000	*3 200 000	*2 800 000	*2 800 000
Sulphur and pyrites						
Recovered (h)	tonnes (sulphur content)	62 400	66 400	4 800	—	—
Recovered (i)	tonnes (sulphur content)	111 000	125 000	115 000	120 000	124 000
Talc	tonnes	4 947	6 194	6 494	3 881	6 000
Slab zinc	tonnes	99 600	99 600	16 600	—	—

### Note(s):-

(1) United Kingdom is believed to produce arsenic

(2) In addition to the countries producing sillimanite minerals, synthetic mullite is known to be produced in United Kingdom

(a) Includes small quantities for other purposes in Northern Ireland

(b) Saleable production based on data from producing companies

(c) Including anthracite

(d) China stone

(e) Sales

(f) Dry weight

(g) Used for purposes other than salt-making

(h) From metal sulphide processing

(i) From petroleum refining and/or natural gas

United Kingdom

## Exports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	13 238 740	12 475 405	11 608 077	12 702 493	13 304 920
Aluminium and bauxite						
Alumina	tonnes	11 795	7 768	(a) *5 000	5 766	4 336
Alumina hydrate	tonnes	42 451	20 170	(a) *25 800	(a) *35 500	(a) *20 600
Unwrought	tonnes	16 855	9 403	1 559	29 949	48 684
Unwrought alloys	tonnes	243 780	241 799	270 701	306 372	329 691
Scrap	tonnes	204 605	243 894	295 642	319 217	474 587
Antimony						
Metal	tonnes	473	252	65	88	54
Oxide	tonnes	1 297	1 879	1 413	663	621
Arsenic						
Metallic arsenic	tonnes	5	5	0	0	1
Barytes	tonnes	58 969	37 778	69 094	12 873	16 334
Bentonite and fuller's earth						
Bentonite	tonnes	72 983	81 707	75 099	71 153	49 514
Fuller's earth	tonnes	121	74	254	124	778
Bismuth						
Metal	tonnes	1 269	1 793	2 239	2 633	2 426
Bromine	kilograms	11 304 252	8 671 909	5 307 678	1 126 043	234 977
Cadmium						
Metal	tonnes	87	114	187	27	79
Cement						
Cement clinkers	tonnes	169 344	160 704	60 920	82 936	134 992
Portland cement	tonnes	229 573	305 801	216 480	214 420	320 680
Other cement	tonnes	81 441	66 163	61 193	76 517	68 554
Chromium						
Ores & concentrates	tonnes	170	26	212	622	228
Metal	tonnes	4 609	3 837	4 173	4 776	4 547
Coal						
Anthracite	tonnes	272 985	187 372	180 382	172 486	169 252
Other coal	tonnes	309 560	341 626	352 620	439 930	380 426
Lignite	tonnes	...	...	...	...	2 321
Briquettes	tonnes	77 184	64 094	60 172	41 094	20 713
Cobalt						
Metal	tonnes	1 855	1 120	1 546	1 882	1 471
Oxides	tonnes	1 256	1 233	1 380	1 233	994
Copper						
Ore & matte	tonnes	11 075	10 724	2 729	127	54
Unwrought	tonnes	10 315	32 276	2 924	7 362	16 253
Unwrought alloys	tonnes	23 808	26 666	24 121	22 035	15 013
Scrap	tonnes	156 121	163 579	210 169	244 749	238 557
Diamond						
Unsorted	carats	4 030 600	...	9 744 443	6 394 541	16 818 545
Gem, rough	carats	69 542 709	86 681 020	104 300 972	78 613 304	76 400 064
Gem, cut	carats	899 959	394 881	828 103	1 592 715	5 330 874
Industrial	carats	11 861 312	7 837 074	12 177 638	22 821 714	21 647 850
Dust	carats	88 612 930	...	75 401 755	149 415 960	124 529 495
Diatomite	tonnes	1 342	816	1 003	2 123	708
Feldspar	tonnes	93	209	801	261	48
Fluorspar	tonnes	2 373	636	519	4 593	5 803
Gold						
Metal	kilograms	405 319	198 805	82 892	407 467	638 262
Waste & scrap	kilograms	493 588	548 843	1 074 829	471 657	541 399
Graphite	tonnes	2 635	2 816	4 158	4 348	2 685
Gypsum						
Crude	tonnes	3 049	14 460	2 601	3 903	2 299
Calcined	tonnes	29 474	44 827	39 515	49 945	54 356
Iodine	kilograms	507 363	207 341	169 145	107 007	197 086

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Iron, steel and ferro-alloys						
Pig iron	tonnes	6 749	3 376	1 459	957	1 387
Sponge & powder	tonnes	3 164	3 134	3 666	4 003	3 605
Ferro-chrome & ferro-silico-chrome	tonnes	1 206	814	1 711	2 384	6 238
Ferro-silico-magnesium	tonnes	...	...	...	316	542
Ferro-manganese	tonnes	792	1 874	434	1 554	661
Ferro-silico-manganese	tonnes	8	116	42	8 247	5 003
Ferro-molybdenum	tonnes	9 278	11 965	14 081	14 213	11 501
Ferro-nickel	tonnes	104	368	424	125	55
Ferro-niobium	tonnes	280	46	59	47	79
Ferro-phosphorus	tonnes	26	57	109	1 336	189
Ferro-silicon	tonnes	2 247	3 155	1 845	2 699	2 652
Ferro-titanium & Fe-Si-Ti	tonnes	16 422	16 334	14 676	20 703	17 361
Ferro-vanadium	tonnes	118	55	39	17	156
Other ferro-alloys	tonnes	6 013	9 226	6 349	5 544	6 204
Silicon metal	tonnes	1 914	4 050	2 699	1 555	2 466
Ingots, blooms, billets	tonnes	746 730	560 796	1 305 976	1 712 102	2 246 377
Scrap	tonnes	4 821 840	5 538 569	7 174 934	6 772 111	6 105 955
Kaolin (b)	tonnes	1 928 230	1 899 220	1 862 437	1 728 161	1 698 747
Lead						
Unwrought	tonnes	93 552	101 832	61 682	34 859	52 593
Unwrought alloys	tonnes	42 308	57 249	44 091	31 148	38 806
Scrap	tonnes	10 700	17 116	28 569	32 934	27 248
Lithium						
Oxides	tonnes	95	186	169	285	125
Carbonate	tonnes	214	147	193	160	203
Magnesite and magnesia						
Magnesite	tonnes	78	337	34	49	87
Magnesia	tonnes	40 023	26 460	26 248	24 796	20 077
Manganese						
Metal (a)	tonnes	*6 000	*4 300	*5 500	*3 100	*3 000
Mercury	kilograms	17 299	6 226	851	2 054	191 193
Mica						
Unmanufactured	tonnes	22	20	34	—	20
Ground	tonnes	3 758	4 023	4 740	9 354	4 030
Waste	tonnes	17	46	0	23	0
Molybdenum						
Ores & concentrates	tonnes	297	418	84	180	179
Metal	tonnes	1 046	326	230	312	807
Nickel						
Mattes, sinters etc.	tonnes	136	128	200	964	196
Unwrought	tonnes	21 670	19 775	19 200	38 249	38 524
Unwrought alloys	tonnes	5 955	4 257	4 899	4 710	6 141
Scrap	tonnes	7 736	7 912	7 861	10 465	14 119
Crude petroleum	tonnes	82 057 946	79 943 787	69 617 507	60 743 679	50 619 044
Phosphates	tonnes	317	386	111	34	1 548
Platinum metals						
Platinum	kilograms	31 859	69 955	37 874	44 598	41 500
Palladium	kilograms	22 845	19 176	27 669	61 198	51 807
Other platinum metals	kilograms	5 604	6 002	9 631	12 610	17 852
Waste & scrap	kilograms	1 124 414	914 126	1 862 845	2 681 379	2 881 226
Potash						
Chloride	tonnes	*530 000	*440 000	*630 000	*512 000	*353 000
Other potassic fertilisers	tonnes	1 141	740	609	662	705
Rare earths						
Cerium compounds	tonnes	415	88	118	47	121
Other rare earth compounds	tonnes	329	1 128	1 105	1 157	1 189
Ferro-cerium & other pyrophoric alloys	tonnes	9	19	768	197	2
Metals	tonnes	51	148	16	10	26
Salt	tonnes	299 607	326 760	537 497	691 895	538 796
Sillimanite	tonnes	6 895	4 554	3 238	2 016	2 417
Silver						
Metal	kilograms	2 282 355	1 497 995	3 429 247	1 754 885	2 289 098
Sulphur and pyrites						
Sulphur	tonnes	1 563	580	476	700	431
Sulphur, sublimed & precipitated	tonnes	386	657	836	1 387	1 458

## United Kingdom

## Exports continued

Commodity	Units	2001	2002	2003	2004	2005
Talc	tonnes	4 034	3 833	3 325	3 317	5 244
Tantalum and niobium						
Tantalum	tonnes	395	280	278	77	131
Tin						
Concentrates	tonnes	59	24	29	0	2
Unwrought	tonnes	426	381	283	524	1 608
Unwrought alloys	tonnes	2 485	2 165	2 152	885	442
Scrap	tonnes	2 256	2 821	4 499	7 353	20 603
Titanium						
Metal	tonnes	13 597	11 511	10 084	11 913	17 212
Oxides	tonnes	207 483	238 884	242 541	234 591	215 741
Tungsten						
Metal	tonnes	1 874	1 667	2 053	1 267	1 732
Carbide	tonnes	20	5	70	92	83
Vanadium						
Metal	tonnes	1 405	1 425	1 137	1 075	433
Zinc						
Unwrought	tonnes	15 455	15 686	3 106	1 581	1 661
Unwrought alloys	tonnes	21 971	22 366	21 770	26 260	38 267
Scrap	tonnes	19 157	15 248	15 436	9 710	9 881
Zirconium						
Concentrates	tonnes	1 776	5 033	418	505	699
Metal	tonnes	380	263	244	183	127

Note(s):-

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

(b) Dry weight

## Imports

Commodity	Units	2001	2002	2003	2004	2005
Primary aggregates	tonnes	771 250	986 963	1 494 230	1 543 380	2 160 513
Aluminium and bauxite						
Bauxite	tonnes	(b) 271 404	...	...	122 021	103 522
Alumina	tonnes	713 808	(c) 798 479	(a) *828 300	748 933	755 443
Alumina hydrate	tonnes	63 687	...	(a) *143 000	124 451	130 321
Unwrought	tonnes	135 094	212 046	163 573	116 545	114 189
Unwrought alloys	tonnes	211 245	159 310	129 451	118 398	87 063
Scrap	tonnes	112 240	117 954	105 061	78 309	116 285
Antimony						
Metal	tonnes	345	183	290	410	60
Oxide	tonnes	4 103	3 164	2 712	2 976	2 048
Arsenic						
Metallic arsenic	tonnes	87	86	155	165	3
Asbestos	tonnes	347	118	3	2 150	—
Barytes	tonnes	77 273	74 935	56 867	63 934	54 753
Bentonite and fuller's earth						
Bentonite	tonnes	235 517	216 022	198 434	187 750	151 179
Sepiolite	tonnes	(d) 65 062	(d) 69 691	(d) 55 483	51 044	65 565
Fuller's earth	tonnes	5 896	9 115	7 085	2 574	3 122
Bismuth						
Metal	tonnes	1 515	1 513	2 237	2 205	2 858
Bromine	kilograms	5 387 458	2 879 558	1 899 231	7 145 977	7 994 939
Cadmium						
Metal	tonnes	942	225	416	479	206
Cement						
Cement clinkers	tonnes	387 306	289 685	506 128	377 341	406 044
Portland cement	tonnes	1 179 521	2 142 589	1 714 946	2 033 772	1 645 088
Other cement	tonnes	52 411	61 327	61 131	64 289	37 705
Chromium						
Ores & concentrates	tonnes	135 369	139 748	107 161	130 841	122 042
Metal	tonnes	1 601	1 171	1 612	2 321	1 723



## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Coal						
Anthracite	tonnes	2 757 188	1 550 849	334 883	197 788	187 388
Other coal	tonnes	32 772 976	27 110 435	31 538 546	35 958 449	43 890 778
Briquettes	tonnes	11 317	17 127	7 638	8 498	6 554
Cobalt						
Metal	tonnes	4 187	4 036	3 356	3 862	3 888
Oxides	tonnes	641	487	582	525	107
Copper						
Unwrought, unrefined	tonnes	290	89	14	122	1 978
Unwrought, refined	tonnes	310 894	316 578	245 152	214 067	181 767
Unwrought alloys	tonnes	7 249	5 480	6 160	8 070	6 191
Scrap	tonnes	19 651	19 240	17 378	15 731	42 264
Diamond						
Unsorted	carats	586 774	1 794 607	5 210 022	10 557 063	33 441 810
Gem, rough	carats	81 302 570	70 336 037	77 712 486	68 227 020	78 735 595
Gem, cut	carats	4 396 223	5 123 898	4 520 872	9 317 146	12 039 040
Industrial	carats	7 344 542	7 804 225	21 518 053	30 993 560	25 367 064
Dust	carats	74 756 325	68 359 660	92 290 565	126 277 015	125 510 400
Diatomite	tonnes	33 474	34 490	37 217	34 988	29 208
Feldspar	tonnes	18 361	33 196	25 764	31 601	23 139
Fluorspar	tonnes	34 999	26 690	21 360	25 092	4 051
Gold						
Metal	kilograms	972 188	1 280 970	1 414 697	1 053 100	460 239
Waste & scrap	kilograms	167 513	122 639	231 365	274 919	66 198
Graphite	tonnes	22 435	22 435	19 270	19 075	17 766
Gypsum						
Crude	tonnes	755 112	(e) 646 889	(e) 903 068	(e) 227 068	(e) 761 117
Calcined	tonnes	31 481	...	...	...	...
Iodine	kilograms	1 015 061	744 234	825 813	802 782	1 092 633
Iron ore						
Iron ore	tonnes	15 351 877	13 316 026	16 121 350	15 298 713	16 204 615
Burnt pyrites	tonnes	17 130	...	19 230	2 436	1 911
Iron, steel and ferro-alloys						
Pig iron	tonnes	159 725	124 682	116 724	105 007	102 531
Sponge & powder	tonnes	23 551	23 673	21 503	21 059	21 914
Ferro-chrome	tonnes	98 994	112 898	68 405	112 234	63 478
Ferro-silico-chrome	tonnes	5 136	2 309	63	—	728
Ferro-silico-magnesium	tonnes	5 318	5 820	5 663	4 969	5 448
Ferro-manganese	tonnes	73 507	86 681	76 686	91 533	79 045
Ferro-silico-manganese	tonnes	53 747	64 565	53 421	63 633	57 136
Ferro-molybdenum	tonnes	351	338	434	836	861
Ferro-nickel	tonnes	7 166	11 010	16 437	14 628	11 325
Ferro-niobium	tonnes	1 261	1 029	1 148	1 236	1 175
Ferro-phosphorus	tonnes	2 163	1 503	2 124	1 687	3 261
Ferro-silicon	tonnes	72 663	76 046	75 469	71 973	58 225
Ferro-titanium & Fe-Si-Ti	tonnes	2 465	2 729	2 042	2 457	1 883
Ferro-tungsten & Fe-Si-W	tonnes	96	32	60	10	36
Ferro-vanadium	tonnes	727	748	1 071	1 262	609
Other ferro-alloys	tonnes	4 073	4 258	2 195	2 275	2 427
Silicon metal	tonnes	86 026	80 766	100 472	100 233	77 103
Ingots, blooms, billets	tonnes	388 350	1 453 884	540 537	758 615	722 452
Scrap	tonnes	178 923	113 107	139 089	225 483	180 261
Kaolin	tonnes	102 839	58 993	72 719	126 501	84 750
Lead						
Ores & concentrates (f)	tonnes	*33 000	*30 000	*5 000	—	—
Unwrought, base bullion (g)	tonnes	184 518	184 060	168 228	127 970	173 910
Unwrought, other	tonnes	33 202	32 468	28 132	51 382	31 347
Scrap	tonnes	15 633	4 946	6 043	6 278	3 898
Lithium						
Oxides	tonnes	374	409	554	498	446
Carbonate	tonnes	499	626	687	490	657
Magnesite and magnesia						
Magnesite	tonnes	7 122	9 252	20 287	11 187	13 896
Magnesia	tonnes	108 988	98 075	82 100	83 539	78 843

## United Kingdom

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Manganese						
Ores & concentrates (h)	tonnes	2 701	1 218	2 102	2 585	698
Metal	tonnes	9 636	7 600	8 250	9 189	8 223
Mercury	kilograms	5 042	23 302	29 673	27 875	32 306
Mica						
Unmanufactured	tonnes	344	240	424	1 769	296
Ground	tonnes	7 258	9 349	8 327	6 286	6 684
Waste	tonnes	4 016	4 224	5 050	4 374	4 485
Molybdenum						
Ores & concentrates	tonnes	16 373	21 437	18 884	18 371	18 600
Metal	tonnes	1 165	1 220	1 169	1 854	2 877
Oxides	tonnes	60	106	7	2	630
Nickel						
Mattes, sinters etc.	tonnes	51 963	52 514	43 968	64 192	57 492
Unwrought	tonnes	47 030	46 610	34 162	45 264	24 019
Unwrought alloys	tonnes	2 788	1 868	31 491	2 238	1 629
Scrap	tonnes	14 963	25 270	20 038	8 957	10 927
Oxides	tonnes	145	130	47	103	277
Crude petroleum	tonnes	38 542 685	40 838 161	44 511 352	56 128 686	54 067 943
Phosphates	tonnes	9 223	10 275	1 242	11 586	30 177
Platinum metals						
Platinum	kilograms	17 825	12 030	13 827	47 735	51 553
Palladium	kilograms	19 724	22 072	48 106	24 666	30 576
Other platinum metals	kilograms	5 602	4 772	8 636	8 267	7 134
Waste & scrap	kilograms	729 250	775 673	367 327	617 417	1 271 315
Potash						
Fertiliser salts	tonnes	16 154	19 366	12 751	9 204	9 517
Chloride	tonnes	335 398	372 031	246 164	207 056	198 893
Other potassic fertilisers	tonnes	14 506	8 804	5 439	12 383	13 151
Rare earths						
Cerium compounds	tonnes	2 227	3 070	2 519	1 914	2 324
Other rare earth compounds	tonnes	403	491	471	775	775
Ferro-cerium & other pyrophoric alloys	tonnes	1	34	1	9	19
Metals	tonnes	172	64	115	135	166
Salt	tonnes	(a) *235 000	306 488	217 009	219 581	287 623
Sillimanite						
Sillimanite	tonnes	28 470	18 588	22 649	24 348	39 650
Mullite	tonnes	5 174	10 006	8 656	12 392	10 430
Silver						
Metal	kilograms	3 471 871	3 780 907	2 484 101	2 105 057	1 485 290
Sulphur and pyrites						
Sulphur, crude	tonnes	(i) 170 055	(i) 87 260	23 469	44 963	24 222
Sulphur, refined	tonnes	...	...	5 560	3 984	7 263
Sulphur, sublimed & precipitated	tonnes	390	355	544	675	577
Talc	tonnes	66 737	66 119	59 172	66 722	65 496
Tantalum and niobium						
Tantalum	tonnes	1 610	3 480	842	243	97
Tin						
Unwrought	tonnes	6 857	7 151	7 488	5 861	4 812
Unwrought alloys	tonnes	2 442	1 437	2 378	1 145	2 067
Scrap	tonnes	179	188	168	215	468
Titanium						
Ilmenite	tonnes	112 447	106 177	113 852	110 596	80 435
Other titanium minerals	tonnes	110 526	82 303	111 754	113 852	109 238
Titanium slag	tonnes	110 697	157 020	44 890	151	64 849
Metal	tonnes	30 752	25 319	25 126	27 401	27 938
Oxides	tonnes	82 852	95 583	74 138	74 787	67 102
Tungsten						
Metal	tonnes	2 538	2 121	1 932	1 903	3 204
Carbide	tonnes	1 381	759	1 232	838	974
Vanadium						
Pentoxide	tonnes	319	962	363	306	339
Metal	tonnes	381	171	256	338	812

## Imports continued

Commodity	Units	2001	2002	2003	2004	2005
Zinc						
Ores & concentrates	tonnes	215 342	229 042	16 611	260	903
Unwrought	tonnes	110 157	108 357	171 219	139 477	135 840
Unwrought alloys	tonnes	6 363	5 738	13 796	15 960	16 128
Scrap	tonnes	3 219	261	172	228	188
Zirconium						
Concentrates	tonnes	46 548	30 656	39 285	32 917	19 519
Metal	tonnes	693	394	346	444	338

## Note(s):-

- (a) BGS estimates, based on known exports from certain countries
- (b) Excluding refractory grade bauxite
- (c) Including some bauxite
- (d) Exports from Spain
- (e) Including calcined
- (f) Pb content
- (g) Includes a substantial precious metal content, mainly silver
- (h) Including manganiferous Iron ore
- (i) Including refined

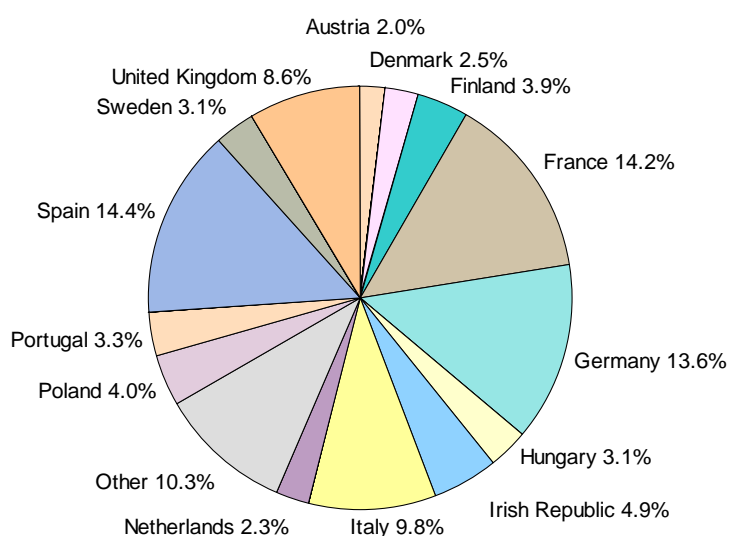


# **STATISTICAL TABLES BY COMMODITY**

## Primary aggregates

- Primary aggregates are sand and gravel and crushed rock aggregates that are widely used in the construction industry. The trade data presented here are for crushed rock combined with sand and gravel.
- Aggregates data are very difficult to establish with satisfactory precision. There are frequent inconsistencies in the way countries report aggregates production and trade. Different definitions for similar materials are commonplace, and many countries do not require production to be reported from quarries that have less than a certain number of employees.
- Aggregates are primarily used in concrete for building, construction and civil engineering, for road surfaces (when bound with bitumen or concrete) and railway/road-base ballast.
- Spain was the largest EU31 producer of primary aggregates in 2005, with 395 million tonnes (14%). Norway and the UK were the largest net exporters. Germany was the largest exporter, in gross terms, but was also, with the Netherlands and Belgium-Luxembourg, a major importer. Total imports and exports of the EU31 are closely balanced from year to year and the considerable total trade (215 million tonnes) is almost entirely within the EU31 area.

**EU31 Production of aggregates 2005**



## Production of primary aggregates (sand and gravel and crushed rock)

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Sand and gravel (a)	23 102 333	28 758 261	27 287 331	29 395 685	29 082 502
Crushed rock (a)	22 404 109	22 438 122	26 333 481	27 687 041	25 204 014
Belgium					
Sand and gravel (b) (c)	11 064 638	10 449 346	9 245 757	8 787 817	8 330 239
Crushed rock (b) (d)	39 270 358	39 772 457	36 772 879	38 562 546	40 388 027
Bulgaria					
Sand and gravel	*3 500 000	*3 500 000	3 710 186	3 333 000	...
Cyprus					
Crushed rock	9 300 000	10 500 000	10 700 000	11 600 000	12 064 112
Czech Republic					
Sand and gravel	11 916 192	12 248 595	15 267 650	15 703 358	15 672 765
Crushed rock	20 301 407	23 643 644	27 934 515	28 846 776	30 221 600
Denmark					
Sand and gravel	55 200 000	53 300 000	50 800 000	57 300 000	69 500 000
Crushed rock	330 000	390 000	380 000	372 000	378 000
Estonia					
Sand and gravel	2 300 000	1 650 400	1 973 740	2 341 620	3 459 760
Crushed rock	1 800 000	4 571 100	4 082 700	5 426 600	6 760 700
Finland					
Sand and gravel	53 000 000	51 000 000	55 000 000	55 000 000	63 000 000
Crushed rock	38 000 000	39 000 000	40 000 000	43 000 000	44 000 000

Production continued

tonnes

Country	2001	2002	2003	2004	2005
France					
Sand and gravel	175 150 000	167 970 000	165 470 000	168 080 000	168 640 000
Crushed rock	221 600 000	215 290 000	217 400 000	223 170 000	219 480 000
Germany					
Sand and gravel	312 700 000	292 100 000	285 500 000	267 300 000	252 000 000
Crushed rock	136 788 000	130 693 000	124 047 000	119 627 000	122 244 000
Hungary					
Sand and gravel	32 252 000	35 407 000	40 530 145	46 354 829	69 027 609
Crushed rock	8 621 080	9 792 782	10 090 547	13 037 471	15 078 440
Irish Republic					
Sand and gravel	33 000 000	34 000 000	40 000 000	*40 000 000	*40 000 000
Crushed rock	77 000 000	78 000 000	60 000 000	*60 000 000	*94 000 000
Italy					
Sand and gravel	215 622 251	200 776 836	212 169 204	176 252 243	206 149 140
Crushed rock	51 224 533	46 512 344	44 562 447	54 195 444	61 639 848
Latvia					
Sand and gravel	2 283 102	2 534 837	3 584 055	3 194 361	2 344 138
Lithuania					
Sand and gravel	4 018 341	5 770 428	4 793 670	5 835 729	7 034 402
Crushed rock	1 576 587	2 145 727	2 896 045	3 683 266	4 757 023
Netherlands					
Sand and gravel	113 917 000	81 490 000	74 200 000	66 200 000	63 579 000
Norway					
Sand and gravel	15 000 000	14 000 000	15 000 000	15 000 000	15 000 000
Crushed rock	36 000 000	36 000 000	36 000 000	37 000 000	38 000 000
Poland					
Sand and gravel (f)	60 039 000	60 186 000	71 376 000	*60 000 000	*77 000 000
Crushed rock	25 593 000	25 875 000	26 404 000	29 271 189	33 098 450
Portugal					
Sand and gravel	9 852 769	7 514 159	6 483 435	...	...
Crushed rock	61 453 129	86 055 000	83 462 955	...	...
Romania					
Sand and gravel	1 075 191	1 568 994	1 013 386	1 458 266	1 394 414
Slovakia					
Sand and gravel	2 033 600	2 238 400	2 627 200	3 174 400	6 807 116
Crushed rock	8 067 600	8 847 900	9 212 400	9 717 300	12 575 266
Slovenia					
Sand and gravel	12 546 000	11 661 000	11 277 000	11 012 000	11 466 000
Crushed rock	12 200 746	13 049 675	15 040 340	13 719 888	12 176 491
Spain					
Sand and gravel	85 000 000	97 857 003	118 746 034	113 947 729	115 000 000
Crushed rock	200 000 000	237 379 504	254 100 000	273 555 490	280 000 000
Sweden					
Sand and gravel	25 549 623	24 537 500	21 650 322	22 647 111	21 755 752
Crushed rock	45 992 625	46 771 631	49 326 880	54 737 031	62 313 089
Switzerland					
Sand and gravel	...	...	...	26 000 000	46 500 000
Crushed rock	...	...	...	3 000 000	5 300 000
United Kingdom					
Sand and gravel	101 397 000	94 424 000	91 803 000	97 333 000	94 666 000
Crushed rock (e)	153 023 000	144 337 000	140 417 000	147 067 000	141 636 000
EU31 Total	2 561 000 000	2 545 000 000	2 578 000 000	2 583 000 000	2 742 000 000

Note(s):-  
(See over)

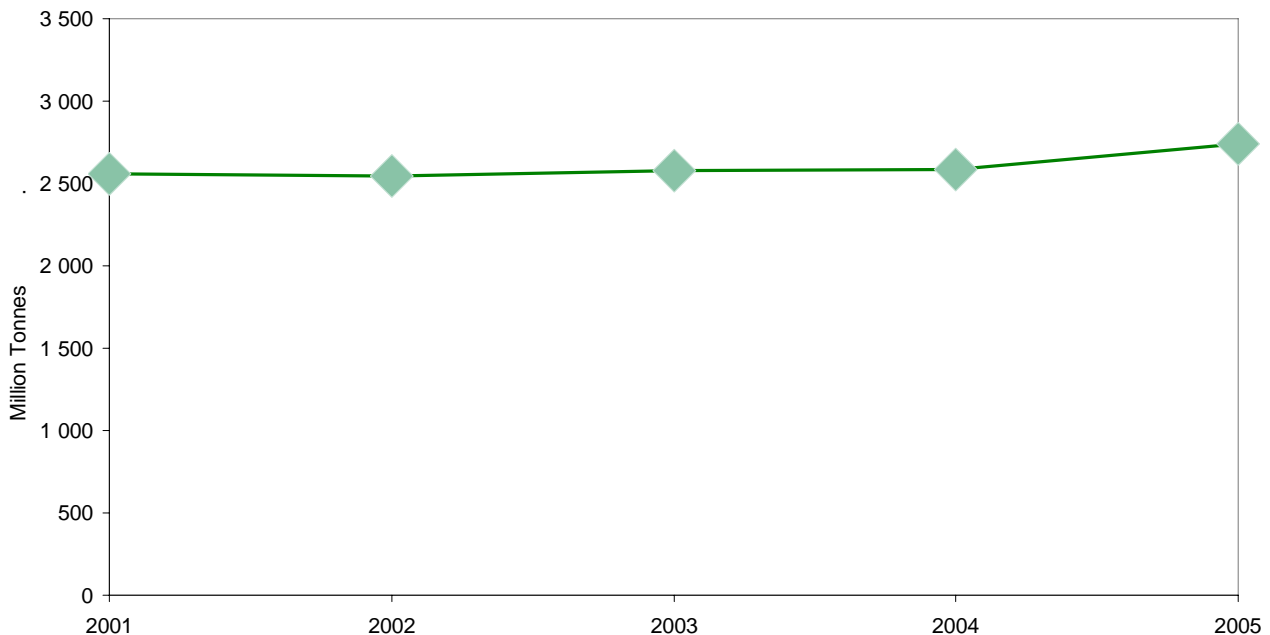
## Aggregates

### Production continued

#### Note(s):-

- (1) So far as possible, these statistics include construction sands; gravel, pebbles, shingle, and flint; crushed stone used for concrete aggregates, roadstone and other construction use; granules, chippings and powders, listed under Prodcom codes 14211190, 14211210, 14211230, 14211250, 14211290
  - (2) Where official sources show more than one series for aggregates the higher series has generally been used in this compilation
  - (3) Where marine sands and gravels have been identified, these are included
  - (4) Information may be incomplete or absent due to reporting methods, confidentiality or lack of available information. All EU31 countries produce sand and gravel and crushed rock
  - (5) Production from many small operations are not officially compiled. The minimum number of employees for which establishments are required to report production varies between different countries and can also vary from year to year within a country
  - (6) Quantities of sand from sand and gravel operations may be discarded due to low demand. This may or may not be included in the statistics
- (a) Sales
  - (b) Deliveries
  - (c) Includes silica sand
  - (d) Includes gravel, slag and tarred macadam
  - (e) Includes small quantities for other purposes in Northern Ireland
  - (f) Includes an estimate for small producers

**EU31 Production of aggregates 2001 - 05**





**Exports of primary aggregates (sand and gravel and crushed rock)**

tonnes

Country	2001	2002	2003	2004	2005
Austria	2 323 043	2 581 242	3 163 141	2 829 930	2 745 393
Belgium-Luxembourg	15 784 851	15 340 439	13 562 764	13 208 283	14 573 270
Bulgaria	123 942	227 464	214 135	384 420	160 032
Czech Republic	555 449	417 503	464 898	344 850	468 540
Denmark	1 112 789	880 032	736 820	795 330	787 389
Estonia	282 172	376 987	469 343	487 863	522 792
Finland	581 353	879 966	446 404	422 709	580 815
France	12 547 219	11 154 637	10 116 439	9 389 763	8 492 936
Germany	21 152 142	19 748 571	19 811 898	21 817 271	21 698 651
Greece	33 971	18 672	12 670	108 042	43 306
Hungary	590 064	743 157	598 056	729 270	736 586
Irish Republic	380 067	703 054	563 286	135 579	62 729
Italy	1 443 143	1 638 314	1 333 675	1 556 414	1 734 620
Latvia	173 112	118 698	12 108	10 278	13 178
Lithuania	258 802	255 405	228 171	460 569	957 488
Netherlands	11 540 000	12 743 000	12 427 000	(a) *14 300 000	(a) *14 100 000
Norway	10 846 009	12 751 398	12 300 157	12 561 778	13 334 212
Poland	867 725	435 628	393 090	790 734	1 237 482
Portugal	54 077	31 516	31 257	53 451	138 939
Romania	1 953	18 927	35 924	23 073	63 110
Slovakia	573 398	570 446	328 547	(a) *542 000	(a) *758 000
Slovenia	77 693	92 618	137 354	166 176	221 830
Spain	1 641 676	1 724 911	1 647 138	1 694 285	1 546 315
Sweden	2 206 841	2 132 194	2 067 542	2 213 385	2 447 200
Switzerland	118 787	229 451	184 678	296 911	283 508
Turkey	174 436	401 071	619 130	758 169	1 631 232
United Kingdom	13 238 740	12 475 405	11 608 077	12 702 493	13 304 920

Note(s):-

- (1) The figures in this table include construction sands, pebbles, gravel, shingle, flint, crushed rock, granules, chippings and powders covered by the Harmonised System codes 2505.90, 2517.10, 2517.41, 2517.49
- (2) Includes marine dredged sand and gravel landed at foreign ports

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

**Imports of primary aggregates (sand and gravel and crushed rock)**

tonnes

Country	2001	2002	2003	2004	2005
Austria	2 293 185	2 545 866	2 446 023	2 087 667	2 516 839
Belgium-Luxembourg	23 173 017	17 771 910	19 492 423	20 219 032	20 831 220
Bulgaria	13 069	17 160	24 578	20 303	17 200
Cyprus	3 104	1 870	3 201	(a) *8 400	5 921
Czech Republic	261 199	237 868	206 018	509 217	574 008
Denmark	2 124 031	2 299 752	2 632 665	2 949 549	2 804 325
Estonia	380 156	669 205	464 516	456 144	739 618
Finland	44 785	29 163	47 702	75 016	43 488
France	9 295 683	9 666 340	8 239 025	9 431 953	10 264 292
Germany	15 006 699	13 306 857	11 870 353	11 127 947	11 563 984
Greece	29 123	105 277	324 882	199 144	22 026
Hungary	57 443	241 929	104 705	254 800	446 504
Irish Republic	989 926	1 121 763	1 036 886	1 269 673	1 444 893
Italy	4 014 635	3 324 865	3 368 905	4 102 477	4 331 596
Latvia	543 479	623 854	676 383	629 613	1 320 287
Lithuania	964 300	1 096 672	993 051	1 069 921	1 289 117
Netherlands	36 200 000	44 000 000	45 300 000	37 100 000	40 800 000
Norway	91 192	66 824	71 837	85 471	67 562
Poland	1 428 456	1 252 285	1 527 892	1 756 513	1 775 291
Portugal	750 486	867 165	641 696	790 615	698 717
Romania	123 702	218 348	213 091	370 184	197 911
Slovakia	194 367	188 874	208 515	294 267	682 608
Slovenia	491 305	447 327	541 189	532 614	364 091
Spain	1 088 430	1 073 979	1 156 484	1 190 670	1 305 835

Aggregates

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Sweden	417 298	838 286	615 470	729 992	810 385
Switzerland	6 307 738	6 554 457	6 134 548	6 413 474	6 261 007
Turkey	1 325	2 425	3 660	4 519	7 785
United Kingdom (b)	771 250	986 963	1 494 230	1 543 380	2 160 513

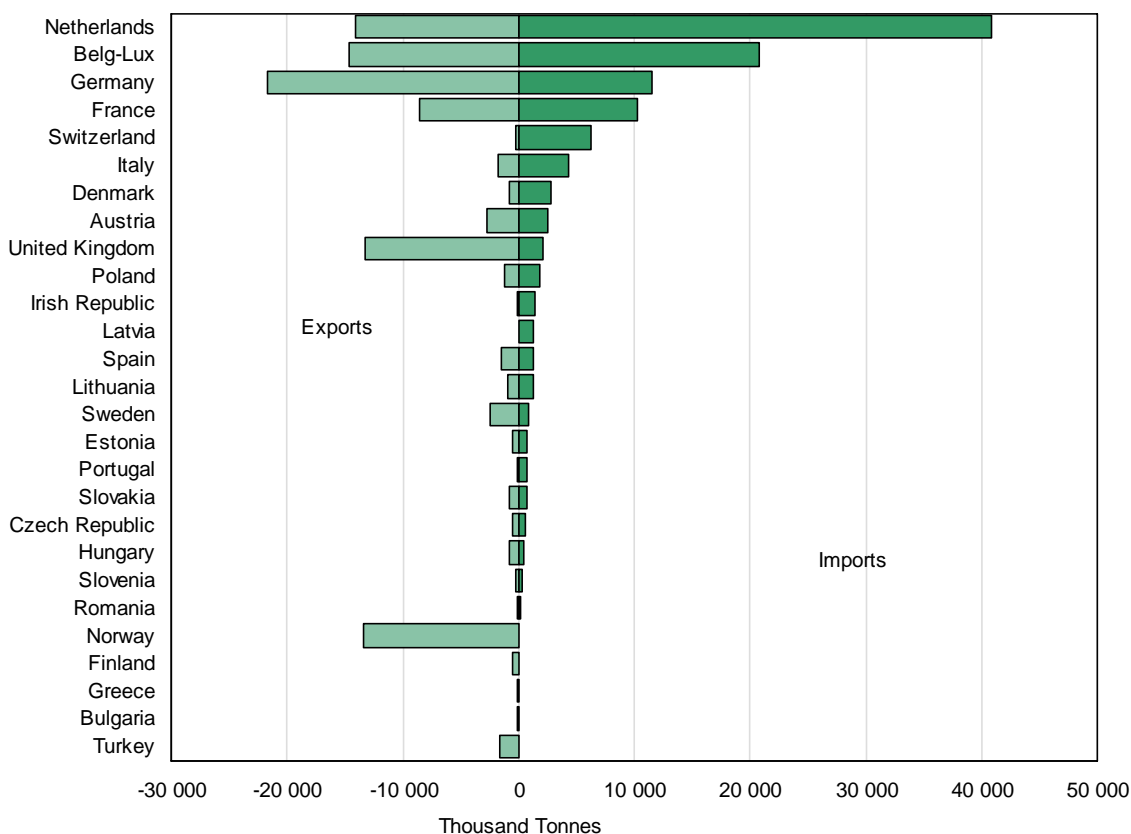
Note(s) :-

(1) The figures in this table include construction sands, pebbles, gravel, shingle, flint, crushed rock, granules, chippings and powders covered by the Harmonised System codes 2505.90, 2517.10, 2517.41, 2517.49

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

(b) For a number of years, a significant amount of crushed rock imports, are believed to have been wrongly classified as 'granite unworked'. In 2005, BGS estimate that aggregate imports should be approximately 3 400 000 tonnes

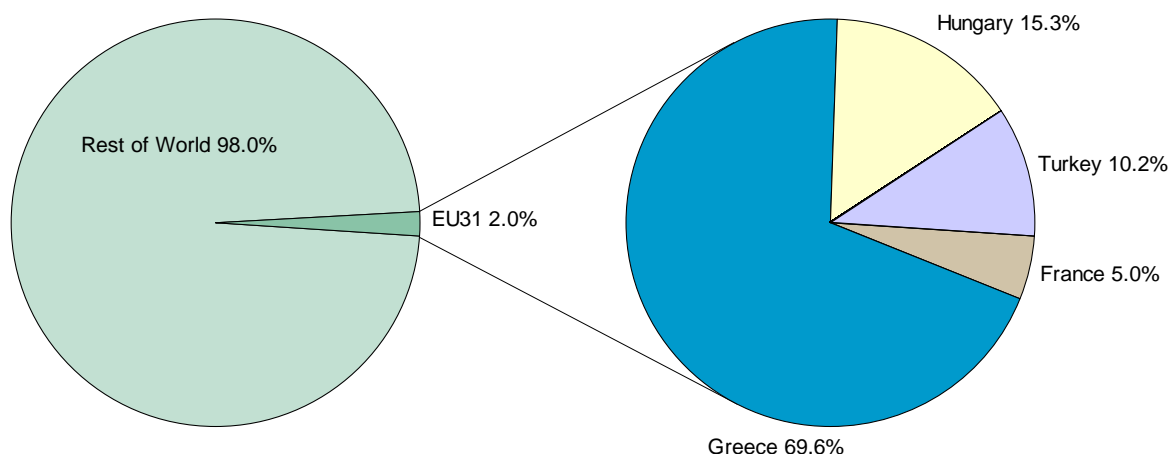
**Aggregates – EU31 trade in 2005**



## Bauxite

- Bauxite is the only significant ore of aluminium and is generated by deep chemical weathering of rocks in tropical to sub-tropical climates. There is limited EU31 production, leaving a very strong dependence on imports from countries outside the EU31.
- The chief use of bauxite is as a raw material for the production of alumina (aluminium oxide) the majority of which is converted to aluminium metal by electrolysis.
- Australia was the world's largest producer in 2005. Greece was the largest producer within the EU31, with 70% of total EU31 production. Guyanan bauxite, (refractory grade CIF Rotterdam) traded between \$205-\$210/tonne during 2005.

**EU31 Production of bauxite 2005**



## Production of bauxite

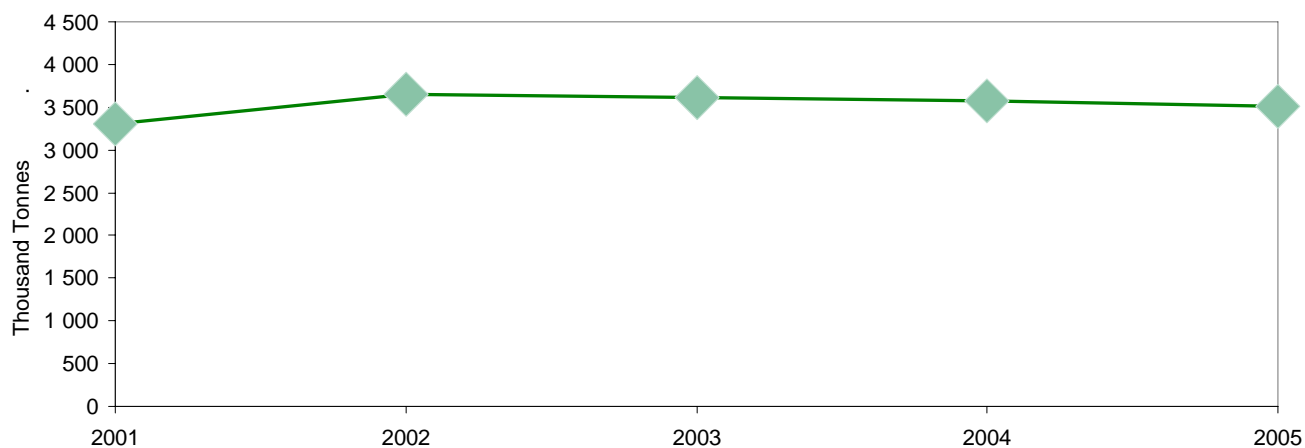
tonnes

Country	2001	2002	2003	2004	2005
France	153 000	150 000	170 000	170 000	175 000
Greece	1 903 280	2 492 000	2 418 000	2 396 065	2 441 443
Hungary	1 000 044	720 000	665 904	646 726	535 337
Turkey	242 040	287 403	364 306	365 836	356 480
<b>EU31 Total</b>	<b>3 298 000</b>	<b>3 649 000</b>	<b>3 618 000</b>	<b>3 579 000</b>	<b>3 508 000</b>

Note(s):-

(1) This table includes production of refractory bauxite

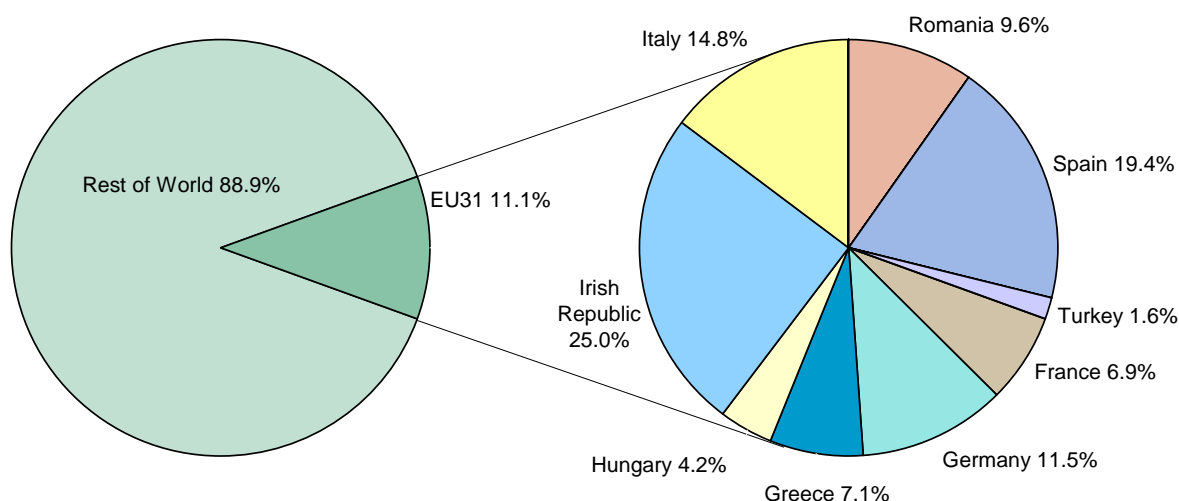
**EU31 Production of bauxite 2001 - 05**



## Alumina

- Alumina (aluminium oxide) is an intermediate product in the manufacture of aluminium metal from raw bauxite ore. Alumina hydrate is a form of alumina containing combined water and used in the paper, petroleum, paint and other industries.
- Australia was the world's largest producer in 2005. The EU31 produced 7.2 million tonnes, representing 11% of world production.
- Market or spot prices for alumina fluctuated in 2005 as a result of limited supply and strong Chinese demand. Metallurgical-grade alumina traded between \$390-\$420/tonne at the beginning of 2005. The price increased in March to \$440-\$460/tonne before declining to \$400-\$420 in June. Prices began to rise again reaching \$580-\$590 in December.

**EU31 Production of alumina 2005**



## Production of alumina

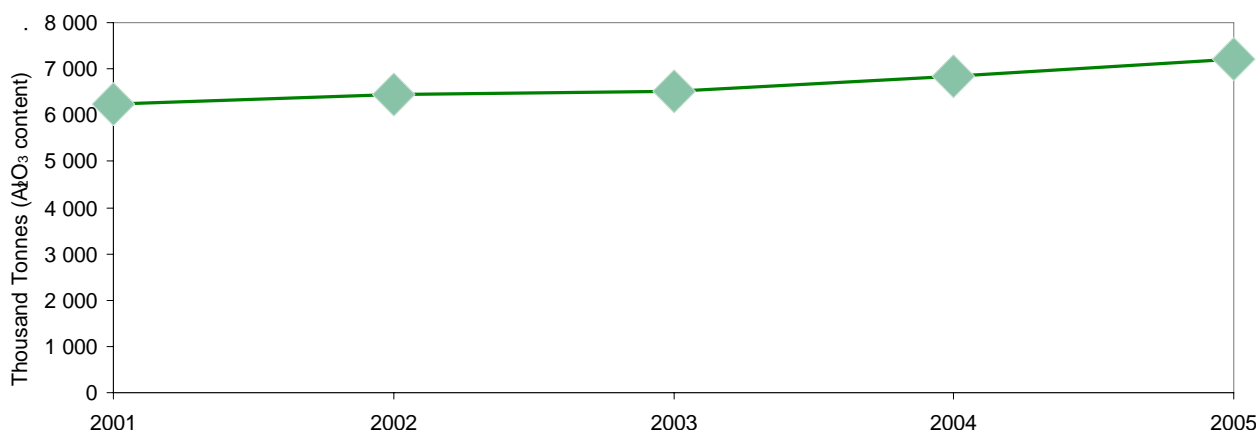
tonnes (Al<sub>2</sub>O<sub>3</sub> content)

Country	2001	2002	2003	2004	2005
France	*510 000	*500 000	*500 000	*500 000	*500 000
Germany	*750 000	*825 000	*830 000	*835 000	*830 000
Greece	463 000	490 000	496 000	514 000	511 000
Hungary	330 000	293 700	300 000	304 000	*300 000
Irish Republic	1 448 730	1 400 000	1 500 000	*1 500 000	*1 800 000
Italy	993 000	1 010 000	1 021 000	1 064 000	1 070 000
Romania	319 403	361 047	332 853	560 243	688 829
Spain	1 199 000	1 350 000	1 380 000	*1 400 000	*1 400 000
Turkey	145 993	152 869	160 675	169 991	112 558
United Kingdom	83 900	73 800	—	—	—
<b>EU31 Total</b>	<b>6 243 000</b>	<b>6 456 000</b>	<b>6 521 000</b>	<b>6 847 000</b>	<b>7 212 000</b>

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

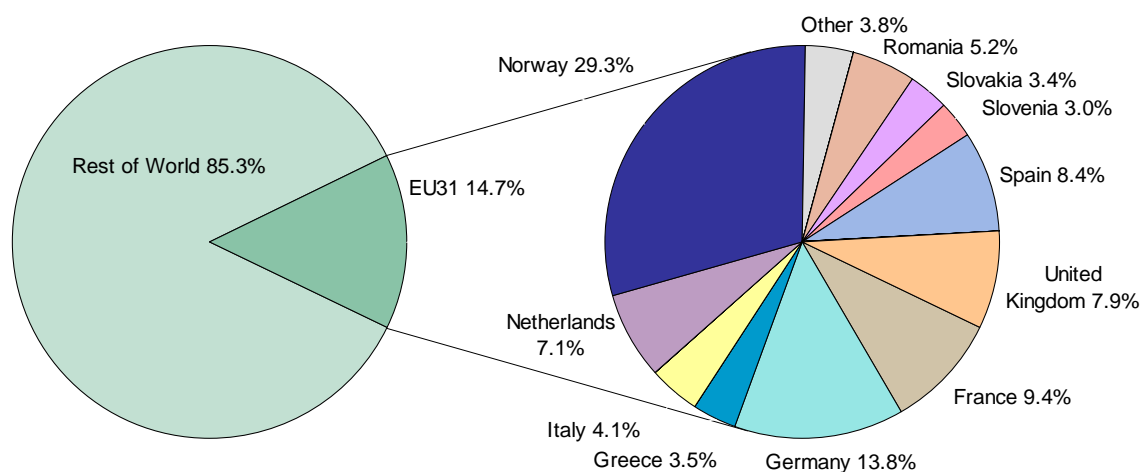
**EU31 Production of alumina 2001 - 05**



## Aluminium metal

- Aluminium is a strong, lightweight metallic element that has many applications. The chief uses are in transportation, packaging, and construction.
- China was the world's largest producer in 2005, with 25% of world production. The EU31 produced 4.7 million tonnes, representing 15% of world production. Norway was the largest EU31 producer.
- The LME daily official spot price for aluminum metal, high grade min. 99.7%, averaged \$1898/tonne during 2005.

EU31 Production of primary aluminium 2005

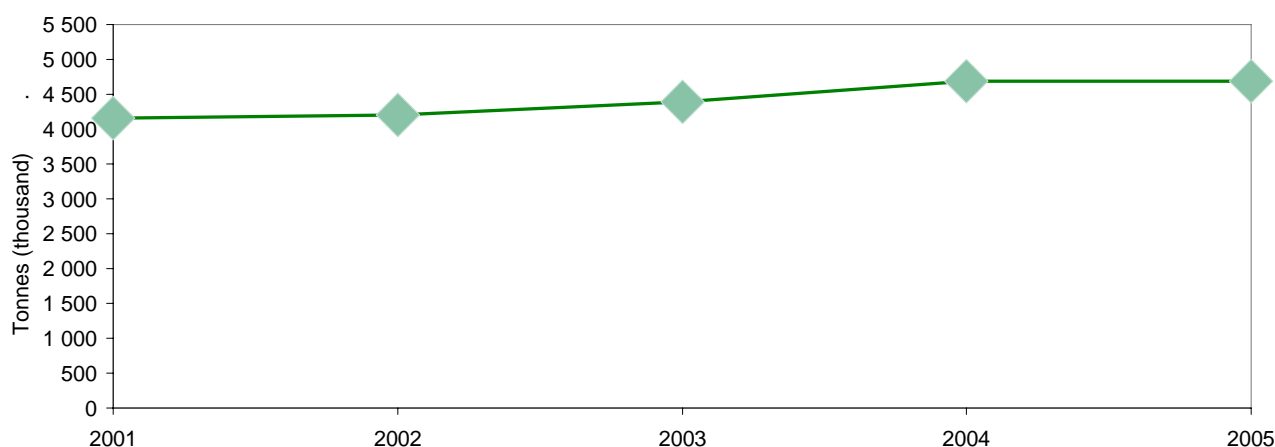


## Production of primary aluminium

tonnes

Country	2001	2002	2003	2004	2005
France	461 000	463 000	444 000	447 000	440 000
Germany	651 592	652 845	660 783	667 800	647 900
Greece	164 000	165 262	167 797	166 634	165 300
Hungary	34 600	35 294	34 000	34 300	31 000
Italy	187 500	190 400	191 400	195 400	192 900
Netherlands	293 068	284 364	282 800	330 000	333 800
Norway	1 034 000	1 044 000	1 180 200	1 318 000	1 376 000
Poland	52 600	52 200	52 600	54 200	53 600
Romania	181 830	187 052	196 844	222 347	243 605
Slovakia	110 062	111 600	132 089	156 893	158 400
Slovenia	76 632	87 600	109 800	120 700	138 500
Spain	376 400	380 100	389 100	397 500	395 000
Sweden	101 420	100 125	100 707	100 591	102 107
Switzerland	36 288	40 224	43 865	44 879	44 800
Turkey	61 730	62 501	63 140	64 002	—
United Kingdom	340 778	344 318	342 748	359 631	368 477
<b>EU31 Total</b>	<b>4 164 000</b>	<b>4 201 000</b>	<b>4 392 000</b>	<b>4 680 000</b>	<b>4 691 000</b>

## EU31 Production of primary aluminium 2001 - 05



## Exports of bauxite, alumina and aluminium

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Unwrought	12 071	14 271	16 150	13 341	6 616
Unwrought alloys	89 985	94 594	87 528	122 693	125 796
Scrap	55 565	57 505	52 564	71 362	67 434
Belgium-Luxembourg					
Bauxite	63 483	73 550	98 961	54 734	46 717
Alumina	3 608	8 955	7 058	...	10 714
Unwrought	142 931	234 880	157 800	266 682	267 811
Unwrought alloys	41 445	52 402	40 919	42 010	38 889
Scrap	161 980	151 468	133 871	137 374	149 914
Bulgaria					
Unwrought alloys	627	2 152	1 971	4 616	5 254
Scrap	18 352	22 994	21 838	22 036	21 902
Croatia					
Bauxite	5 981	3 869	1 478	566	276
Scrap	8 311	10 187	10 914	12 024	15 927
Cyprus					
Unwrought	6 236	1 028	381	316	62
Scrap	5 003	2 813	2 966	3 699	4 578
Czech Republic					
Unwrought (a)	38 362	34 611	43 045	48 698	48 885
Scrap	30 520	33 636	33 410	43 223	39 297
Denmark					
Alumina	3 481	4 520	4 556	...	3 579
Unwrought alloys	26 092	23 363	17 538	14 019	23 509
Scrap	48 753	45 342	36 738	55 407	70 828
Estonia					
Unwrought (a)	3 744	6 095	11 986	5 479	2 414
Scrap	9 994	9 108	9 712	8 062	10 686
Finland					
Unwrought alloys	33 670	23 529	18 557	17 254	14 107
Scrap	7 913	15 189	16 720	22 946	21 053
France					
Bauxite	4 157	14 013	253	2 985	5 195
Alumina	166 329	167 309	188 951	232 762	255 392
Alumina hydrate	117 496	103 258	125 437	144 331	139 694
Unwrought	78 306	81 601	63 659	70 010	77 097
Unwrought alloys	72 663	75 069	75 318	78 047	95 700
Scrap	248 291	274 551	257 279	299 226	314 243
Germany					
Bauxite	35 894	42 524	26 666	30 647	28 087
Alumina	167 226	201 103	308 210	294 034	204 075
Alumina hydrate	537 767	488 918	472 091	528 700	527 900
Unwrought	71 793	59 597	48 570	58 365	60 757
Unwrought alloys	294 918	327 962	340 772	354 998	330 843
Scrap	557 252	499 791	556 405	544 522	583 987

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
Greece					
Bauxite	567 470	535 074	701 911	925 282	1 136 505
Alumina	279 120	327 476	358 955	404 852	439 374
Alumina hydrate	34 493	12 261	11 568	3 760	2 944
Unwrought	6 368	56 730	58 714	61 846	60 964
Unwrought alloys	9 457	6 142	8 880	8 597	15 017
Scrap	9 444	12 794	10 731	13 777	15 205
Hungary					
Alumina	258 945	241 441	216 200	250 978	218 696
Unwrought (a)	10 894	11 730	16 231	25 475	22 635
Scrap	29 656	24 428	27 022	38 684	41 192
Irish Republic					
Alumina	1 891 293	1 564 481	2 405 797	1 388 723	1 459 036
Alumina hydrate	20 746	22 656	51 149	44 645	85 062
Unwrought alloys	3 287	4 389	4 569	3 776	3 542
Scrap	14 470	19 240	12 307	15 367	16 475
Italy					
Bauxite	69 646	49 307	9 291	40 512	121 029
Alumina	646 064	721 558	682 587	606 416	651 704
Alumina hydrate	29 901	35 623	34 820	24 895	26 652
Unwrought	2 639	5 986	3 385	4 203	8 742
Unwrought alloys	28 817	35 982	31 082	43 578	57 573
Scrap	19 416	17 707	20 358	26 630	35 904
Latvia					
Unwrought (a)	26 973	37 243	34 081	39 368	34 697
Scrap	2 389	1 477	747	748	910
Lithuania					
Unwrought (a)	4 767	4 083	5 222	3 943	3 922
Scrap	22 873	24 276	15 140	11 953	7 210
Netherlands					
Bauxite	76 216	35 719	58 848	96 740	93 993
Alumina	144 613	125 292	51 228	267 947	264 116
Alumina hydrate	24 904	37 548	48 026	42 398	48 643
Unwrought	169 741	356 282	408 302	314 462	304 993
Unwrought alloys	300 275	225 385	227 283	320 583	304 675
Scrap	153 947	186 791	187 522	234 761	265 755
Norway					
Unwrought	156 506	135 792	150 101	150 479	147 295
Unwrought alloys	1 031 140	992 055	1 212 372	1 333 251	1 365 929
Scrap	37 376	40 797	37 566	39 742	38 218
Poland					
Unwrought (a)	30 519	32 349	52 132	70 740	81 962
Scrap	62 915	65 404	63 022	71 525	82 875
Portugal					
Unwrought alloys	96 207	84 709	111 732	105 837	140 505
Scrap	19 266	24 671	19 513	28 576	41 797
Romania					
Alumina	196 600	5 128	155 094	209 950	261 862
Unwrought (a)	73 320	88 022	35 094	79 508	39 254
Scrap	6 577	6 963	5 787	4 703	4 829
Slovakia					
Unwrought	1 345	2 225	3 098	6 827	15 302
Unwrought alloys	146 730	156 343	169 698	183 346	159 134
Scrap	4 744	5 417	5 722	7 594	8 042
Slovenia					
Alumina	10 452	11 760	18 072	24 277	205 606
Unwrought alloys	70 705	77 362	101 446	124 069	123 555
Scrap	9 522	12 329	11 619	14 971	21 103
Spain					
Alumina	292 210	179 478	369 353	491 808	561 125
Alumina hydrate	231 485	11 685	214 263	241 910	264 829
Unwrought	5 191	2 429	915	1 024	3 002
Unwrought alloys	86 974	68 484	87 356	102 146	111 992
Scrap	30 251	37 236	41 646	35 021	36 688

## Aluminium and Bauxite

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
Sweden					
Alumina	1 453	1 506	1 939	6 160	14 133
Unwrought	3 183	2 529	101	22 096	9 390
Unwrought alloys	62 986	78 675	75 903	105 752	88 311
Scrap	63 869	70 721	109 170	79 433	69 166
Switzerland					
Unwrought (a)	5 536	7 139	775	8 180	14 499
Scrap	100 096	96 217	96 860	108 536	122 729
Turkey					
Alumina	29 123	23 425	25 573	29 915	45 838
Unwrought (a)	6 289	3 745	4 429	8 076	27 039
Scrap	12 098	10 582	8 036	9 955	12 534
United Kingdom					
Alumina	11 795	7 768	(b) *5 000	5 766	4 336
Alumina hydrate	42 451	20 170	(b) *25 800	(b) *35 500	(b) *20 600
Unwrought	16 855	9 403	1 559	29 949	48 684
Unwrought alloys	243 780	241 799	270 701	306 372	329 691
Scrap	204 605	243 894	295 642	319 217	474 587

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

## Imports of bauxite, alumina and aluminium

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Bauxite	25 581	21 354	31 082	36 791	36 123
Alumina	43 134	41 141	43 318	23 636	41 269
Alumina hydrate	5 937	6 538	7 779	6 372	10 125
Unwrought	160 372	136 767	141 841	106 348	82 597
Unwrought alloys	139 329	170 541	184 478	229 607	214 611
Scrap	(c) *123 900	(c) *129 700	(c) *143 400	128 798	150 412
Belgium-Luxembourg					
Bauxite	112 399	106 310	102 691	82 208	87 376
Alumina	8 785	9 983	11 350	12 942	10 879
Alumina hydrate	35 659	43 902	43 941	33 798	37 831
Unwrought	448 703	473 246	382 266	513 835	497 013
Unwrought alloys	151 061	196 413	217 309	235 761	265 937
Scrap	185 465	157 885	146 723	157 812	158 799
Bulgaria					
Unwrought (a)	19 069	22 890	28 194	35 515	40 748
Croatia					
Bauxite	76 243	42 464	71 335	48 302	112 007
Unwrought	(a) 32 087	32 229	21 289	47 437	56 509
Unwrought alloys	...	8 326	7 329	9 672	14 915
Cyprus					
Unwrought alloys	6 749	7 629	7 697	10 858	9 898
Czech Republic					
Bauxite	15 212	15 391	13 871	20 922	24 315
Alumina	24 771	22 117	23 142	26 898	28 458
Alumina hydrate	9 960	11 981	12 767	17 215	10 898
Unwrought	43 792	64 108	66 747	75 289	69 977
Unwrought alloys	76 779	78 849	82 823	90 688	96 702
Scrap	26 013	23 986	24 336	28 542	34 226



Imports continued

tonnes

Country	2001	2002	2003	2004	2005
<b>Denmark</b>					
Bauxite	20 077	6 140	11 297	13 801	9 148
Alumina	18 897	20 228	17 896	23 666	21 979
Unwrought (a)	48 723	61 538	65 386	75 233	70 617
Scrap	163 573	52 460	41 373	39 949	63 678
<b>Estonia</b>					
Alumina	1 757	270	854	1 586	182
Unwrought (a)	6 047	6 086	10 428	5 859	1 686
<b>Finland</b>					
Bauxite	3 544	3 790	6 027	4 782	3 661
Alumina	2 204	2 042	1 904	2 220	2 659
Alumina hydrate	41 950	44 570	24 958	37 361	28 300
Unwrought	21 586	13 704	3 534	3 295	4 057
Unwrought alloys	28 948	24 253	33 174	37 999	40 510
Scrap	29 829	30 310	23 445	18 901	15 537
<b>France</b>					
Bauxite	1 667 959	1 347 713	1 786 905	1 507 504	1 799 671
Alumina	785 981	670 046	704 393	644 513	655 246
Alumina hydrate	46 522	43 727	44 743	41 187	41 682
Unwrought	182 477	148 344	165 490	144 053	150 798
Unwrought alloys	324 411	325 980	324 997	369 795	366 369
Scrap	145 422	133 794	149 876	143 833	135 611
<b>Germany</b>					
Bauxite	1 965 709	1 950 542	1 907 966	2 119 259	2 435 244
Alumina	777 003	867 297	1 047 728	1 107 265	999 798
Alumina hydrate	480 679	378 146	225 998	204 721	231 124
Unwrought	625 469	721 430	796 479	628 038	648 764
Unwrought alloys	976 513	945 177	1 099 136	1 170 875	1 121 715
Scrap	419 586	483 052	462 320	462 580	438 066
<b>Greece</b>					
Bauxite	252 246	246 155	375 275	247 358	206 870
Alumina	3 711	952	889	905	1 049
Unwrought	78 683	79 463	98 093	116 074	121 266
Unwrought alloys	44 151	39 444	46 193	51 522	68 958
Scrap	19 148	17 329	15 127	16 631	18 083
<b>Hungary</b>					
Bauxite	88 950	116 037	164 930	189 528	279 660
Alumina	2 609	3 188	17 819	8 751	15 638
Unwrought	175 645	199 392	199 978	337 995	109 382
Unwrought alloys	27 701	25 328	27 925	32 021	54 362
Scrap	7 016	17 071	16 764	13 111	17 164
<b>Irish Republic</b>					
Bauxite	3 493 883	3 732 789	3 418 940	3 740 006	3 606 983
Alumina	7 768	7 544	6 718	6 626	4 252
Unwrought (a)	11 474	6 750	6 503	6 603	4 092
Scrap	695	503	294	490	117
<b>Italy</b>					
Bauxite	2 324 849	2 256 065	2 169 206	2 407 108	2 602 224
Alumina	126 284	126 299	123 514	142 931	147 537
Alumina hydrate	145 496	134 724	128 280	151 086	155 718
Unwrought	307 267	381 046	425 165	434 802	426 721
Unwrought alloys	362 897	400 139	446 358	468 500	463 411
Scrap	429 647	300 058	327 721	346 736	326 901
<b>Latvia</b>					
Unwrought (a)	2 634	2 052	4 940	6 100	1 810
Scrap	11 977	24 125	22 149	27 340	16 970
<b>Lithuania</b>					
Alumina	5 338	9 431	6 673	10 388	13 079
Scrap	1 654	7 907	4 435	1 131	1 841
<b>Netherlands</b>					
Bauxite	95 110	92 667	120 787	231 213	169 012
Alumina	726 542	554 967	634 626	671 167	654 487
Alumina hydrate	131 097	141 991	191 165	181 328	223 823
Unwrought	350 467	332 873	367 227	349 481	370 979
Unwrought alloys	170 095	193 099	216 251	249 182	287 504
Scrap	206 963	150 466	138 051	174 969	189 722

## Aluminium and Bauxite

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Norway					
Bauxite	34 811	20 898	22 147	9 035	16 601
Alumina	1 977 187	2 063 999	2 267 237	2 620 149	2 723 588
Alumina hydrate	37 426	42 984	42 487	42 775	45 957
Unwrought	163 090	225 972	277 122	325 514	328 722
Unwrought alloys	60 982	56 209	24 473	29 974	42 056
Scrap	95 290	100 006	113 228	70 430	20 806
Poland					
Bauxite	37 835	49 504	67 966	82 233	59 758
Alumina	109 044	97 085	120 733	124 274	102 845
Alumina hydrate	25 766	25 562	25 572	26 927	29 538
Unwrought	49 259	74 302	88 008	85 010	62 403
Unwrought alloys	68 294	73 770	94 090	119 305	140 792
Scrap	12 080	9 616	13 472	31 536	39 907
Portugal					
Alumina	10 638	9 820	10 152	9 257	6 250
Unwrought	5 072	5 276	7 903	10 903	13 941
Unwrought alloys	169 878	167 619	185 279	200 335	224 631
Scrap	2 746	9 043	1 755	4 214	2 651
Romania					
Bauxite	1 152 415	843 557	821 036	1 532 335	1 655 045
Alumina	81 407	31 763	223 466	125 902	29 350
Unwrought (a)	224	...	3 145	7 449	2 849
Slovakia					
Bauxite	28 803	8 211	8 300	7 991	3 669
Alumina	232 975	221 205	253 825	366 784	307 756
Unwrought (a)	36 909	53 060	49 945	45 913	31 683
Scrap	4 163	11 508	10 593	13 701	12 567
Slovenia					
Bauxite	87 940	35 020	51 683	44 560	47 935
Alumina	167 095	239 473	252 351	264 319	450 273
Alumina hydrate	26 905	23 219	22 878	14 131	23 581
Unwrought	79 091	51 670	63 688	57 362	73 137
Unwrought alloys	28 897	33 274	40 332	43 403	46 782
Scrap	13 739	13 262	13 676	27 390	47 381
Spain					
Bauxite	3 059 122	2 887 349	2 781 769	3 329 441	3 224 101
Alumina	61 147	53 469	50 403	55 184	58 627
Alumina hydrate	35 064	19 509	14 595	30 429	43 246
Unwrought	67 047	55 894	116 742	91 382	110 257
Unwrought alloys	149 069	166 771	166 538	235 123	223 627
Scrap	63 125	70 908	66 466	86 553	99 459
Sweden					
Bauxite	28 463	1 920	3 317	28 758	3 171
Alumina	133 786	172 761	196 834	205 734	191 504
Alumina hydrate	54 262	55 379	54 825	66 156	62 549
Unwrought	16 612	13 991	21 584	29 493	17 916
Unwrought alloys	80 571	106 217	97 276	120 732	117 202
Scrap	24 295	18 450	16 255	24 082	24 309
Switzerland					
Bauxite	4 669	7 653	5 881	8 066	9 929
Alumina	65 877	81 002	93 357	87 235	88 358
Alumina hydrate	19 621	17 953	15 340	16 945	16 823
Unwrought	67 203	66 958	60 791	73 413	75 987
Unwrought alloys	63 319	52 470	64 351	59 125	56 059
Scrap	15 910	12 565	11 327	20 734	27 617
Turkey					
Bauxite	25 323	33 361	39 129	34 592	46 016
Alumina	14 164	16 311	26 096	19 341	19 665
Unwrought	72 786	109 683	160 378	182 113	236 076
Unwrought alloys	52 939	84 829	114 881	144 836	146 853
Scrap	11 090	9 478	14 850	11 648	16 723

Imports continued

tonnes

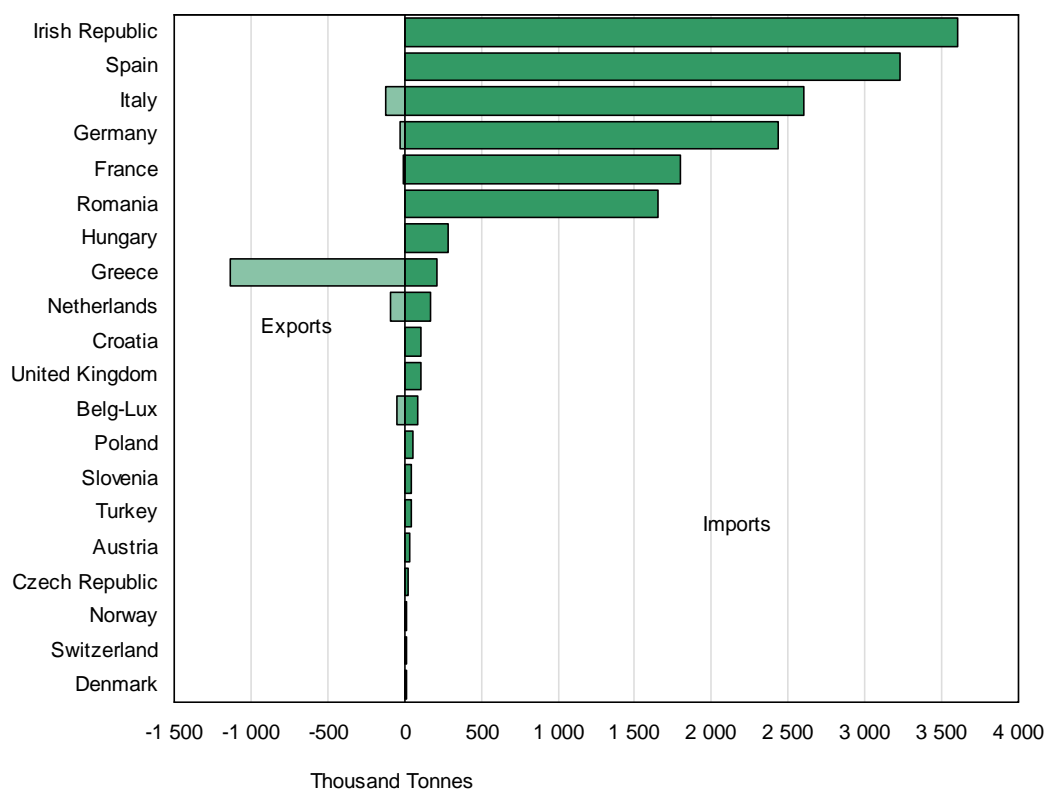
Country	2001	2002	2003	2004	2005
United Kingdom					
Bauxite	(b) 271 404	...	...	122 021	103 522
Alumina	713 808	(d) 798 479	(c) *828 300	748 933	755 443
Alumina hydrate	63 687	...	(c) *143 000	124 451	130 321
Unwrought	135 094	212 046	163 573	116 545	114 189
Unwrought alloys	211 245	159 310	129 451	118 398	87 063
Scrap	112 240	117 954	105 061	78 309	116 285

Note(s) :-

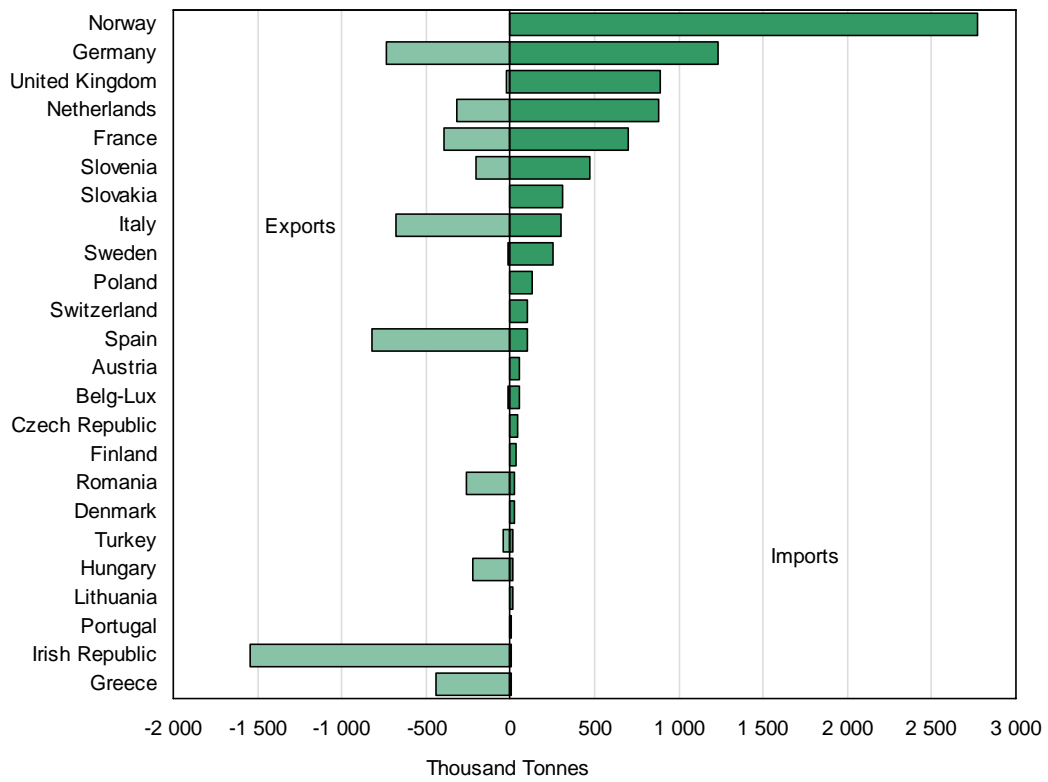
- (1) Except where alumina hydrate is separately specified, national trade figures for alumina can be considered as inclusive of hydrate  
(2) In this table the term 'unwrought' aluminium corresponds to item 7601 of the Harmonised System and comprises ingots, blocks, unwrought bars etc.  
(3) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-Alloys

- (a) Including alloys  
(b) Excluding refractory grade bauxite  
(c) BGS estimates, based on known exports from certain countries  
(d) Including some bauxite

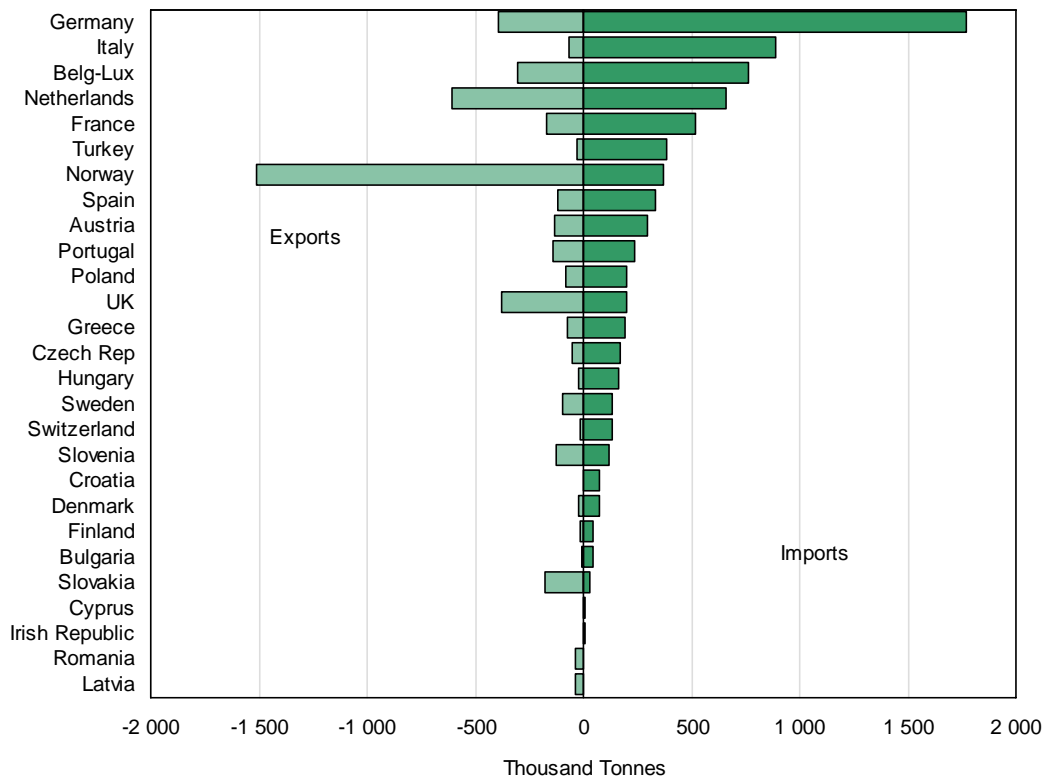
### Bauxite – EU31 trade in 2005



**Alumina and alumina hydrate – EU31 trade in 2005**



**Aluminium metal – EU31 trade in 2005**



## Antimony

- Antimony is a toxic metallic element with several specialised uses. It is frequently alloyed with lead, where it greatly increases hardness and strength. Antimony is also used in semi-conductors and its compounds form excellent flame-retardants in cable sheathes.
- China was by far the largest mine producer of antimony in 2005, with 83% of world production. Antimony is also produced as a by-product of lead refining in many countries.
- Antimony metal, minimum 99.65% Sb, and antimony oxide, a white powder, are the most commonly traded forms. In 2005 the price of antimony metal averaged \$3462/tonne.

### Mine production of antimony

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Turkey	*20	*20	*20	*20	*20

Note(s):-

- (1) This table includes antimony content of antimonial lead alloys  
 (2) In addition, Hungary is believed to produce antimony

### Exports of antimony

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	37	103	16	19	1 089
Belgium-Luxembourg					
Metal	2	48	181	493	693
Oxide	(a) *11 700	(a) *11 700	12 063	12 443	11 526
France					
Metal	60	104	8	79	186
Oxide	3 715	3 391	4 352	4 540	5 177
Germany					
Metal	38	10	27	12	15
Oxide	783	543	683	786	724
Greece					
Metal	54	22	49	3	141
Italy					
Metal	36	70	1	3	10
Oxide	200	504	340	207	94
Netherlands					
Metal	186	115	315	212	570
Oxide	872	345	270	652	664
Spain					
Metal	92	10	41	409	13
Oxide	974	934	622	706	859
Turkey					
Metal	50	...	7	25	63
United Kingdom					
Metal	473	252	65	88	54
Oxide	1 297	1 879	1 413	663	621

Note(s):-

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

**Imports of antimony**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	205	270	120	53	74
Oxide	146	190	207	316	263
Belgium-Luxembourg					
Ores & concentrates	6	491	6	13	5
Metal	11 928	13 379	11 409	12 225	10 722
Oxide	900	1 583	1 615	1 708	1 735
Bulgaria					
Metal	50	48	52	47	...
Czech Republic					
Metal	53	76	45	14	72
Oxide	548	626	365	557	588
Finland					
Oxide	269	238	238	248	199
France					
Ores & concentrates	223	6	5	11	9
Metal	6 854	6 645	5 241	8 486	7 766
Oxide	2 090	2 093	1 972	2 096	2 243
Germany					
Ores & concentrates	494	—	—	15	—
Metal	599	309	149	178	148
Oxide	6 384	6 915	6 707	7 072	6 560
Greece					
Metal	98	40	40	46	24
Hungary					
Oxide	180	178	150	186	180
Irish Republic					
Metal	12	31	15	13	0
Italy					
Ores & concentrates	446	727	786	879	1 005
Metal	1 929	1 551	1 377	743	164
Oxide	4 366	5 037	4 314	5 528	5 543
Netherlands					
Metal	775	268	511	817	705
Oxide	2 293	1 424	1 481	2 932	3 717
Norway					
Metal	9	3	8	0	71
Oxide	157	234	351	775	305
Poland					
Metal	53	10	49	80	28
Oxide	611	711	920	1 042	1 231
Portugal					
Metal	3	10	10	6	5
Oxide	331	254	147	242	137
Romania					
Metal	70	64	65	62	55
Slovenia					
Metal	29	118	52	84	137
Spain					
Metal	2 277	2 314	1 516	2 270	1 881
Oxide	828	544	519	5 656	808
Sweden					
Metal	108	176	269	234	199
Oxide	401	485	232	328	377
Switzerland					
Ores & concentrates	10	154	89	5 004	1 722
Metal	44	52	50	93	58
Oxide	1 033	720	927	1 174	1 026
Turkey					
Metal	20	98	141	87	40
Oxide	209	314	294	460	377
United Kingdom					
Metal	345	183	290	410	60
Oxide	4 103	3 164	2 712	2 976	2 048

## Arsenic

- Arsenic is a toxic semi-metallic element produced and traded chiefly as 'white arsenic' (arsenic trioxide). Its principal uses are as compounds in wood preservatives and pesticides. Gallium arsenide is used in semi-conductors whilst arsenic metal has a number of minor uses.
- China was the largest producer of white arsenic in 2005 with an estimated 60% of world production.
- In 2005 the price of metallic arsenic (min. 99% As) averaged \$0.55/lb.

### Production of white arsenic

tonnes

Country	2001	2002	2003	2004	2005
Belgium	*1 000	*1 000	*1 000	*1 000	*1 000
France	*1 000	*1 000	*1 000	*1 000	*1 000
Germany	*200	*200	*200	*200	*200
Portugal	*50	*50	*50	*50	*50

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, Austria, Finland, Hungary, Spain and the United Kingdom are believed to produce arsenic

### Exports of arsenic

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg					
Metallic arsenic	29	62	27	10	101
France					
Metallic arsenic	22	...	0	...	8
Germany					
Metallic arsenic	8	9	8	14	20
Italy					
Metallic arsenic	—	—	—	—	16
Netherlands					
Metallic arsenic	39	45	64	115	50
United Kingdom					
Metallic arsenic	5	5	0	0	1

Note(s):-

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

**Imports of arsenic**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metallic arsenic	28	16	5	...	2
Belgium-Luxembourg					
Metallic arsenic	73	75	90	95	164
Czech Republic					
Metallic arsenic	18	24	20	8	9
France					
Metallic arsenic	50	17	4	9	21
Germany					
Metallic arsenic	8	5	5	4	2
Greece					
Metallic arsenic	15	31	16	21	35
Irish Republic					
Metallic arsenic	31	127	47	...	158
Italy					
Metallic arsenic	48	91	111	84	54
Netherlands					
Metallic arsenic	137	77	61	110	85
Norway					
Metallic arsenic	44	36	0	—	—
Poland					
White arsenic	63	36	32	...	...
Metallic arsenic	11	30	—	14	39
Spain					
Metallic arsenic	87	136	114	92	112
Sweden					
Metallic arsenic	18	19	17	13	6
Switzerland					
Metallic arsenic	2	4	4	2	5
Turkey					
White arsenic	10	...	...	...	...
Metallic arsenic	23	49	78	48	82
United Kingdom					
Metallic arsenic	87	86	155	165	3

Note(s) :-

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



## Asbestos

- Asbestos is a commercial term for six fibrous minerals of which chrysotile (white asbestos), the fibrous form of serpentine, is the only form of asbestos now worked. Asbestos was once highly sought after because of its unique combination of properties:
  - non-combustibility
  - resistance to heat, friction, corrosion and acid/alkali attack
  - good thermal and sound insulation qualities
  - good dielectric properties
- Airborne asbestos fibres are a serious hazard to health and virtually all industrial use of asbestos has now ceased in Europe. Only Greece continues to produce minor amounts for highly specialised, and carefully controlled, applications. The largest producer in the world is Russia with 42% of world production.
- In 2005 the EU31 countries were strongly dependent on asbestos imports from outside the EU31. The price of asbestos (U.S. Imports) was around \$330/tonne in 2005.

### Production of asbestos

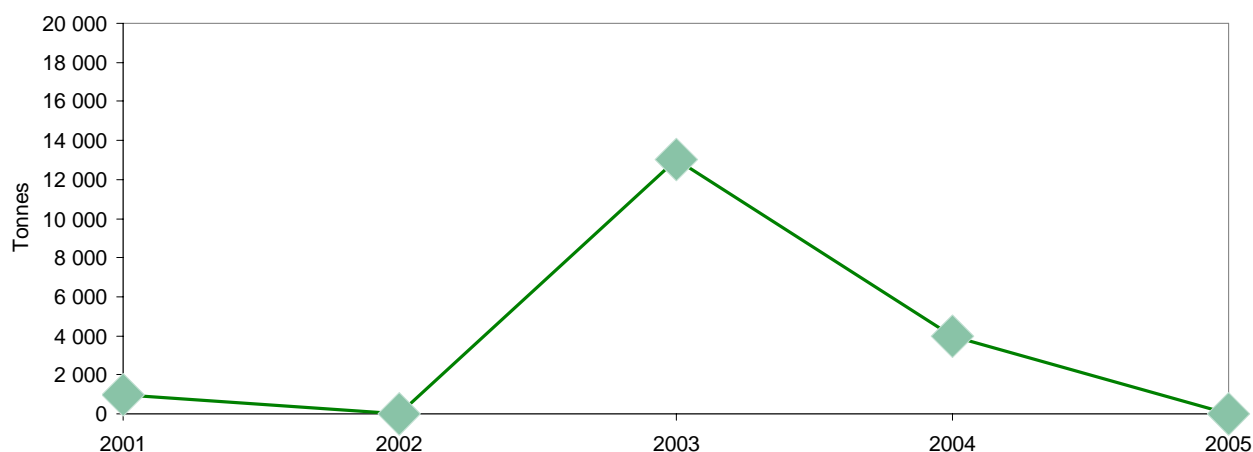
tonnes

Country	2001	2002	2003	2004	2005
Greece	*1 000	—	*13 000	*4 000	—

Note(s):-

(1) In addition to the countries listed, Romania is believed to produce asbestos

#### EU31 Production of asbestos 2001 - 05



### Exports of unmanufactured asbestos

tonnes

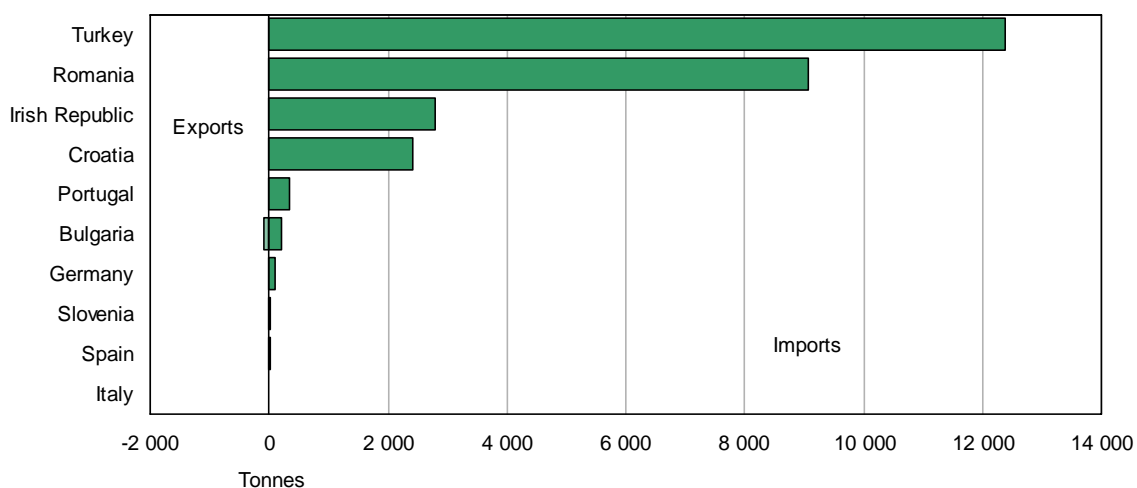
Country	2001	2002	2003	2004	2005
Bulgaria	36	9	0	83	...
France	59	...	5	31	—
Greece	252	29	12 576	4 256	—
Italy	...	...	...	...	20
Lithuania	139	0	0	...	...
Spain	36	1	—	—	—
Turkey	5	3	42 000	0	—

## Imports of unmanufactured asbestos

tonnes

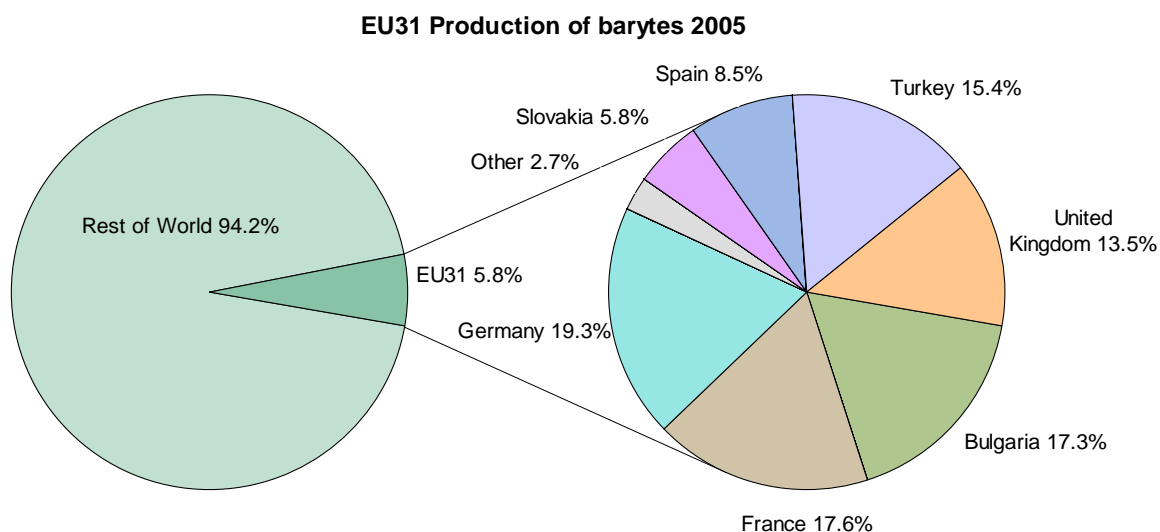
Country	2001	2002	2003	2004	2005
Belgium-Luxembourg	65	...	1	63	...
Bulgaria	271	160	50	196	...
Croatia	2 666	3 274	1 958	3 251	2 429
Czech Republic	2 322	785	1 464	2 891	0
Estonia	58	61	...	...	...
France	25	0	3	8	5
Germany	168	199	59	69	98
Greece	1 016	1 988	91	—	...
Hungary	2 167	740	574	...	...
Irish Republic	1	19	—	475	2 794
Latvia	664	...	...	34	4
Poland	19	19	—	16	6
Portugal	5 505	7 137	1 568	474	356
Romania	13 644	12 137	11 859	13 036	9 077
Slovenia	...	...	...	10	25
Spain	13 349	3 085	130	192	23
Turkey	10 557	13 977	14 645	13 509	12 373
United Kingdom	347	118	3	2 150	—

## Asbestos – EU31 trade in 2005



## Barytes

- Barytes (barium sulphate) is used in a variety of industries that utilise its properties of high specific gravity, softness, non-abrasiveness, chemical neutrality and brightness. Around 88% of barytes production is used in the manufacture and utilisation of drilling fluids in oil and gas exploration.
- The EU31 countries contributed 6% of world barytes production in 2005. The largest producer amongst the EU31 is Germany. The largest world producer is China, which accounted for 54% of world production in 2005.
- Two main grades of barytes are traded on world markets: paint grade (min. 99%) and drilling fluid grade (min. 95%). In 2005 paint grade micronised barytes averaged £145/tonne delivered into the UK. Drilling fluid grade barytes delivered to Aberdeen ranged between £60-65/tonne.



## Production of barytes

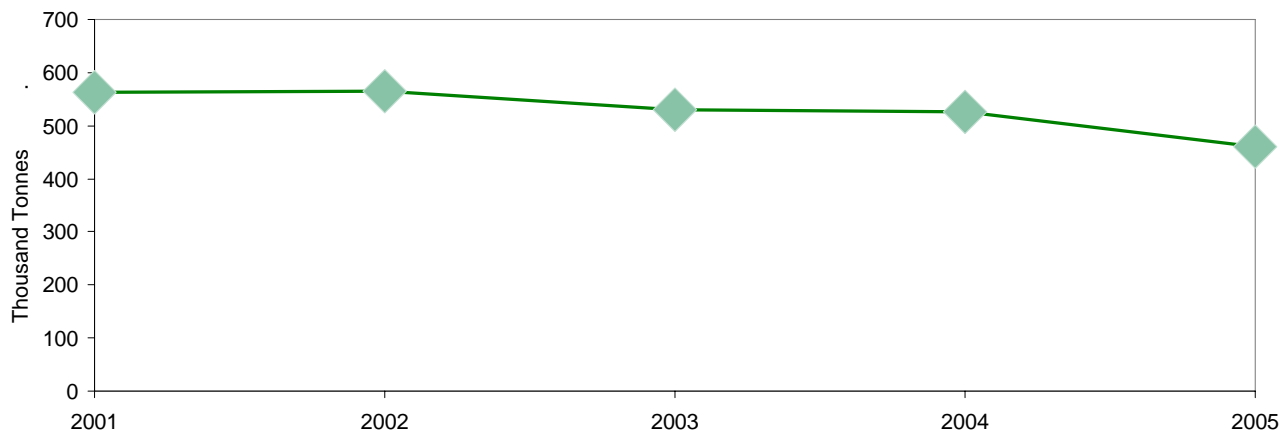
tonnes

Country	2001	2002	2003	2004	2005
Bulgaria	131 100	123 200	91 200	75 400	79 500
France	81 000	85 200	81 100	81 000	*81 000
Germany	108 111	100 993	109 506	93 624	88 591
Italy	10 809	10 215	12 214	9 608	*10 000
Poland	—	2 708	3 030	3 183	2 357
Romania	2 851	100	23	—	—
Slovakia	14 450	25 820	12 000	27 063	26 589
Spain	45 473	50 071	44 660	40 776	39 133
Turkey	102 323	106 943	119 648	134 504	70 925
United Kingdom	*66 000	*59 000	*57 000	*61 000	*62 000
<b>EU31 Total</b>	<b>560 000</b>	<b>560 000</b>	<b>530 000</b>	<b>530 000</b>	<b>460 000</b>

Note(s):-

(1) This table may include small quantities of witherite

## EU31 Production of barytes 2001 - 05



## Exports of barytes

tonnes

Country	2001	2002	2003	2004	2005
Austria	1 402	1 197	479	2 737	1 407
Belgium-Luxembourg	6 707	1 781	1 424	3 646	4 016
Bulgaria	131 137	123 224	91 215	75 393	76 644
Czech Republic	535	986	895	616	557
France (a)	*61 000	*30 200	*55 500	*75 700	*57 700
Germany	38 775	32 297	32 546	32 383	32 375
Italy	390	2 076	224	1 951	505
Netherlands	88 229	98 393	91 083	77 269	52 444
Norway	9 227	5 234	11 105	15 888	1 482
Slovakia	14 215	11 037	6 642	7 919	7 876
Spain	39 910	44 570	37 141	33 930	27 389
Turkey	136 916	117 862	101 716	142 767	134 333
United Kingdom	58 969	37 778	69 094	12 873	16 334

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) BGS estimates, based on known imports into certain countries

## Imports of barytes

tonnes

Country	2001	2002	2003	2004	2005
Austria	3 151	2 420	2 742	3 910	5 863
Belgium-Luxembourg	6 706	5 369	6 045	3 255	3 432
Croatia	111	1 803	1 053	1 878	715
Czech Republic	10 594	10 754	8 448	8 782	8 552
Denmark	46 013	53 153	39 341	36 133	28 788
Finland	2 537	3 070	3 119	3 559	3 931
France	19 902	20 442	23 009	28 748	31 965
Germany	251 884	221 000	218 811	226 706	231 471
Greece	1 657	839	791	858	996
Hungary	1 455	1 878	1 704	3 453	...
Irish Republic	176	318	332	411	894
Italy	93 733	79 605	87 501	86 874	84 178
Netherlands	111 042	103 133	136 981	155 325	116 512
Norway	145 445	110 755	115 402	129 547	109 802
Poland	7 358	6 571	8 318	6 593	7 744
Portugal	2 721	2 607	3 589	2 630	5 382

Imports continued

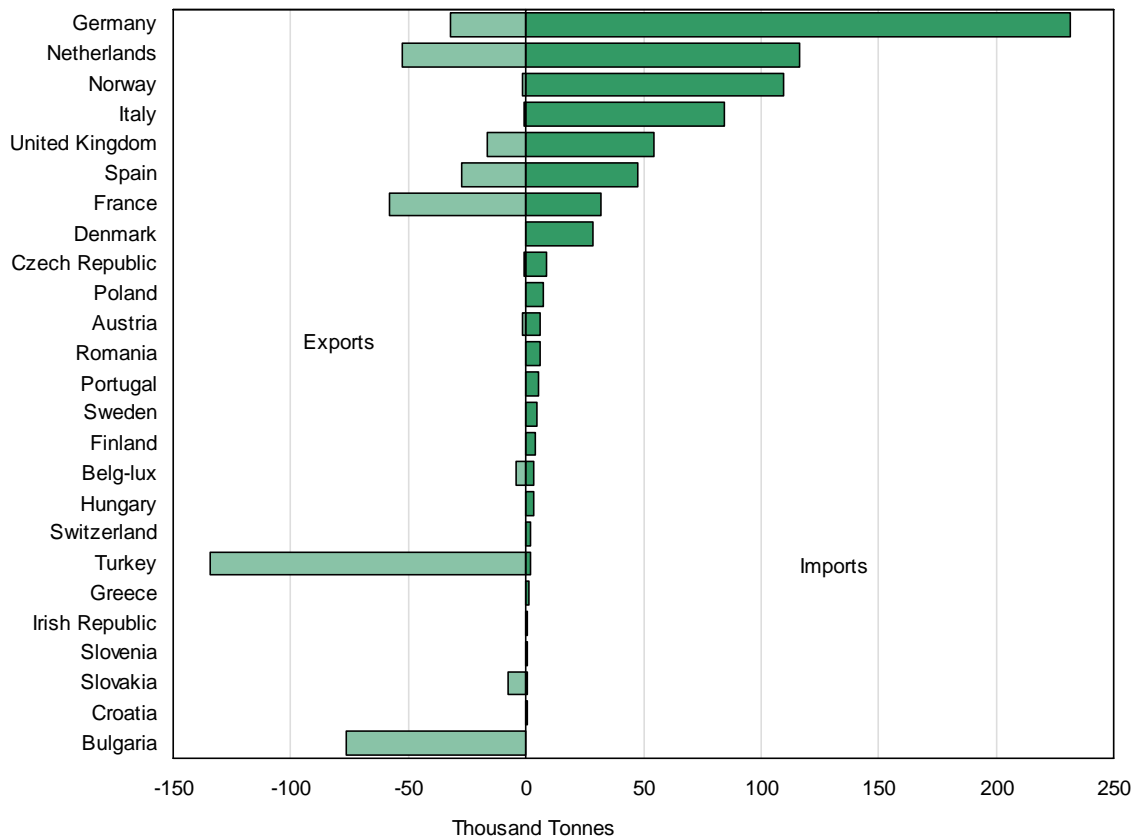
tonnes

Country	2001	2002	2003	2004	2005
Romania	8 198	16 869	2 943	9 943	5 747
Slovakia	538	1 312	956	927	814
Slovenia	1 026	1 075	931	896	845
Spain	39 311	51 952	50 596	59 378	47 923
Sweden	1 892	1 927	1 848	2 854	4 610
Switzerland	1 917	1 844	2 433	2 187	2 242
Turkey	371	202	121	258	1 983
United Kingdom	77 273	74 935	56 867	63 934	54 753

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

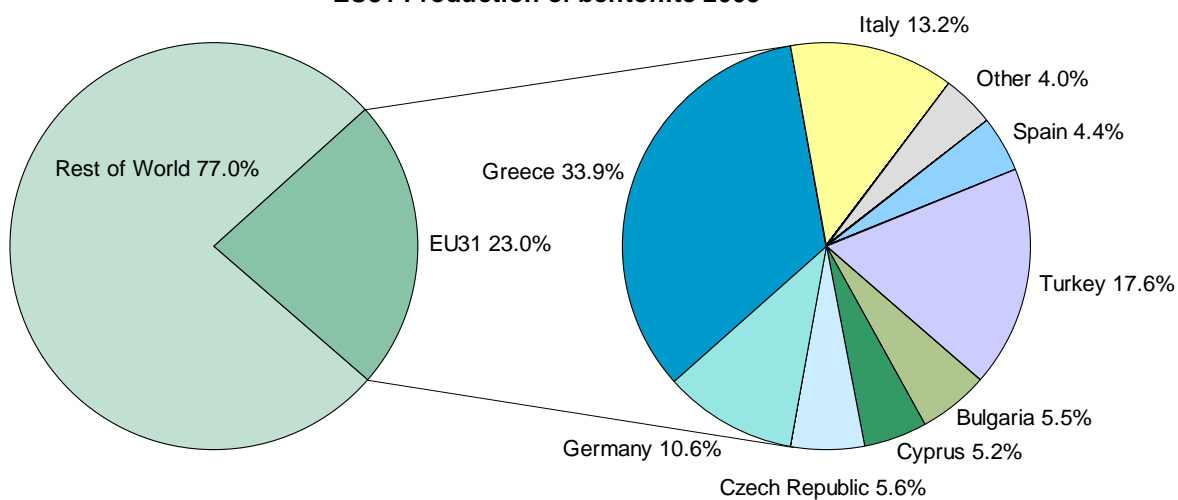
### Barytes – EU31 trade in 2005



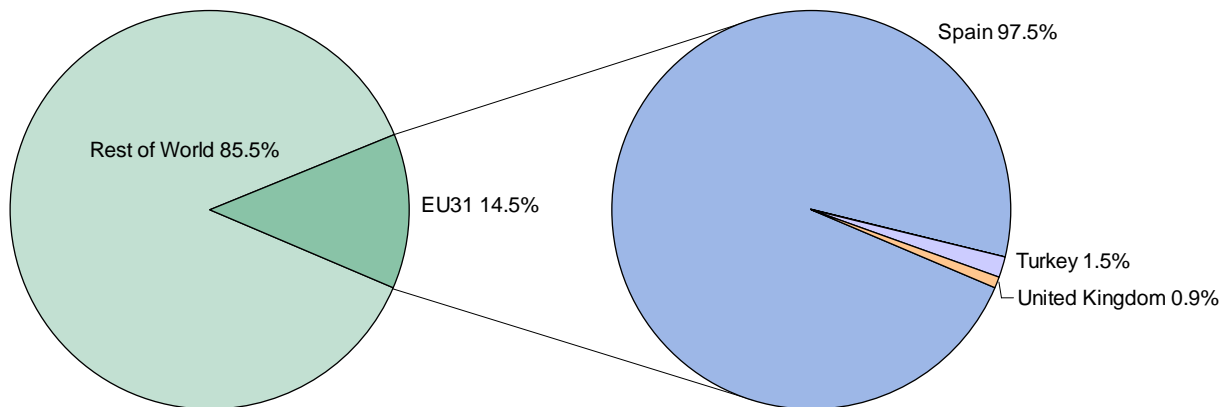
## Bentonite and fullers earth

- Bentonites consist of montmorillonite (a clay mineral) that occurs as two main varieties — calcium bentonite and the more commercially important sodium bentonite. In the UK the name fuller's earth is given to calcium bentonite (and in the USA to attapulgite). Sepiolite is a fibrous clay that can be a substitute for bentonite. Calcium bentonite can be changed to sodium bentonite by the ion-exchange process. The main uses of bentonite and fuller's earth take advantage of their natural sorptive and thixotropic properties. They are used as additions to drilling muds, in making foundry moulds, pelletising iron ore and in the manufacture of cat litter.
- The EU31 countries produced 23% of world bentonite and 14.5% of fuller's earth in 2005. Greece is the largest producer of bentonite in the EU31 and the UK is the largest producer of fuller's earth. All of Europe's reported sepiolite production in 2005 came from Spain. Turkey, however, is believed to produce some sepiolite.
- Bentonite is traded in a variety of forms. For example, cat litter grade traded at between \$32–\$40/tonne during 2005.

**EU31 Production of bentonite 2005**



**EU31 Production of fuller's earth, attapulgite and sepiolite 2005**



### Production of bentonite and fuller's earth

tonnes

Country	2001	2002	2003	2004	2005
Bulgaria					
Bentonite	171 092	211 500	145 500	224 900	181 200
Croatia					
Bentonite	10 580	12 102	13 568	15 674	17 391
Cyprus					
Bentonite	127 000	128 400	144 859	155 717	172 366
Czech Republic					
Bentonite	224 000	174 000	199 000	201 000	186 000
Denmark					
Bentonite	12 166	14 539	16 303	18 352	18 515

Production continued

tonnes

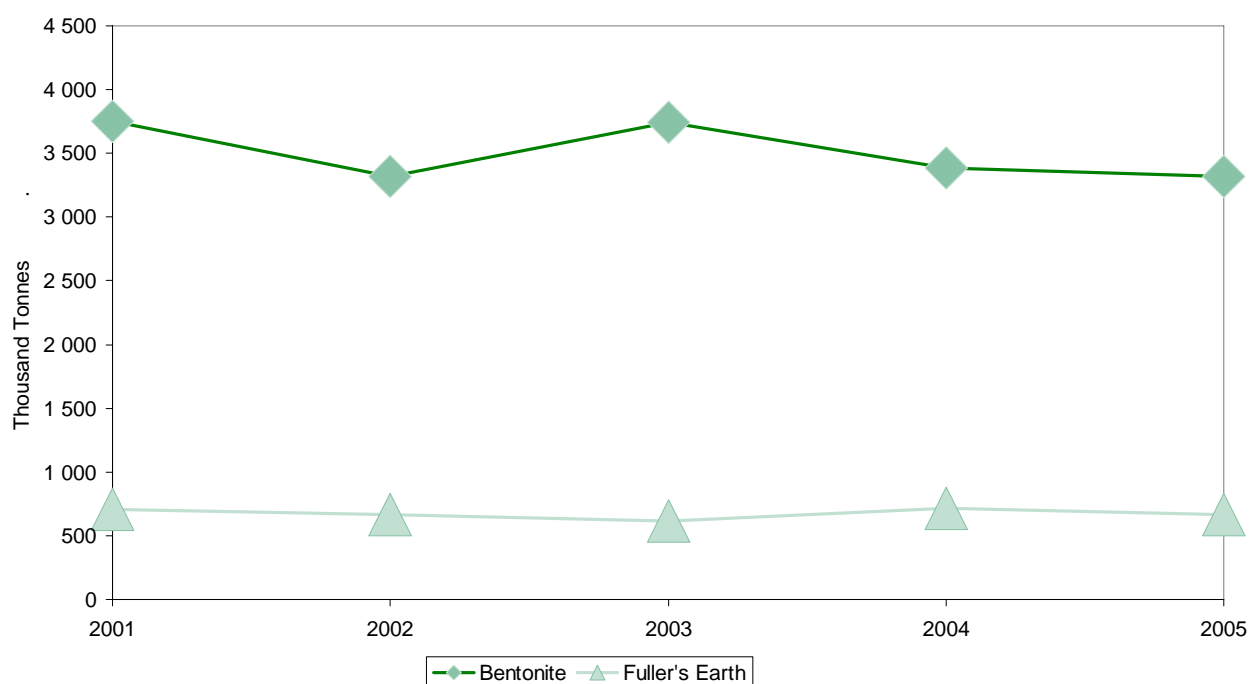
Country	2001	2002	2003	2004	2005
Germany					
Bentonite	447 913	495 310	478 796	404 549	352 374
Greece					
Bentonite	1 258 872	1 056 598	1 156 642	1 030 556	1 124 795
Hungary					
Bentonite	30 441	3 700	87 200	9 300	4 900
Italy					
Bentonite	579 029	463 231	474 475	437 659	...
Fuller's earth	19 815	24 595	250	300	...
Romania					
Bentonite	24 779	15 389	17 637	18 161	18 190
Slovakia					
Bentonite	73 000	65 500	74 700	73 280	75 860
Spain					
Bentonite	*120 000	123 457	103 174	156 760	145 000
Attapulgite	24 477	22 918	18 975	20 796	18 100
Sepiolite	*600 000	564 610	548 728	655 346	631 033
Turkey					
Bentonite	674 178	559 224	831 146	643 153	582 735
Sepiolite	10 253	...	...	...	...
United Kingdom					
Fuller's earth (a)	52 000	44 200	33 900	27 540	6 200
EU31 Total					
Bentonite	3 753 000	3 323 000	3 743 000	3 389 000	3 316 000
Fuller's Earth (b)	707 000	666 000	612 000	714 000	666 000

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 is believed to produce bentonite and France may produce fuller's earth

- (a) Saleable production based on data from producing companies  
 (b) Including attapulgite and sepiolite

EU31 production of bentonite and fuller's earth 2001 - 05



**Exports of bentonite and fuller's earth**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Bentonite	8 142	10 394	9 246	8 242	10 173
Belgium-Luxembourg					
Bentonite	5 642	14 819	28 403	22 700	26 049
Bulgaria					
Bentonite	160 332	121 868	102 263	95 435	76 614
Cyprus					
Bentonite	80 714	81 388	71 460	81 596	85 724
Czech Republic					
Bentonite	46 823	32 002	17 439	62 012	85 093
Denmark					
Bentonite	10 911	14 601	16 821	17 279	17 066
Finland					
Bentonite	15 891	10 286	1 132	188	155
France					
Bentonite	23 580	20 343	18 966	7 696	9 243
Fuller's earth	267	34	—	10	31
Germany					
Bentonite	56 589	43 329	57 237	50 477	71 977
Fuller's earth	410	...	299	860	1 540
Greece					
Bentonite	80 669	25 969	27 395	15 612	1 283
Hungary					
Bentonite	5 784	2 118	1 030	897	442
Italy					
Bentonite	209 107	215 834	221 353	257 596	245 515
Netherlands					
Bentonite	165 460	178 006	180 736	203 897	186 286
Fuller's earth	8 123	4 019	3 752	9 085	2 931
Poland					
Bentonite	...	...	...	...	12 002
Romania					
Bentonite	12 748	4 430	4 056	8 810	7 154
Slovakia					
Bentonite	65 850	56 645	66 954	85 341	76 014
Fuller's earth	1 091	1 007	856	*1 000	1 757
Spain					
Bentonite	61 691	63 120	74 277	80 410	75 450
Sepiolite	609 250	581 737	507 584	501 988	506 019
Fuller's earth	14 370	14 721	12 417	11 362	9 828
Sweden					
Bentonite	6 716	9 401	10 082	9 486	7 419
Turkey					
Bentonite	106 104	106 712	153 691	210 328	211 926
United Kingdom					
Bentonite	72 983	81 707	75 099	71 153	49 514
Fuller's earth	121	74	254	124	778

## 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



## Imports of bentonite and fuller's earth

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Bentonite	55 291	54 441	47 358	53 871	58 344
Fuller's earth	45	129	560	615	374
Belgium-Luxembourg					
Bentonite	24 730	27 239	33 129	35 509	45 282
Fuller's earth	6 362	6 626	6 428	11 164	8 028
Bulgaria	550	653	511	1 089	1 600
Croatia					
Bentonite	10 094	14 571	1 238	2 181	1 897
Cyprus	11 060	24 260	20 519	18 052	3 057
Czech Republic					
Bentonite	15 410	12 623	11 795	19 852	14 776
Fuller's earth	595	547	702	564	1 290
Denmark					
Bentonite	40 261	43 666	46 516	37 253	47 386
Fuller's earth	183	41	40	107	137
Finland					
Bentonite	50 898	27 758	26 569	27 321	26 395
Fuller's earth	60	207	212	322	201
France					
Bentonite	162 787	174 735	170 540	220 260	163 999
Fuller's earth	1 196	1 794	3 701	17 907	18 445
Germany					
Bentonite	230 303	227 785	253 998	218 349	253 226
Fuller's earth	7 476	7 315	8 483	11 202	9 571
Greece					
Bentonite	3 654	3 639	14 280	8 902	22 164
Fuller's earth	362	1 068	898	633	844
Hungary	3 797	4 440	5 914	5 214	2 369
Irish Republic					
Bentonite	1 064	966	869	2 042	2 658
Italy					
Bentonite	112 094	103 545	139 576	153 410	138 973
Fuller's earth	12 920	12 954	10 982	5 760	7 893
Latvia					
Bentonite	438	1 087	1 710	1 917	1 629
Lithuania	2 124	1 762	2 642	2 475	2 716
Netherlands					
Bentonite	236 201	247 142	298 369	358 305	199 692
Fuller's earth	24 615	14 975	76 241	76 177	70 482
Norway					
Bentonite	11 476	11 618	13 963	13 667	10 000
Poland					
Bentonite	64 986	68 020	93 915	126 127	115 208
Fuller's earth	797	1 432	1 263	1 749	2 566
Portugal					
Bentonite	16 376	16 115	14 208	17 907	16 881
Fuller's earth	47	351	936	662	483
Romania	9 861	14 733	3 383	4 652	4 126
Slovakia					
Bentonite	4 861	4 008	3 912	6 040	6 863
Fuller's earth	...	204	1 014	866	1 082
Slovenia	3 738	4 122	4 322	3 591	3 639
Spain					
Bentonite	64 157	72 294	68 776	60 709	83 784
Fuller's earth	578	1 067	488	271	238
Sweden					
Bentonite	136 742	125 852	140 176	82 414	48 564
Switzerland					
Bentonite	21 715	21 128	20 540	20 027	20 861
Fuller's earth	1 682	1 544	1 541	1 641	1 844
Turkey					
Bentonite	1 213	1 715	1 702	832	4 127
Fuller's earth	305	201	104	157	159

### Imports of bentonite and fuller's earth

tonnes

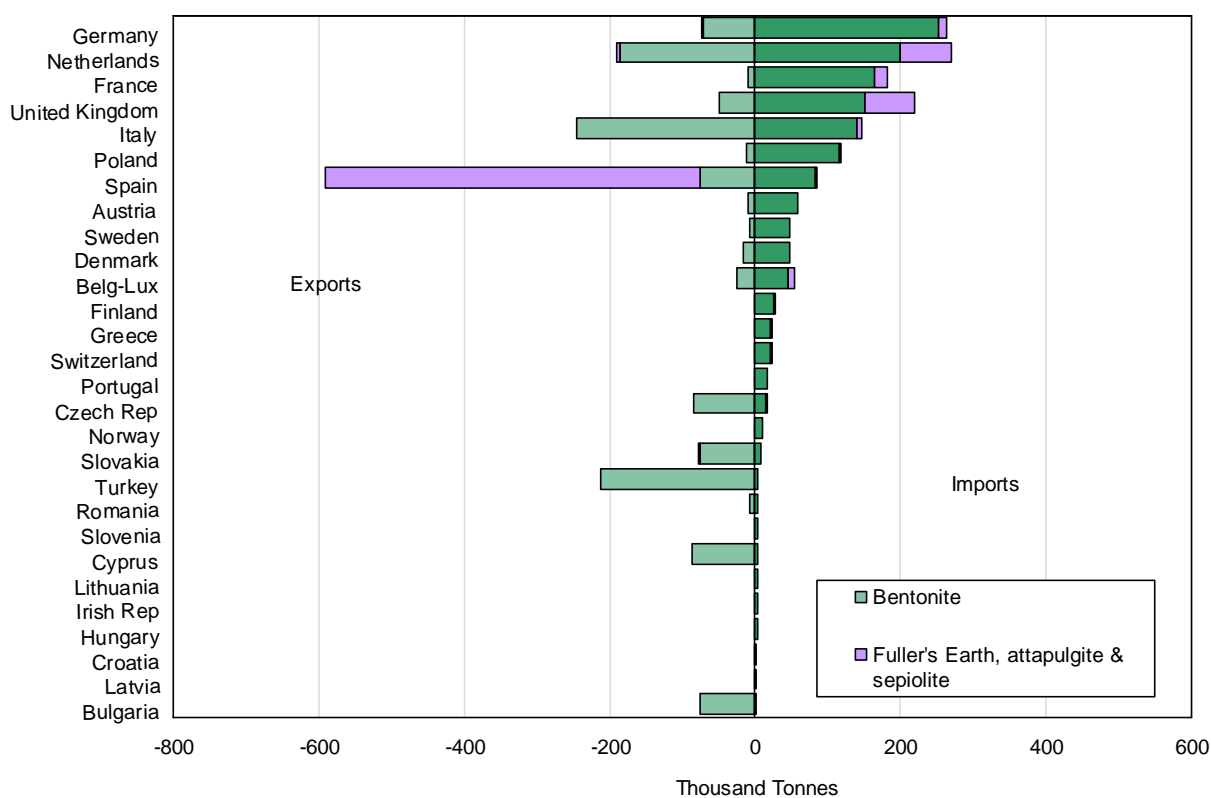
Country	2001	2002	2003	2004	2005
United Kingdom					
Bentonite	235 517	216 022	198 434	187 750	151 179
Sepiolite	(a) 65 062	(a) 69 691	(a) 55 483	51 044	65 565
Fuller's earth	5 896	9 115	7 085	2 574	3 122

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) Exports from Spain

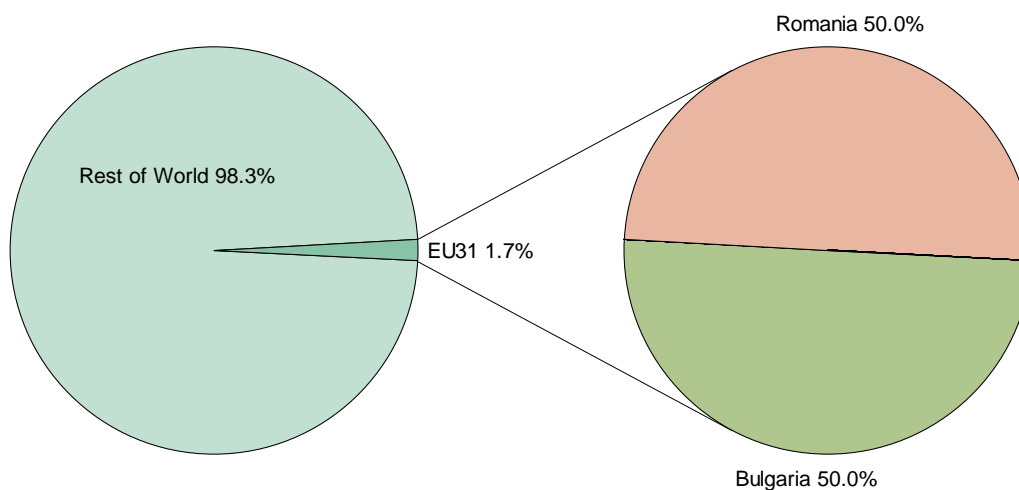
**Bentonite and fuller's earth – EU31 trade in 2005**



## Bismuth

- Bismuth is a metallic element, chiefly used in the form of its compounds, in pharmaceuticals and as metal in fusible (low-melting) alloys. It is also highly valued as a substitute for lead.
- China, Peru and Mexico are the world's largest producers of bismuth with 83% of world production in 2005. There is very little mine production in the EU31; however, bismuth is produced as a by-product of lead and zinc refining.
- Bismuth prices increased dramatically during 2005 due to limited supply and exhaustion of Chinese reserves. Substitution of bismuth for lead in many applications is significantly affecting demand. The price of bismuth in 2005 ranged from \$3.90/lb–\$4.20/lb.

**EU31 Production of bismuth 2005**



### Mine production of bismuth

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Bulgaria	*40	*40	*40	*40	*40
Romania	*40	*40	*40	*40	*40
<b>EU31 Total</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>

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

**Exports of bismuth**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	24	0	8	8	8
Belgium-Luxembourg					
Compounds	1 415	...	...	...	...
France					
Compounds	12	...	...	...	...
Metal	28	26	46	28	39
Germany					
Compounds	35	...	...	...	...
Metal	104	228	152	275	371
Netherlands					
Metal	6	100	327	136	97
Spain					
Compounds	72	—	...	...	...
Metal	7	13	10	2	9
Sweden					
Metal	2	13	...	...	...
United Kingdom					
Metal	1 269	1 793	2 239	2 633	2 426

Note(s):-

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

**Imports of bismuth**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	67	105	128	114	62
Belgium-Luxembourg					
Metal	1	4	4	20	27
Czech Republic					
Metal	26	42	56	64	50
France					
Compounds	101	...	...	...	...
Metal	420	728	629	830	1 029
Germany					
Compounds	1 295	...	...	...	...
Metal	2 038	1 517	1 689	1 693	1 508
Greece					
Metal	8	3	17	23	6
Irish Republic					
Metal	30	33	54	2	6
Italy					
Metal	391	301	151	175	203
Netherlands					
Compounds	360	...	...	...	...
Metal	278	108	274	166	85
Poland					
Metal	8	4	4	6	14
Slovenia					
Metal	35	54	42	43	69
Spain					
Metal	125	139	188	206	179
Sweden					
Metal	16	12	8	13	11
Switzerland					
Metal	18	15	15	6	15
Turkey					
Metal	3	4	4	6	7
United Kingdom					
Metal	1 515	1 513	2 237	2 205	2 858

Note(s) :-

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

## Bromine

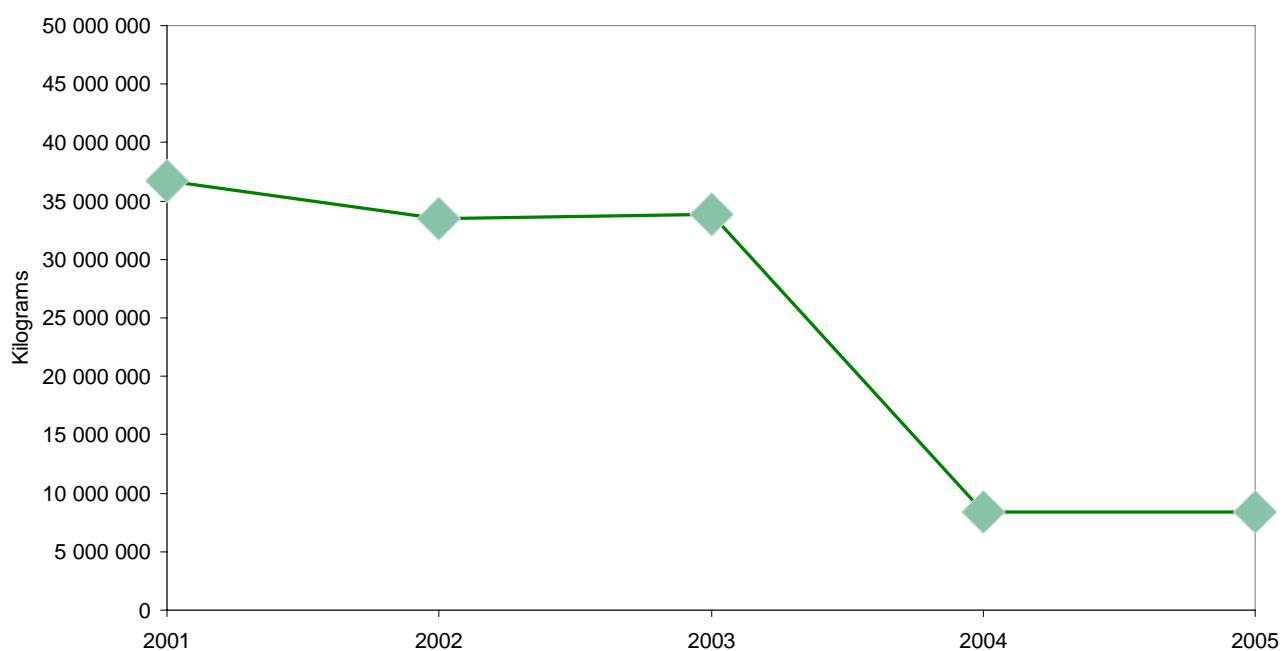
- Bromine is the only non-metallic element that is liquid at room temperature. It is strongly reactive and hazardous in pure forms and has a wide range of uses including medicinal, fumigants, dyes, and pesticides.
- Bromine is almost entirely produced from processing sea-water. The two largest producers are the USA (43%) and Israel (42%), the latter taking advantage of the relatively high bromine content of the Dead Sea.
- The price of purified bromine decreased in 2005 with an estimated price of \$0.81/kg.

## Production of bromine

kilograms

Country	2001	2002	2003	2004	2005
France	*8 000 000	*8 000 000	*8 000 000	*8 000 000	*8 000 000
Germany	*500 000	*500 000	*500 000	—	—
Italy	*300 000	*300 000	*300 000	*300 000	*300 000
Spain	*100 000	*100 000	*100 000	*100 000	*100 000
United Kingdom	27 854 000	24 542 000	*25 000 000	—	—
<b>EU31 Total</b>	<b>36 800 000</b>	<b>33 400 000</b>	<b>33 900 000</b>	<b>8 400 000</b>	<b>8 400 000</b>

EU31 Production of bromine 2001 - 05



## Exports of bromine

kilograms

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg	21 200 000	21 462 800	17 930 400	21 275 800	19 124 000
Germany	15 000	13 700	16 700	5 600	3 000
Italy	16 000	2 259	1 296	505	1 000
Netherlands	9 091 000	11 625 600	5 219 900	634 000	1 593 000
Poland	3 000	2 000	...	...	3 000
United Kingdom	11 304 252	8 671 909	5 307 678	1 126 043	234 977

Note(s):-

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

**Imports of bromine**

kilograms

Country	2001	2002	2003	2004	2005
Austria	228 000	254 900	252 200	93 000	222 000
Belgium-Luxembourg	23 057 000	25 627 900	21 097 900	23 466 200	25 108 000
Finland	92 000	57 054	56 506	71 251	71 000
France	11 914 000	12 437 700	13 225 500	12 595 900	13 989 000
Germany	2 121 000	1 775 500	1 835 400	1 626 600	1 304 000
Hungary	17 687	26 838	24 921	5 636	12 000
Irish Republic	22 000	5 739	33 238	602	...
Italy	113 000	104 414	139 908	355 734	281 000
Netherlands (a)	1 253	2 017 929	981 870	147 994	5 019 459
Poland	14 000	6 000	2 000	(a) 9 348	6 000
Spain	233 000	166 487	122 194	73 493	53 000
Sweden	—	...	0	5 000	13 000
Turkey	91 505	(a) 111 895	(a) 75 080	(a) 149 960	105 000
United Kingdom	5 387 458	2 879 558	1 899 231	7 145 977	7 994 939

Note(s) :-

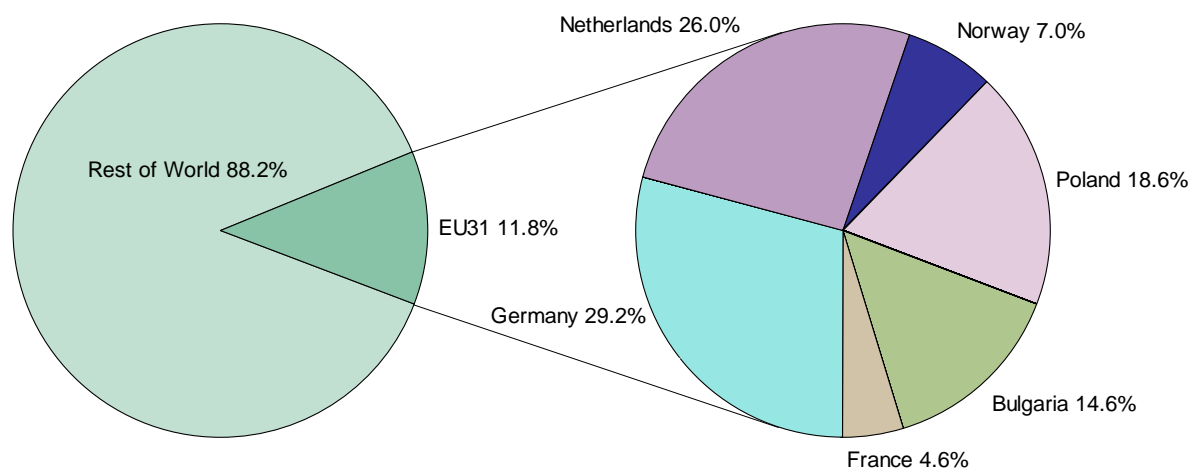
(1) This table does not purport to be comprehensive: trade in bromine is not separately distinguished from other halogens by many countries

(a) May include some fluorine

## Cadmium

- Cadmium is a highly toxic metallic element mostly produced as a by-product of zinc refining. The bulk of cadmium in use is in nickel-cadmium (NiCd) rechargeable batteries. Other major uses are in pigments and in metal coatings.
- The two largest world producers in 2005 were China (16%) and the Republic of Korea (14%). The EU31 contributed 12% of world cadmium production in 2005. Germany was the largest EU31 producer accounting for around 29% of EU31 production.
- Cadmium prices have increased considerably in recent years, accelerating in 2005 to reach more than double those in 2004. This has largely resulted from the growing nickel-cadmium battery market coupled with limited primary metal production and depleted stocks. Cadmium metal (min. 99.95% Cd) traded between \$1.41/lb and \$1.54/lb in 2005.

**EU31 Production of cadmium 2005**



## Production of cadmium

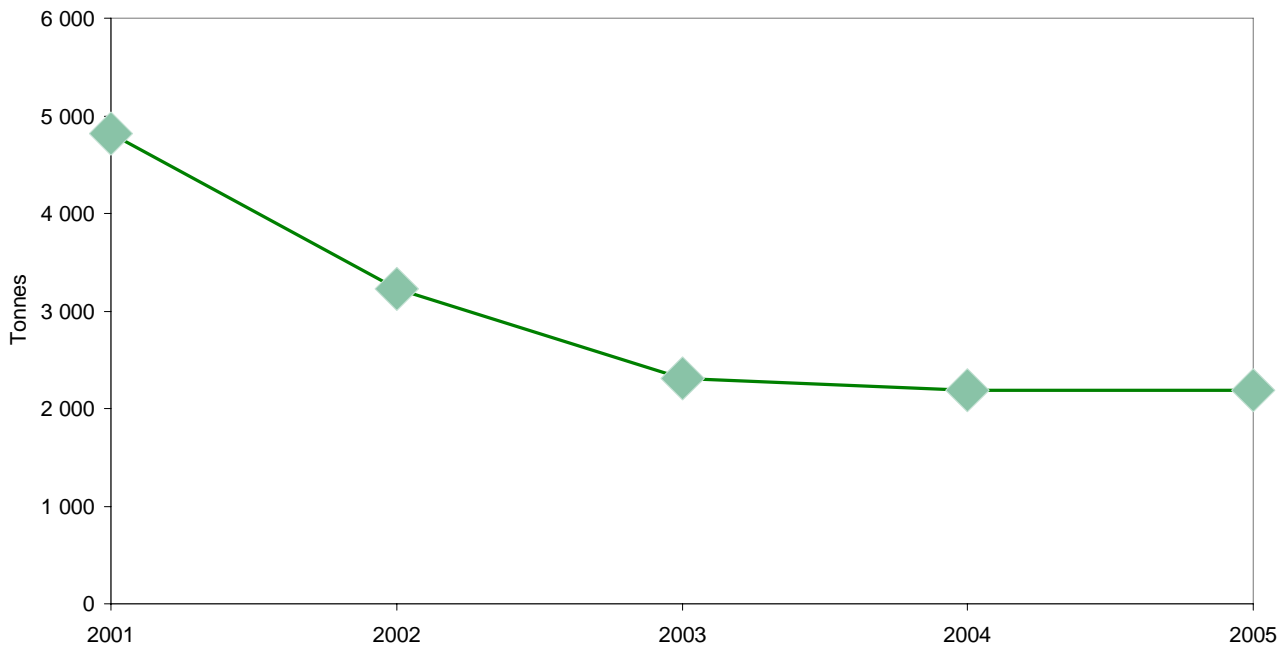
tonnes

Country	2001	2002	2003	2004	2005
Belgium	1 236	117	—	—	—
Bulgaria	333	345	307	356	319
Finland	604	400	—	—	—
France	176	154	*120	*120	*100
Germany	539	422	640	*640	*640
Italy	352	362	22	—	—
Netherlands	455	485	495	572	*570
Norway	371	215	323	141	153
Poland	330	440	375	356	408
United Kingdom	425	292	22	—	—
<b>EU31Total</b>	<b>4 800</b>	<b>3 200</b>	<b>2 300</b>	<b>2 200</b>	<b>2 200</b>

Note(s):-

(1) Data in this table excludes secondary metal

## EU31 Production of cadmium 2001 - 05



## Exports of cadmium

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg					
Metal	1 525	607	1 018	746	639
Sulphide	31	17	10	15	29
Bulgaria					
Metal	374	337	344	378	316
Czech Republic					
Metal	87	0	0	0	...
Finland					
Metal	682	34	0	...	—
France					
Metal	3 614	1 232	794	604	533
Germany					
Metal	1	1	0	...	...
Sulphide	3	2	5	6	14
Italy					
Metal	739	377	239	54	18
Sulphide	5	4	0	—	—
Netherlands					
Metal	891	741	572	621	553
Norway					
Metal	357	117	237	304	132
Poland					
Metal	198	49	697	665	610
Spain					
Metal	1	0	0	0	0
Sweden					
Oxide	54	78	120	139	140
United Kingdom					
Metal	87	114	187	27	79

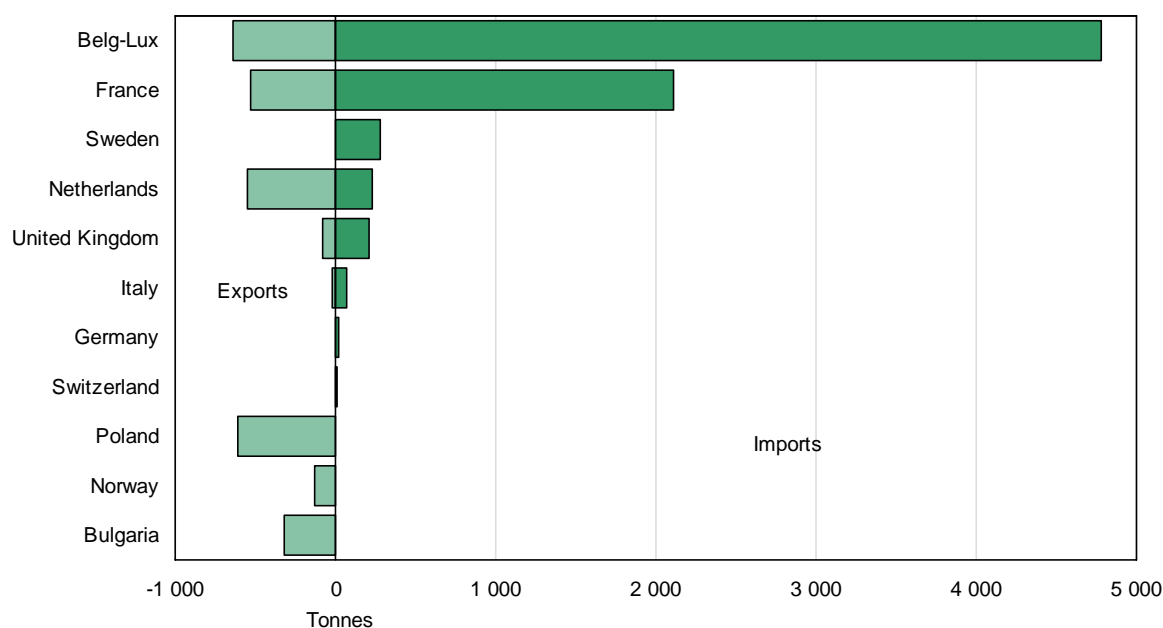


## Imports of cadmium

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg					
Metal	7 828	5 121	4 914	4 064	4 779
Sulphide	46	4	18	—	29
Czech Republic					
Sulphide	36	11	20	19	21
France					
Metal	1 488	1 682	1 248	1 465	2 114
Oxide	1 032	910	839	743	584
Sulphide	7	82	20	5 802	6
Germany					
Metal	8	8	11	39	16
Oxide	149	152	143	139	231
Sulphide	11	8	8	6	18
Italy					
Metal	45	46	48	87	72
Oxide	76	95	62	96	55
Netherlands					
Metal	544	...	357	284	233
Poland					
Oxide	4	38	...	...	...
Spain					
Metal	94	4	23	22	2
Oxide	56	70	29	28	53
Sweden					
Metal	65	150	402	330	282
Oxide	10	—	26	71	35
Switzerland					
Metal	7	6	4	30	5
Turkey					
Metal	9	14	12	6	2
Oxide	28	...	...	...	...
United Kingdom					
Metal	942	225	416	479	206

## Cadmium metal – EU31 trade in 2005



## Cement

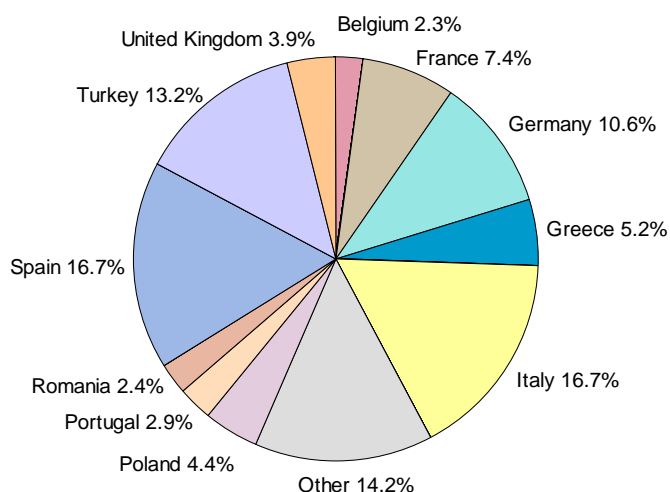
- Cement is a manufactured product and is the essential basis of concrete and mortar. Its chief raw materials are limestone or chalk and clay/mudstone. In Europe it is the largest use of limestone after crushed rock aggregate.
- Cement is made by firing a mixture of limestone and clay in a kiln to produce 'cement clinker'. This is a mixture of calcium silicates and calcium aluminates, which is finely ground with the addition of 5% gypsum/anhydrite to produce finished cement. Cement plants are nearly always sited at the limestone quarry.
- In the EU31, Germany (22%) and France (15%) are the largest producers of cement clinker. There is significant international trade in both clinker and finished cement.

### Production of cement clinker

tonnes

Country	2001	2002	2003	2004	2005
Austria	...	...	...	...	80 288
Belgium	1 121 656	1 301 790	...	...	...
Cyprus	...	212 459	56 034	68 865	37 891
Czech Republic	2 441 353	2 102 275	...	...	...
Denmark	102 571	152 636	61 909	52 758	42 691
France	16 503 000	16 479 000	16 313 000	17 157 000	17 332 000
Germany	24 523 000	20 120 000	21 513 000	26 281 000	24 315 000
Greece	13 210 781	8 947 394	...	...	...
Italy	30 893 082	30 770 167	32 077 055	33 048 546	...
Latvia	*200 000	*200 000	*200 000	250 000	...
Luxembourg	844 000	895 000	770 000	847 000	834 000
Netherlands	...	900 000	800 000	825 000	...
Poland	9 335 062	8 811 639	8 647 397	9 620 601	9 468 410
Portugal	...	...	845 594	1 082 678	1 629 687
Sweden	2 421 693	2 364 724	2 235 138	2 385 509	*2 400 000
United Kingdom	10 183 000	10 327 000	10 146 000	10 402 000	10 074 000
<b>EU31 Total</b>	<b>113 800 000</b>	<b>104 500 000</b>	<b>106 100 000</b>	<b>114 500 000</b>	<b>112 700 000</b>

**EU31 Production of finished cement 2005**



## Production of finished cement

tonnes

Country	2001	2002	2003	2004	2005
Austria	3 863 000	3 967 000	*4 000 000	4 040 000	4 739 768
Belgium	7 241 000	7 103 000	6 553 000	6 216 000	6 587 000
Bulgaria	2 088 000	2 137 000	2 100 000	2 100 000	2 100 000
Cyprus	1 368 800	1 438 160	1 636 879	1 688 917	1 834 645
Czech Republic	3 590 689	3 249 155	3 502 103	3 828 677	3 978 056
Denmark	2 575 512	2 544 868	2 580 427	2 892 831	2 880 554
Estonia	404 600	465 900	506 200	614 600	726 000
Finland (a)	1 324 705	1 198 423	1 186 000	1 295 000	1 347 000
France	19 839 000	19 437 000	19 655 000	20 962 000	21 277 000
Germany	32 600 000	31 200 000	33 400 000	32 000 000	30 600 000
Greece	15 562 654	*15 500 000	(c) 17 546 281	(c) 14 761 437	(c) 14 830 944
Hungary	3 452 000	3 510 000	3 573 000	3 349 000	3 371 000
Irish Republic	2 600 000	2 500 000	2 500 000	*2 500 000	*2 500 000
Italy	40 190 597	41 722 254	43 580 047	45 342 868	*48 000 000
Latvia	*300 000	260 397	295 205	283 645	280 000
Lithuania	529 193	605 784	596 857	753 069	832 076
Luxembourg	726 000	729 000	709 000	797 000	767 000
Netherlands	3 380 000	3 080 000	2 450 000	2 380 000	*2 400 000
Norway	1 870 000	1 850 000	1 860 000	1 870 000	...
Poland	12 069 941	11 206 439	11 653 448	12 837 083	12 646 223
Portugal	(b) 10 162 310	(c) 9 760 964	(c) 8 485 826	(c) 8 764 316	(c) 8 279 418
Romania	5 702 000	5 679 776	5 991 962	6 238 584	7 032 100
Slovakia	3 122 665	3 140 581	3 147 478	3 158 308	3 498 685
Slovenia	1 237 000	1 178 000	1 370 000	1 186 000	1 200 000
Spain	40 512 090	42 417 253	44 746 757	46 595 560	*48 000 000
Sweden	2 644 365	2 764 954	2 544 647	2 712 810	2 731 000
Switzerland	3 920 000	3 771 000	3 700 000	3 800 000	3 900 000
Turkey	30 125 000	32 576 701	35 076 902	38 019 112	*38 000 000
United Kingdom	11 090 000	11 089 000	11 215 000	11 405 000	11 216 000
<b>EU31 Total</b>	<b>264 100 000</b>	<b>266 100 000</b>	<b>276 200 000</b>	<b>282 400 000</b>	<b>287 400 000</b>

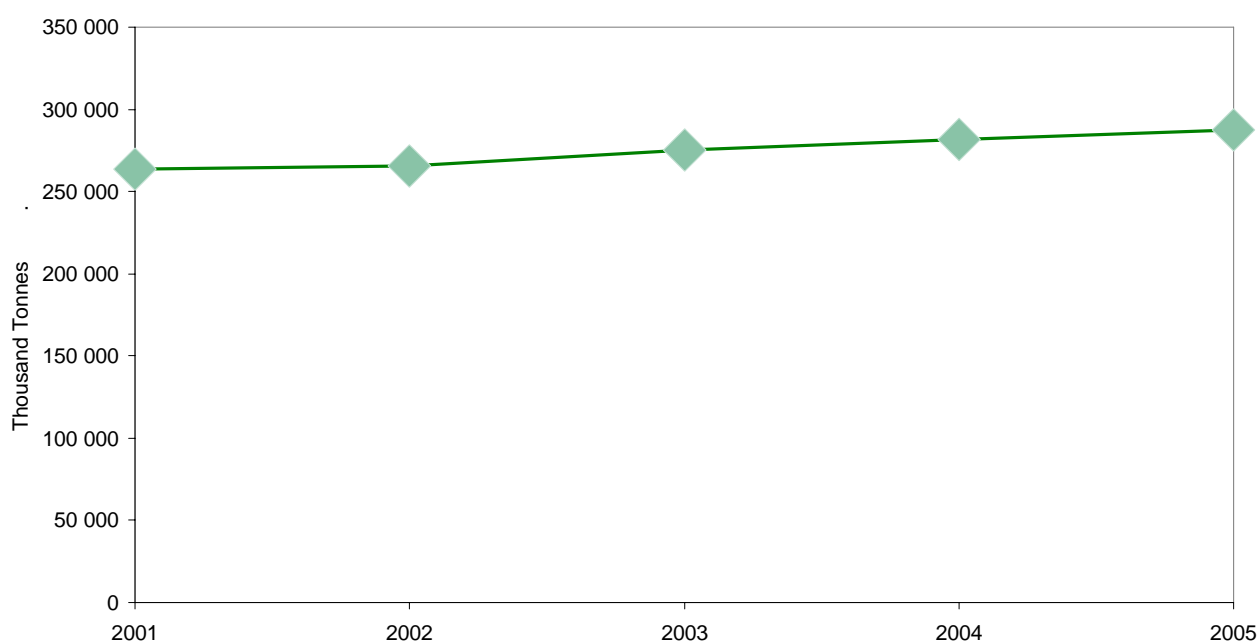
Note(s):-

(a) Sales

(b) Portland cement only

(c) Portland cement, excluding white cement

EU31 Production of finished cement 2001 - 05



## Exports of cement

tonnes

Country	2001	2002	2003	2004	2005
<b>Austria</b>					
Cement clinkers	60 212	47 401	54 375	58 262	32 877
Portland cement	118 822	97 600	136 732	185 069	151 330
Other cement	19 896	27 365	42 712	40 830	53 951
<b>Belgium-Luxembourg</b>					
Cement clinkers	1 111 745	767 780	749 249	842 257	833 257
Portland cement	1 432 246	1 854 749	1 815 882	1 598 742	1 715 979
Other cement	840 274	687 836	592 657	616 066	612 642
<b>Bulgaria</b>					
Cement clinkers	397 914	435 202	602 632	392 414	338 505
Portland cement	643 158	485 972	568 083	460 281	455 824
Other cement	240	2 729	22 625	...	...
<b>Cyprus</b>					
Cement clinkers	96 709	245 656	200 461	31 215	37 891
Portland cement	316 758	201 542	196 173	146 669	219 460
<b>Czech Republic</b>					
Cement clinkers	213 960	77 171	44 410	91 626	29 169
Portland cement	618 868	350 341	506 588	576 531	526 784
Other cement	33 244	38 341	11 476	3 216	34 046
<b>Denmark</b>					
Cement clinkers	101 949	97 886	65 962	85 967	54 542
Portland cement	1 220 484	1 259 988	1 164 923	1 127 638	1 235 477
Other cement	17 458	12 697	11 947	13 535	13 118
<b>Estonia</b>					
Cement clinkers	277 012	163 887	157 353	113 105	97 442
Portland cement	183 156	176 923	172 223	209 168	225 729
<b>Finland</b>					
Portland cement	872	633	837	11 449	3 367
<b>France</b>					
Cement clinkers	491 760	555 646	479 952	460 364	310 228
Portland cement	686 872	549 756	604 494	785 100	792 192
Other cement	120 320	157 945	144 523	112 828	102 222
<b>Germany</b>					
Cement clinkers	718 285	411 711	1 001 024	868 384	773 394
Portland cement	1 959 481	2 083 433	2 472 418	3 496 157	3 587 966
Other cement	1 084 249	1 226 979	1 196 558	1 580 315	1 876 289
<b>Greece</b>					
Cement clinkers	549 377	400 700	742 540	257 136	304 750
Portland cement	4 165 718	2 312 090	2 507 359	2 679 607	3 502 085
Other cement	221 294	142 068	110 674	170 640	242 957
<b>Hungary</b>					
Cement clinkers	44	125 482	41 006	78 590	27 328
Portland cement	492 397	433 217	440 285	244 276	274 262
<b>Irish Republic</b>					
Cement clinkers	6 447	...	2 650	...	...
Portland cement	220 581	263 254	439 876	1 133 469	942 655
<b>Italy</b>					
Cement clinkers	99 472	82 835	55 289	8 965	19 427
Portland cement	2 078 455	1 940 114	1 816 975	1 903 368	2 379 941
Other cement	168 039	174 484	181 086	130 920	130 120
<b>Latvia</b>					
Portland cement	53 352	42 492	42 644	26 144	10 762
<b>Lithuania</b>					
Portland cement	213 851	224 544	212 730	247 918	299 782
<b>Netherlands</b>					
Cement clinkers	1 259	1 325	2 326	1 585	4 610
Portland cement	215 827	108 209	209 122	326 234	295 457
Other cement	158 864	86 102	53 743	30 013	18 513
<b>Norway</b>					
Cement clinkers	156 911	98 557	(a) *109 000	(a) *108 000	(a) *179 000
Portland cement	506 741	558 861	(a) *724 000	...	...
<b>Poland</b>					
Cement clinkers	2 894	6 461	87 470	226 981	256 621
Portland cement	757 302	370 832	262 290	341 112	460 479
Other cement	134 130	98 766	7 406	7 059	49 970

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
<b>Portugal</b>					
Cement clinkers	...	41 626	117 332	148 984	1 271 578
Portland cement	35 442	59 628	114 182	286 819	1 110 739
Other cement	5 109	5 815	6 081	13 267	17 301
<b>Romania</b>					
Cement clinkers	512 590	572 684	360 639	669 204	465 660
Portland cement	1 133 414	1 020 819	963 978	701 686	739 215
<b>Slovakia</b>					
Cement clinkers	3 848	9 501	27 695	4 768	26 549
Portland cement	1 697 104	1 584 379	1 476 998	1 470 728	1 433 926
Other cement	58 301	18 992	15 958	24 408	44 670
<b>Slovenia</b>					
Cement clinkers	...	2 163	7 589	18 577	58 765
Portland cement	184 683	171 993	166 323	101 842	56 776
Other cement	...	...	...	16 154	63 732
<b>Spain</b>					
Cement clinkers	6 538	45 657	18 350	9 491	13 259
Portland cement	1 713 277	1 700 683	1 585 078	1 681 953	1 713 572
Other cement	94 252	92 852	100 272	59 696	51 340
<b>Sweden</b>					
Portland cement	1 241 183	1 285 376	1 064 305	867 450	1 295 834
Other cement	2 341	1 469	2 818	2 492	2 555
<b>Switzerland</b>					
Cement clinkers	123 026	130 261	106 617	106 263	121 014
Portland cement	20 968	12 942	14 396	33 524	46 939
<b>Turkey</b>					
Cement clinkers	3 275 087	4 546 480	2 898 730	2 359 071	2 893 665
Portland cement	4 968 305	5 803 964	6 749 791	7 907 130	6 713 088
Other cement	33 163	25 296	96 793	147 792	261 816
<b>United Kingdom</b>					
Cement clinkers	169 344	160 704	60 920	82 936	134 992
Portland cement	229 573	305 801	216 480	214 420	320 680
Other cement	81 441	66 163	61 193	76 517	68 554

Note(s):-

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

## Imports of cement

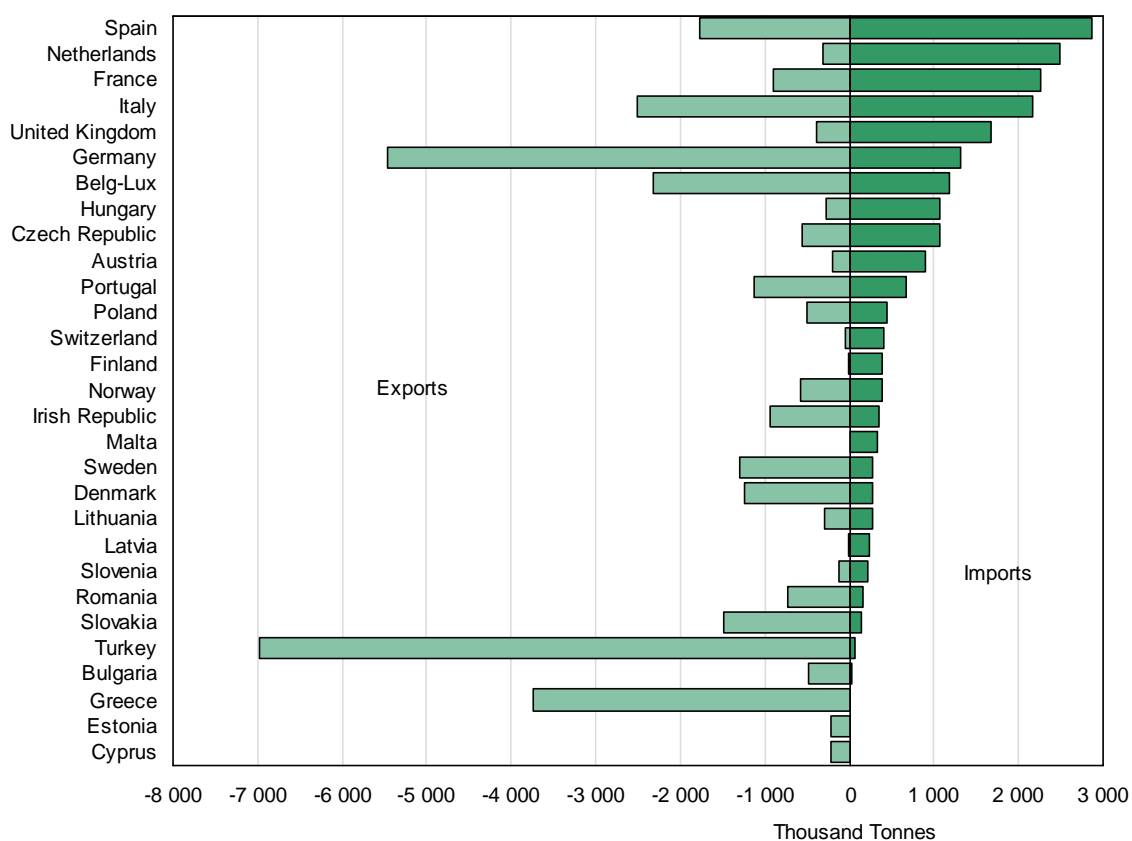
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Country	2001	2002	2003	2004	2005
<b>Austria</b>					
Cement clinkers	314 407	314 864	444 535	443 956	532 745
Portland cement	717 691	804 924	763 455	773 897	860 087
Other cement	29 489	18 597	17 434	51 811	43 083
<b>Belgium-Luxembourg</b>					
Cement clinkers	133 317	64 453	256 355	553 911	442 986
Portland cement	809 758	795 844	846 044	956 062	898 871
Other cement	159 414	187 371	292 756	314 515	275 177
<b>Bulgaria</b>					
Cement clinkers	...	3 088	3 815	23 048	180 254
Portland cement	7 864	7 491	33 810	51 493	23 787
Other cement	...	...	...	920	1 128
<b>Cyprus</b>					
Cement clinkers	5 550	17 144	74 627	28 622	43 375
Portland cement	1 636	2 926	2 496	2 092	2 339
<b>Czech Republic</b>					
Cement clinkers	147	6 792	76 152	167 711	95 108
Portland cement	1 278 439	748 672	1 044 234	1 105 823	1 027 011
Other cement	104 981	83 286	28 197	24 799	38 434
<b>Denmark</b>					
Cement clinkers	10	4 033	23 222	22 506	31 634
Portland cement	238 654	274 440	185 757	187 982	230 842
Other cement	33 903	29 067	30 501	33 913	36 753
<b>Cement</b>					

Country	2001	2002	2003	2004	2005
<b>Estonia</b>					
Cement clinkers	...	...	...	...	21 219
Portland cement	44 989	31 847	36 438	16 827	3 311
Other cement	572	451	634	...	...
<b>Finland</b>					
Cement clinkers	95 591	7 265	67 297	28 129	17 594
Portland cement	333 868	382 160	438 363	423 958	383 260
Other cement	8 722	8 669	9 654	9 344	13 211
<b>France</b>					
Cement clinkers	919 175	852 287	793 933	865 213	946 642
Portland cement	1 104 447	1 114 553	1 090 120	1 114 684	1 271 478
Other cement	926 599	1 190 848	1 123 098	927 157	984 597
<b>Germany</b>					
Cement clinkers	494 930	523 967	325 302	370 454	289 600
Portland cement	2 003 309	1 197 165	906 718	1 002 404	934 865
Other cement	413 249	321 014	277 349	343 597	380 858
<b>Greece</b>					
Portland cement	79 052	56 424	302	1 754	425
Other cement	2 989	2 628	3 322	3 497	4 548
<b>Hungary</b>					
Portland cement	401 168	303 249	342 107	451 613	565 366
Other cement	174 362	466 700	536 445	579 735	508 067
<b>Irish Republic</b>					
Cement clinkers	66 661	56 199	88 669	226 116	245 955
Portland cement	430 990	373 759	259 703	281 044	335 055
Other cement	3 092	2 968	4 105	9 132	8 958
<b>Italy</b>					
Cement clinkers	1 018 494	1 777 159	2 322 710	2 720 499	2 828 906
Portland cement	1 915 641	1 796 508	2 033 657	2 130 079	2 014 905
Other cement	314 706	304 329	168 008	146 033	152 325
<b>Latvia</b>					
Cement clinkers	3 255	...	...	...	38 589
Portland cement	87 609	112 025	138 488	204 353	234 862
<b>Lithuania</b>					
Cement clinkers	...	14 459	...	22 496	...
Portland cement	88 783	128 201	206 317	183 712	265 103
<b>Malta</b>					
Portland cement	260 812	275 627	275 736	179 533	334 107
<b>Netherlands</b>					
Cement clinkers	706 124	52 231	679 330	581 267	388 146
Portland cement	1 551 824	370 170	1 614 917	1 812 884	1 632 872
Other cement	934 043	229 933	826 513	774 050	846 622
<b>Norway</b>					
Portland cement	192 678	186 529	188 442	236 622	373 788
Other cement	7 224	5 549	5 026	10 738	12 319
<b>Poland</b>					
Cement clinkers	251 458	66 800	70 207	13 746	33 673
Portland cement	328 347	630 256	699 379	540 342	444 855
Other cement	17 313	23 531	16 352	2 323	5 537
<b>Portugal</b>					
Cement clinkers	917 322	5 421	7 715	8 775	17 084
Portland cement	1 497 434	1 485 581	1 225 167	1 066 969	669 272
Other cement	17 671	11 842	50 576	65 793	10 479
<b>Romania</b>					
Portland cement	9 680	20 478	123 332	228 506	167 686
<b>Slovakia</b>					
Cement clinkers	0	—	34 550	33 021	68 894
Portland cement	80 356	82 114	113 926	85 834	88 403
Other cement	2 629	2 320	3 379	19 636	49 619
<b>Slovenia</b>					
Cement clinkers	21 066	16 279	95 002	61 151	1 343
Portland cement	174 690	150 749	205 345	219 779	215 513
Other cement	1 254	1 272	1 440	112	2 861
<b>Spain</b>					
Cement clinkers	3 975 430	4 646 090	5 897 219	6 266 470	7 852 531
Portland cement	2 960 674	3 155 122	2 606 300	2 549 086	2 845 856
Other cement	200 370	36 947	54 726	21 527	20 031
					Cement

Country	2001	2002	2003	2004	2005
Sweden					
Portland cement	210 732	208 113	209 882	218 928	242 326
Other cement	25 186	25 151	27 286	27 286	34 597
Switzerland					
Cement clinkers	156 910	146 388	47 050	64 882	71 542
Portland cement	180 860	198 607	319 539	313 292	352 409
Other cement	86 391	56 272	41 949	58 671	48 309
Turkey					
Cement clinkers	143 225	7 117	170 275	375 619	567 256
Portland cement	27 109	19 014	9 922	9 096	66 260
Other cement	5 914	5 800	3 675	105	4 693
United Kingdom					
Cement clinkers	387 306	289 685	506 128	377 341	406 044
Portland cement	1 179 521	2 142 589	1 714 946	2 033 772	1 645 088
Other cement	52 411	61 327	61 131	64 289	37 705

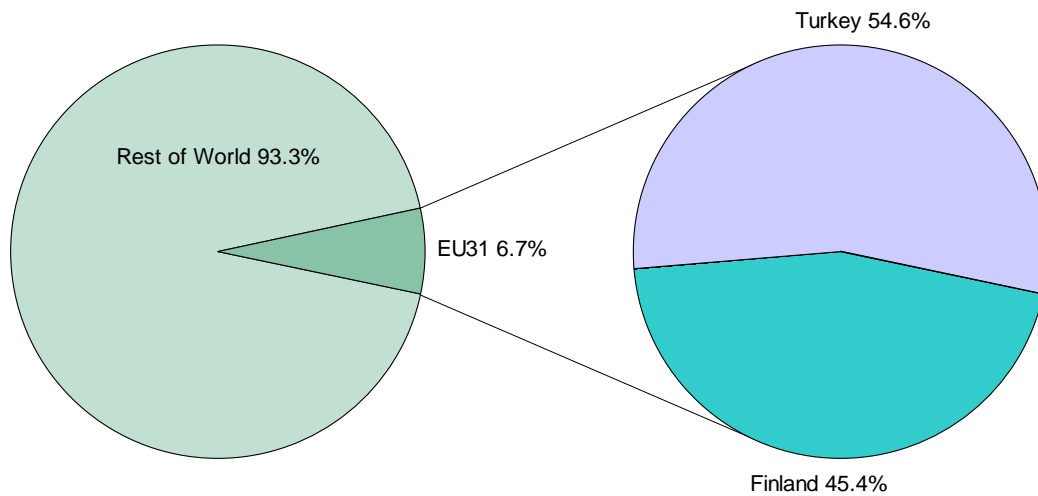
## Cement – EU31 trade in 2005



## Chromium ores and concentrates

- Chromium is a hard metallic element that is an essential component of stainless steel and other alloy steels, where it is used in the form of the alloy ferro-chromium. It is also used extensively in superalloys and metal plating. Its compounds are important pigments and the natural mineral chromite is used in refractories.
- World production is dominated by South Africa, India and Kazakhstan which together produced 77% of world chromium in 2005. Finland and Turkey are the only countries in Europe with significant chromium production.
- The price of chromite in 2005 ranged from \$170–\$195/tonne, depending on grade. The price of ferrochromium continued to rise in 2005 before leveling off and decreasing toward the end of the year largely due to reduced stainless steel production in the second half of 2005. Ferro-chrome traded at \$0.60–\$0.81/lb, depending on type; the price of chromium metal increased from 2004 trading in the range of \$5300/tonne–\$7000/tonne (alumino-thermic, min. 99% in warehouse) during 2005.

**EU31 Production of chromium ores and concentrates 2005**



## Production of chromium ores and concentrates

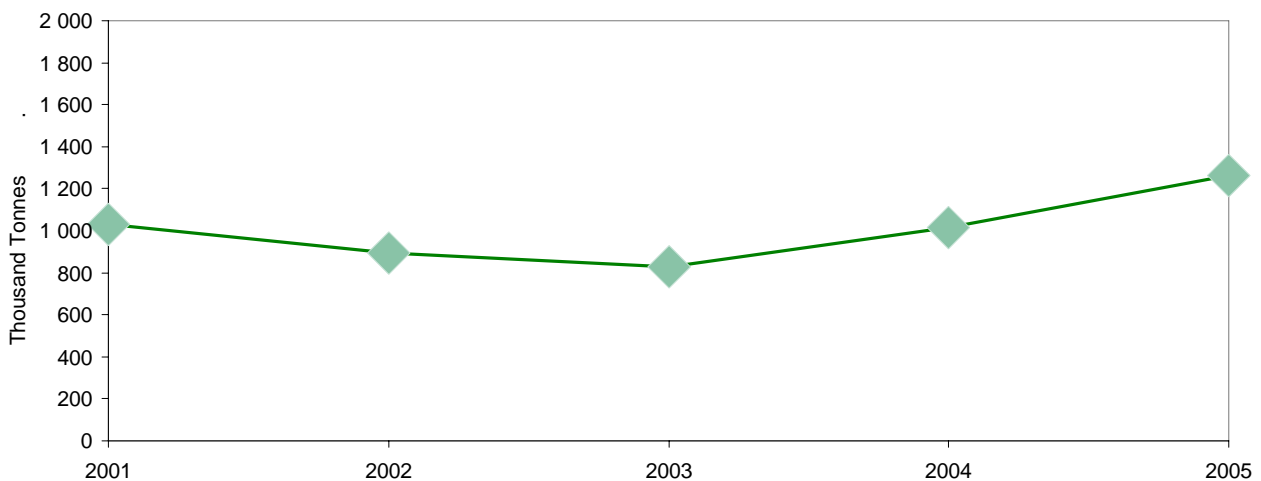
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Country	2001	2002	2003	2004	2005
Finland	575 126	566 090	549 000	580 000	572 000
Turkey	454 549	326 390	281 783	436 639	688 377
<b>EU31 Total</b>	<b>1 030 000</b>	<b>892 000</b>	<b>831 000</b>	<b>1 017 000</b>	<b>1 260 000</b>

Note(s):-

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

**EU31 Production of chromium ores and concentrates 2001 - 05**





## Exports of chromium

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Ores & concentrates	647	896	1 155	392	276
Metal	2 858	4 506	5 485	7 194	8 893
Belgium-Luxembourg					
Ores & concentrates	17 051	9 510	5 491	2 433	10 777
Metal	318	262	660	852	782
Czech Republic					
Metal	1	88	338	364	109
Denmark					
Metal	964	496	521	661	703
Estonia					
Metal	200	12	148	...	...
Finland					
Ores & concentrates	354	281	612	708	841
France					
Ores & concentrates	2 129	2 835	2 879	2 928	2 340
Metal	6 634	5 056	4 498	7 182	8 074
Germany					
Ores & concentrates	6 771	11 760	3 666	12 691	14 188
Metal	225	762	2 096	1 256	1 478
Greece					
Ores & concentrates	5 067	...	...	21	249
Italy					
Ores & concentrates	5 558	3 014	2 638	3 803	4 673
Metal	815	407	1 993	4 184	1 070
Netherlands					
Ores & concentrates	58 219	46 386	52 636	58 623	72 062
Metal	812	1 282	1 817	2 655	3 543
Norway					
Metal	3	13	141	413	116
Poland					
Ores & concentrates	145	1 533	...	117	25
Metal	140	73	181	0	1
Slovakia					
Metal	2 869	2 511	2 289	2 362	1 876
Spain					
Ores & concentrates	678	1 040	947	2 113	1 314
Metal	1 569	2 679	1 126	905	709
Sweden					
Metal	...	...	...	...	55
Switzerland					
Metal	156	31	66	319	249
Turkey					
Ores & concentrates	321 047	265 296	363 699	575 030	834 034
Metal	279	249	20	33	238
United Kingdom					
Ores & concentrates	170	26	212	622	228
Metal	4 609	3 837	4 173	4 776	4 547

Note(s):-

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

## Imports of chromium

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Ores & concentrates	37 321	28 384	36 348	26 761	21 398
Metal	1 713	1 808	2 337	3 731	4 440
Belgium-Luxembourg					
Ores & concentrates	5 789	4 179	4 644	6 094	18 464
Metal	629	664	765	821	1 245
Croatia					
Ores & concentrates	908	287	341	459	537
Metal	6	160	200	279	54

## Chromium

Imports continued

tonnes

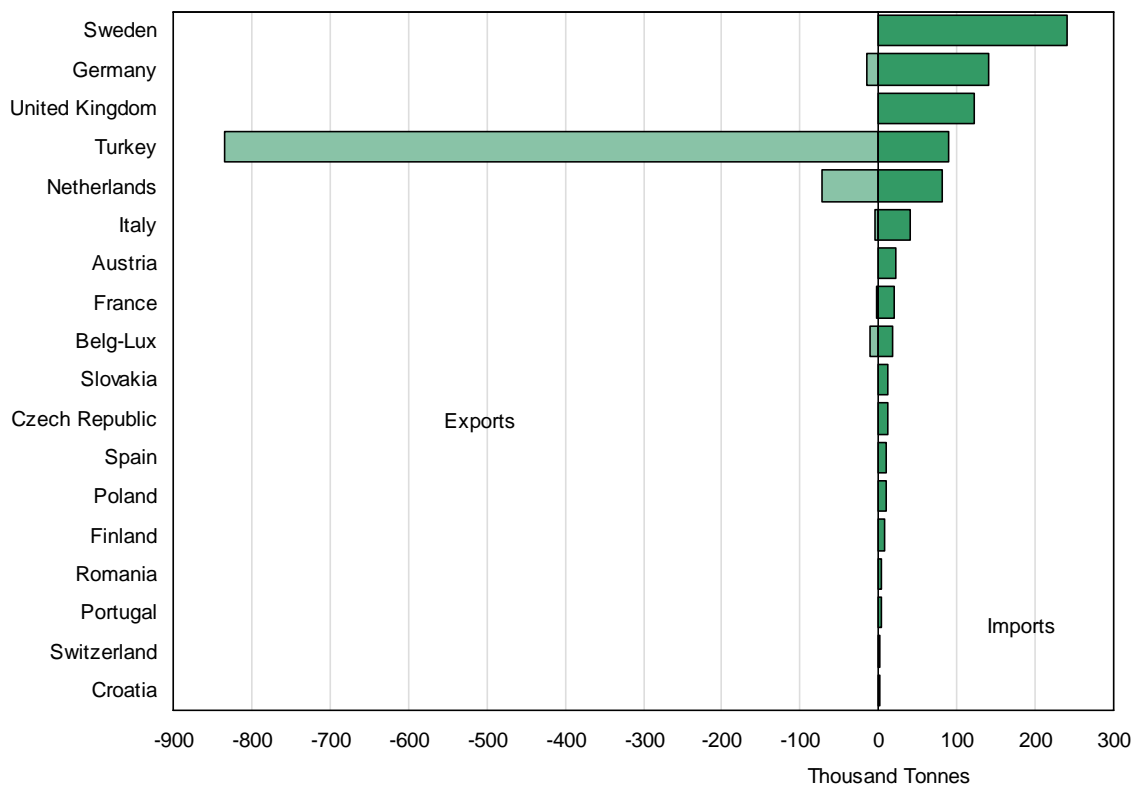
Country	2001	2002	2003	2004	2005
Czech Republic					
Ores & concentrates	15 054	11 655	10 674	11 365	12 440
Metal	12	14	66	60	149
Denmark					
Ores & concentrates	512	1 496	920	614	53
Metal	19	63	106	90	53
Estonia					
Metal	204	0	140	8	23
Finland					
Ores & concentrates	7 174	4 294	6 050	6 092	6 962
Metal	174	87	190	164	258
France					
Ores & concentrates	26 693	22 534	22 917	19 770	18 980
Metal	699	782	677	1 323	669
Germany					
Ores & concentrates	130 485	114 806	126 278	128 886	141 483
Metal	2 257	3 291	4 063	5 599	5 428
Greece					
Ores & concentrates	231	360	218	122	477
Hungary					
Ores & concentrates	549	651	593	367	388
Metal	85	65	82	68	0
Irish Republic					
Metal	26	19	27	25	40
Italy					
Ores & concentrates	82 769	56 835	26 802	30 872	39 999
Metal	549	544	520	677	958
Netherlands					
Ores & concentrates	73 730	62 992	52 353	88 660	80 622
Metal	1 359	562	310	612	1 838
Norway					
Ores & concentrates (a)	*176 000	*51 000	*600	*400	*500
Metal	89	53	47	88	92
Poland					
Ores & concentrates	26 128	8 461	10 977	13 053	9 391
Metal	20	18	29	242	54
Portugal					
Ores & concentrates	2 569	2 334	2 062	1 547	2 599
Romania					
Ores & concentrates	2 405	3 869	2 701	2 562	2 828
Metal	22	60	70	58	245
Slovakia					
Ores & concentrates	28 803	16 766	12 624	24 479	12 475
Metal	58	103	179	2	55
Slovenia					
Ores & concentrates	722	451	340	406	446
Metal	18	10	26	31	122
Spain					
Ores & concentrates	9 141	2 585	5 799	3 947	10 262
Metal	1 202	666	921	1 519	1 308
Sweden					
Ores & concentrates	200 000	280 000	215 000	457 000	240 000
Metal	1 275	1 265	823	1 903	1 150
Switzerland					
Ores & concentrates	818	525	716	671	624
Metal	112	116	110	141	127
Turkey					
Ores & concentrates	101 278	68 832	82 452	56 836	89 844
Metal	12	19	19	85	26
United Kingdom					
Ores & concentrates	135 369	139 748	107 161	130 841	122 042
Metal	1 601	1 171	1 612	2 321	1 723

Note(s) :-

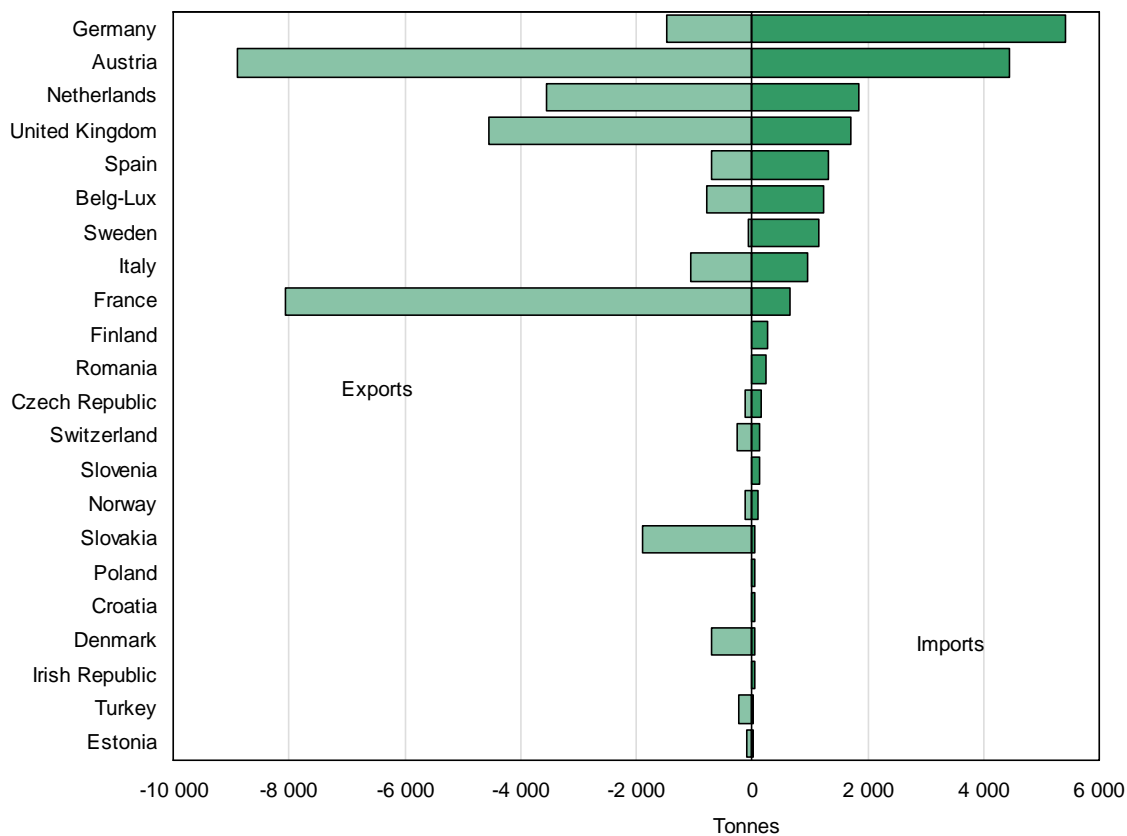
(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-Alloys

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

**Chromium ores and concentrates – EU31 trade in 2005**

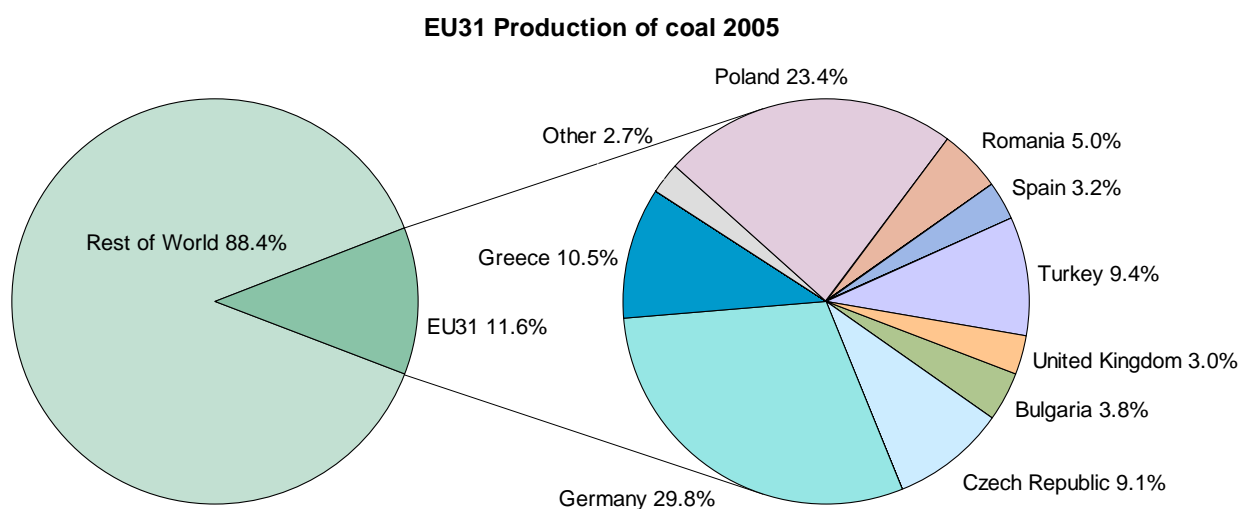


**Chromium metal – EU31 trade in 2005**



## Coal

- Coal is a combustible rock, composed of lithified plant remains. It is an important source of energy throughout the world.
- Coal has two predominant end uses. Steam coal (or thermal coal) is burnt in power stations for electricity generation and is also used for other domestic and industrial purposes. Coking coal, which commands a higher price, is used in the steel industry to de-oxidise iron ore in the blast furnace. Both black coal (anthracite+bituminous) and brown coal (lignite) are used as steam coal; only bituminous coal is used as coking coal.
- In 2005 the EU31 countries produced 12% of the world's coal (all types) of which more than half was contributed by Germany and Poland. Overall production fell by 21.9 million tonnes (3%) between 2001 and 2005, with the UK recording a decline in production of 36%.
- Following strong price rises in recent years for internationally traded steam coal imported into Europe, prices fell back slightly in 2005 to around £32/tonne. European producers are generally able to charge above the import prices due to their proximity to power stations.



## Production of coal

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Anthracite & bituminous	...	...	...	...	7 793
Brown coal & lignite	(a) 1 193 970	(a) 1 411 824	(a) 1 152 389	(a) 235 397	6 138
Bulgaria					
Anthracite & bituminous	115 000	122 000	53 000	170 000	...
Brown coal & lignite	26 095 516	26 433 500	27 641 000	26 455 000	(a) 26 200 000
Czech Republic					
Bituminous	14 808 000	14 097 000	13 382 000	14 648 000	12 778 000
Lignite	507 000	501 000	470 000	450 000	467 000
Brown coal	51 036 000	48 834 000	49 920 000	47 840 000	48 658 000
France					
Anthracite & bituminous	1 972 000	1 483 000	1 728 000	200 000	—
Lignite	324 000	147 000	9 000	—	—
Germany					
Anthracite & bituminous	27 361 079	26 363 084	25 873 043	25 871 882	24 906 867
Brown coal	175 364 780	181 778 432	179 086 923	181 926 060	177 881 773
Greece					
Lignite	66 621 437	71 087 609	69 410 756	71 237 228	71 700 000
Hungary					
Bituminous	635 200	660 000	667 126	280 000	—
Lignite	8 043 062	7 573 971	8 564 000	8 470 258	8 153 968
Brown coal	5 392 000	4 530 000	4 128 000	2 500 000	1 426 000
Italy					
Lignite	130 000	100 000	...	...	...
Norway					
Bituminous (b)	1 787 784	2 131 691	2 944 000	3 018 500	1 667 000
Poland					
Bituminous	103 991 700	103 546 000	103 016 400	100 087 100	97 903 730
Lignite	59 557 400	58 209 600	60 919 100	61 197 500	61 636 445

Production continued

tonnes

Country	2001	2002	2003	2004	2005
Romania					
Anthracite & bituminous	4 033 000	3 976 000	3 309 000	*3 000 000	*3 000 000
Brown coal & lignite	30 750 000	28 015 000	31 121 000	31 792 000	31 122 000
Slovakia					
Brown coal	3 421 100	3 406 400	3 076 100	2 578 273	2 513 030
Slovenia					
Brown coal & lignite	4 133 000	4 684 710	4 828 786	4 807 302	4 539 556
Spain					
Anthracite	4 693 831	4 399 365	3 857 364	3 692 220	3 888 638
Bituminous	5 797 496	5 349 027	5 547 150	5 220 407	4 664 589
Sub-bituminous	3 456 000	3 537 710	3 182 572	3 426 001	5 854 014
Lignite	8 787 000	8 726 121	7 977 546	8 146 908	7 587 113
Turkey					
Anthracite	3 369 727	3 312 690	3 090 458	2 842 952	2 785 505
Bituminous	55 860	118 235	336 714	738 915	737 701
Lignite	58 172 982	49 626 612	43 749 420	43 754 159	60 867 574
United Kingdom					
Bituminous (c)	31 930 000	29 989 000	28 279 000	25 096 000	20 498 000
<b>EU31 Total</b>	<b>703 500 000</b>	<b>694 200 000</b>	<b>687 400 000</b>	<b>679 800 000</b>	<b>681 600 000</b>

Note(s):-

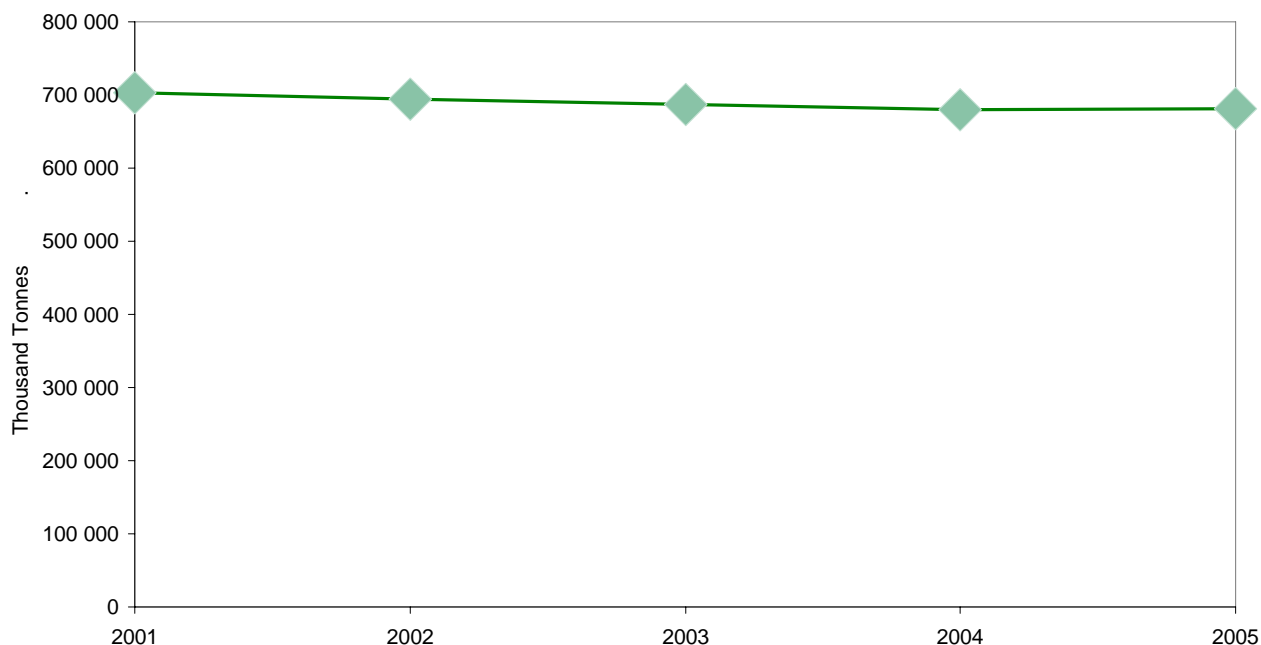
(1) There is no international agreement as to the separate definition of lignite and brown coal. In some cases they are distinguished. Elsewhere both may be aggregated under one or other term

(a) Coal; all forms

(b) Spitzbergen: not including production from mines controlled by the former Soviet Union

(c) Including anthracite

EU31 Production of coal 2001 - 05



## Coal

**Exports of coal**

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg					
Anthracite	1 029 455	940 201	999 793	1 399 280	1 463 646
Other coal	1 309 947	1 783 567	1 777 869	2 273 223	2 948 838
Briquettes	15 955	43 484	19 122	...	11 682
Czech Republic					
Hard coal (a)	5 712 522	5 680 003	5 668 451	5 706 798	5 260 739
Lignite	2 977 065	1 770 888	1 082 961	1 072 275	1 324 025
Briquettes	168 874	188 383	191 650	160 823	148 966
Denmark					
Hard coal	100 160	97 862	6 665	7 380	86 739
Estonia					
Hard coal (a)	33 648	37 954	5 875	...	...
France					
Anthracite	15 698	26 834	9 324	1 077	14 913
Other coal	69 544	94 865	74 343	93 265	68 197
Germany					
Hard coal (a)	105 443	49 449	182 233	183 694	255 029
Brown coal	304 061	273 953	71 777	430	73
Briquettes	218 890	173 867	156 179	87 651	74 800
Greece					
Briquettes	404	40 046	71 510	67 701	51 752
Hungary					
Lignite	...	...	13 966	81 047	366 132
Irish Republic					
Briquettes	20 787	20 130	21 151	18 049	13 103
Italy					
Hard coal (a)	54 884	33 141	17 124	92 227	66 115
Netherlands					
Anthracite	272 320	162 820	206 426	161 320	165 918
Other coal	13 104 257	6 539 589	5 574 363	8 624 870	8 445 919
Briquettes	977	13 472	1 362	71 710	58 241
Poland					
Anthracite	79 908	6 677	71 646	8 599	23 331
Other coal	22 946 136	22 608 910	20 044 204	19 684 005	20 816 121
Lignite	14 789	41 287	35 824	26 929	8 211
Spain					
Anthracite	7 146	12 173	47 185	48 710	49 563
Turkey					
Anthracite	35 713	12 062	9 540	11 077	10 324
United Kingdom					
Anthracite	272 985	187 372	180 382	172 486	169 252
Other coal	309 560	341 626	352 620	439 930	380 426
Lignite	...	...	...	...	2 321
Briquettes	77 184	64 094	60 172	41 094	20 713

Note(s):-

(1) This table excludes bunker shipments

(a) Including anthracite

## Imports of coal

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Hard coal (b)	3 846 806	3 993 504	3 965 922	3 552 594	4 108 821
Brown coal	52 745	61 439	59 077	38 833	2 139
Briquettes	108 786	76 354	84 343	83 035	96 318
Belgium-Luxembourg					
Anthracite	1 138 122	3 412 532	3 439 165	4 134 160	3 293 344
Other coal	9 829 971	8 263 921	8 342 288	9 728 235	8 997 265
Brown coal	232 063	244 300	219 162	232 809	229 192
Briquettes	52 887	53 715	14 717	3 924	14 120
Bulgaria					
Anthracite	1 928 500	1 173 622	1 396 246	1 464 605	2 016 911
Other coal	1 758 266	2 315 367	3 038 589	2 784 512	2 270 525
Croatia					
Hard coal	642 574	281 298	1 034 849	1 218 407	957 899
Lignite	84 520	34 807	69 679	79 921	77 959
Briquettes	18 278	65 401	22 828	2 981	4 734
Cyprus	85 931	71 734	21	...	3
Czech Republic					
Anthracite	6 258	19 893	15 177	52 247	43 713
Other coal	1 196 643	1 199 062	1 265 727	1 642 568	1 192 214
Denmark					
Anthracite	81 874	120 888	92 434	77 502	52 143
Other coal	6 916 611	6 087 316	9 126 099	7 487 269	5 881 938
Estonia					
Hard coal (b)	126 569	59 183	60 731	44 399	53 647
Finland					
Hard coal (b)	6 174 441	5 788 973	10 145 037	8 283 891	4 724 392
France					
Anthracite	1 049 738	1 323 661	1 557 639	2 076 592	3 266 840
Other coal	13 508 122	13 960 659	15 082 984	17 619 595	16 234 759
Lignite	60 810	23 470	41 784	40 405	34 396
Briquettes	98 610	74 423	68 883	75 872	116 845
Germany					
Anthracite	846 310	775 851	1 143 311	1 413 902	991 877
Other coal	27 397 137	26 629 962	25 164 977	31 047 441	29 452 512
Brown coal	1 936 950	1 040 979	49 433	10 570	9 890
Briquettes	159 991	154 033	178 993	95 446	110 971
Greece					
Anthracite	22 618	47 356	51 753	37 633	35 475
Other coal	1 334 625	238 619	803 239	753 949	724 600
Hungary					
Hard coal (b)	...	874 393	1 108 289	1 347 232	498 369
Brown coal	247 929	259 129	311 845	403 297	710 417
Irish Republic					
Anthracite	282 790	163 733	164 270	100 792	60 325
Other coal	1 682 981	1 337 469	1 307 994	2 930 298	2 641 074
Briquettes	42 480	28 105	46 789	48 348	35 959
Italy					
Anthracite	155 092	193 308	243 578	338 706	369 840
Other coal	20 068 964	19 682 422	21 029 014	25 382 339	24 714 768
Latvia					
Hard coal (b)	86 754	101 680	123 844	94 896	115 720
Lithuania					
Hard coal (b)	105 625	222 485	294 938	260 684	290 058
Netherlands					
Anthracite	1 293 055	190 633	363 692	293 892	186 936
Other coal	26 951 400	18 685 529	20 158 178	22 241 661	21 958 859
Brown coal	38 959	36 923	23 782	18 294	30 769
Briquettes	16 111	13 474	24 574	15 510	58 737
Norway					
Anthracite (a)	105 585	56 263	84 858	71 785	92 673
Other coal (a)	684 305	598 378	586 775	693 106	575 921
Lignite (a)	35 000	1 308	9	67	0
Poland					
Anthracite	41 730	37 788	49 745	168 095	263 929
Other coal	1 857 741	2 729 972	2 506 316	2 231 606	3 112 462

Coal

Imports continued

tonnes

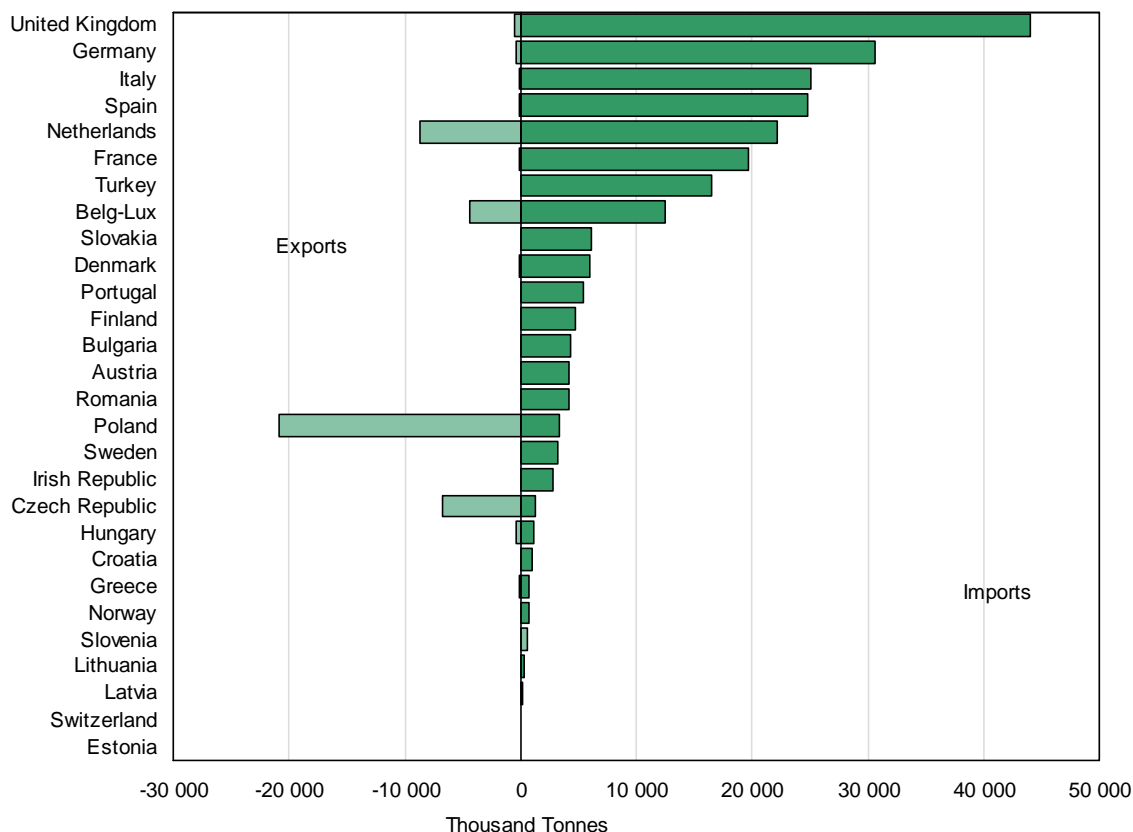
Country	2001	2002	2003	2004	2005
Portugal					
Anthracite	209 725	211 583	276 685	30 630	48 785
Other coal	4 459 459	5 627 373	5 084 416	5 241 255	5 386 968
Romania					
Anthracite	...	14 124	18 267	74 708	82 683
Other coal	(b) 3 015 063	3 658 335	3 251 154	3 584 413	3 681 406
Lignite	...	153	18 554	44 787	367 781
Slovakia					
Hard coal (b)	4 974 806	4 630 110	4 944 486	5 181 166	5 343 468
Lignite	763 850	710 943	805 556	717 562	700 503
Briquettes	5 421	3 162	1 803	20 243	33 049
Slovenia					
Hard coal (b)	28 581	34 607	54 168	38 849	51 173
Lignite	440 419	539 356	488 929	584 117	543 465
Spain					
Anthracite	1 741 429	1 729 758	2 015 985	2 376 019	2 534 019
Other coal	17 174 707	22 792 868	19 537 014	22 098 156	22 222 316
Sweden					
Anthracite	10 194	11 078	99 008	7 304	13 013
Other coal	2 758 180	2 652 007	3 081 407	3 059 218	3 187 798
Switzerland					
Anthracite	12 492	6 828	6 146	7 396	6 640
Other coal	155 809	115 061	79 125	169 472	93 584
Turkey					
Anthracite	119 373	213 743	340 165	397 125	413 333
Other coal	6 086 397	13 394 458	15 215 711	16 033 118	16 126 628
United Kingdom					
Anthracite	2 757 188	1 550 849	334 883	197 788	187 388
Other coal	32 772 976	27 110 435	31 538 546	35 958 449	43 890 778
Briquettes	11 317	17 127	7 638	8 498	6 554

Note(s) :-

(a) Excludes coal imported from Spitzbergen

(b) Including anthracite

Coal – EU31trade in 2005

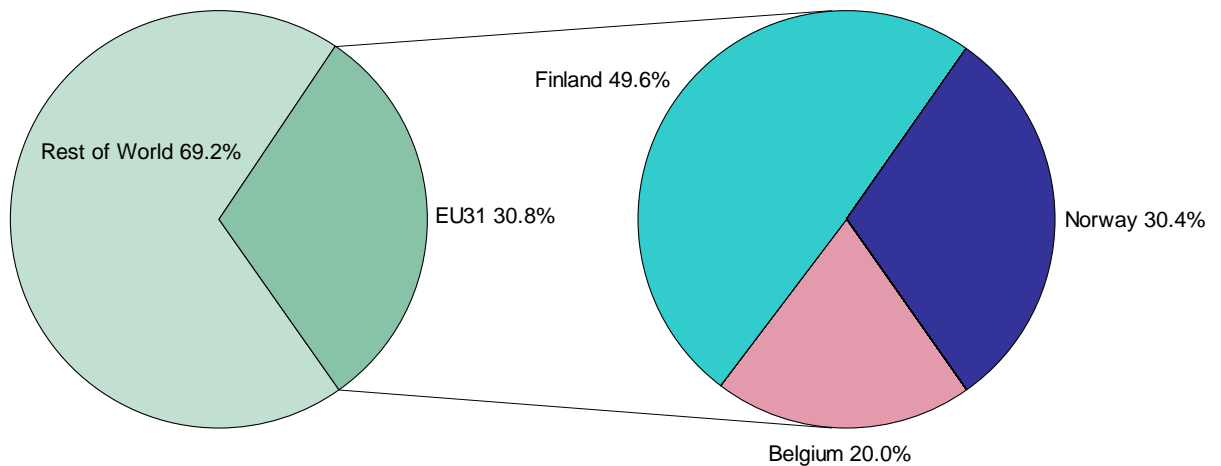




## Cobalt

- Cobalt is a magnetic, brittle, hard metallic element. Its chief uses are in alloy steels, superalloys, magnet alloys, batteries, catalysts and as the cement for carbides in tools. Cobalt compounds are used as pigments and paint-driers.
- Democratic Republic of Congo was the largest world producer in 2005 (41%), however mine production of cobalt is dominated by only five countries (Congo D.R., Zambia, Russia, Brazil and Canada). There was no mine production within the EU31. China was the world's largest producer of cobalt metal, closely followed by Finland, based on imported materials.
- The cobalt price tends to be highly volatile, usually as a result of production being concentrated in so few countries and because of its status as a byproduct metal. During the first half of 2005 availability of refined cobalt increased compared with 2004 causing cobalt prices to fall. During 2005 cobalt (min. 99.8% ingot) traded between \$12/lb and \$19/lb.

**EU31 Production of cobalt metal 2005**



### Production of cobalt metal

tonnes

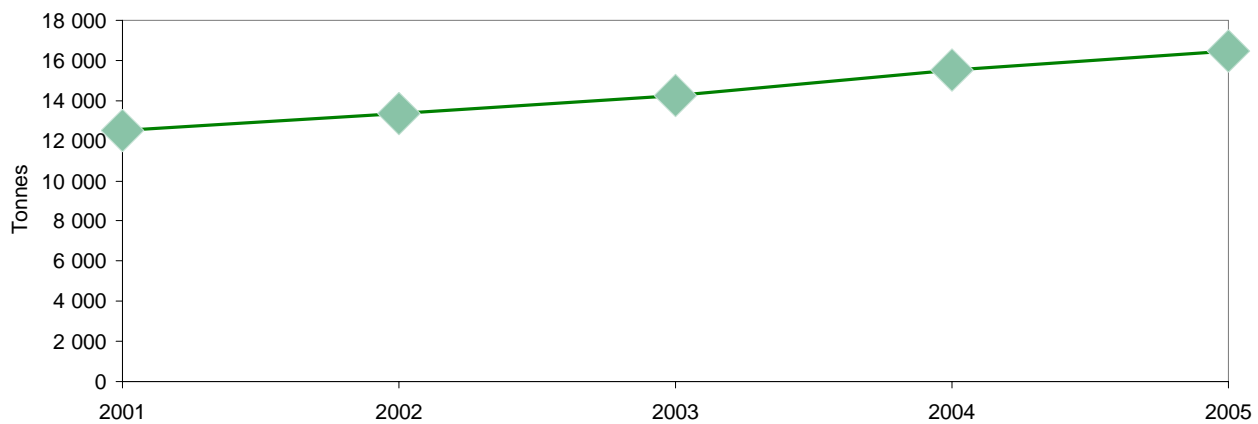
Country	2001	2002	2003	2004	2005
Belgium	*1 090	1 135	1 704	(a) 2 947	(a) 3 298
Finland	8 100	8 240	7 989	7 893	8 171
Norway	3 300	4 000	4 556	4 670	5 021
<b>EU31 Total</b>	<b>12 500</b>	<b>13 400</b>	<b>14 200</b>	<b>15 500</b>	<b>16 500</b>

Note(s):-

(1) In addition to the production listed above, several countries, including the United Kingdom, Finland and France, are known to produce substantial amounts of cobalt compounds

(a) Some metal production in China is recorded in Belgium

## EU31 Production of cobalt metal 2001 - 05



## Exports of cobalt

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	50	173	85	22	5
Belgium-Luxembourg					
Ore	104	145	381	1 064	543
Metal (a)	*3 300	*3 600	*3 800	*3 900	*3 100
Oxides (a)	*3 200	*3 800	*6 900	*2 100	*5 200
Estonia					
Metal	49	—	143	12	...
Finland					
Metal (a)	*3 600	*3 900	*4 100	*5 200	*5 800
Oxides (a)	*3 500	*3 700	*3 400	*2 100	*1 700
France					
Metal	733	516	502	675	699
Oxides	114	64	69	221	57
Germany					
Metal	1 027	901	1 116	1 441	1 395
Oxides	126	122	151	233	185
Irish Republic					
Oxides	49	119	118	11	—
Italy					
Metal	86	98	174	236	97
Oxides	126	49	63	123	63
Netherlands					
Metal	2 737	690	2 247	1 954	1 326
Oxides	459	271	150	953	1 323
Norway					
Metal	3 322	3 941	4 635	4 744	4 997
Poland					
Metal	57	1	...	26	19
Spain					
Metal	49	16	14	35	7
Oxides	2	122	8	33	59
Sweden					
Metal	110	146	117	127	127
Oxides	12	...	...	...	...
Switzerland					
Metal	205	61	104	95	140
United Kingdom					
Metal	1 855	1 120	1 546	1 882	1 471
Oxides	1 256	1 233	1 380	1 233	994

Note(s):-

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

## Imports of cobalt

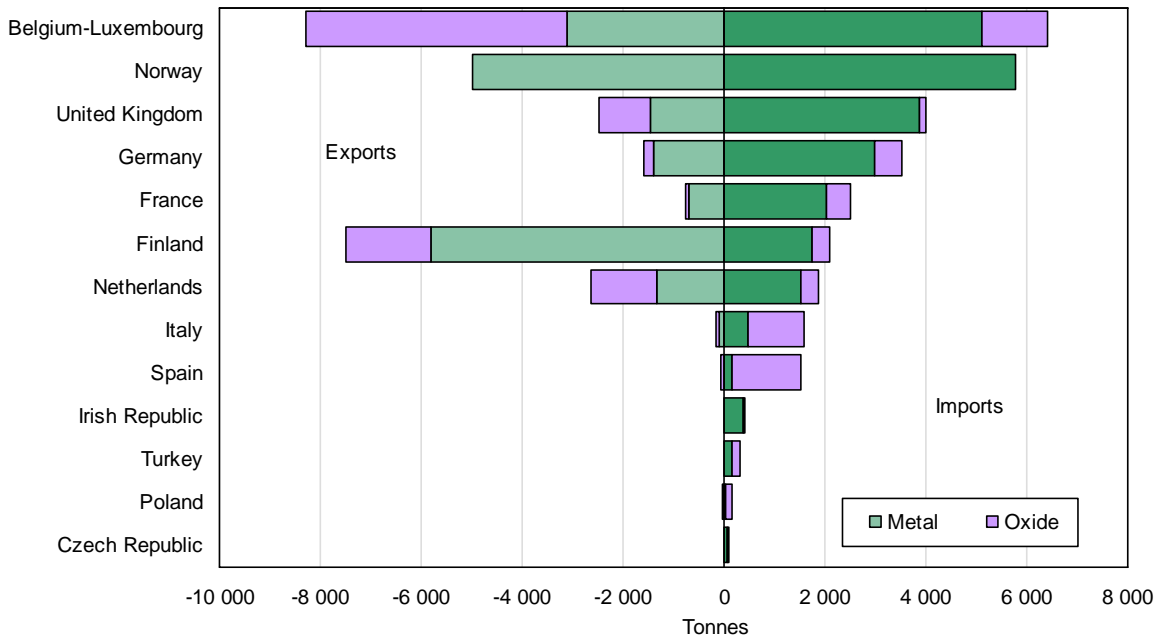
tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	415	345	30	585	694
Belgium-Luxembourg					
Ore	50	—	67	455	263
Metal (a)	*4 600	*4 800	*7 200	*6 300	*5 100
Oxides	667	644	800	1 103	(b) *1 300
Czech Republic					
Metal	41	35	54	81	75
Oxides	37	32	25	33	18
Estonia					
Metal	30	0	138	17	0
Finland					
Ore	61 785	64 274	41 707	80 202	54 794
Metal	...	(b) *400	(b) *100	(b) *700	1 759
Oxides	1	4	45	126	336
France					
Ore	69	45	9	5	1
Metal	1 723	1 654	1 813	*1 600	2 038
Oxides	471	370	533	522	474
Germany					
Metal	2 408	2 349	2 568	2 602	2 990
Oxides	301	346	439	448	542
Greece					
Metal	33	34	30	89	31
Irish Republic					
Metal	527	398	282	273	390
Oxides	45	6	3	5	13
Italy					
Ore	1	41	495	122	5
Metal	624	649	449	440	468
Oxides	1 004	1 256	966	1 004	1 128
Netherlands					
Metal	1 451	478	551	1 340	1 532
Oxides	510	570	215	369	351
Norway					
Metal	2 196	3 131	4 773	9 629	5 775
Oxides	113	41	22	4	9
Poland					
Metal	53	44	49	44	35
Oxides	38	33	16	37	121
Slovenia					
Metal	214	141	198	162	209
Spain					
Metal	228	131	171	181	158
Oxides	1 336	1 436	1 401	1 249	1 352
Sweden					
Metal	813	599	663	711	660
Switzerland					
Metal	394	342	291	361	423
Turkey					
Metal	62	88	157	170	164
Oxides	60	84	108	134	139
United Kingdom					
Metal	4 187	4 036	3 356	3 862	3 888
Oxides	641	487	582	525	107

Note(s) :-

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

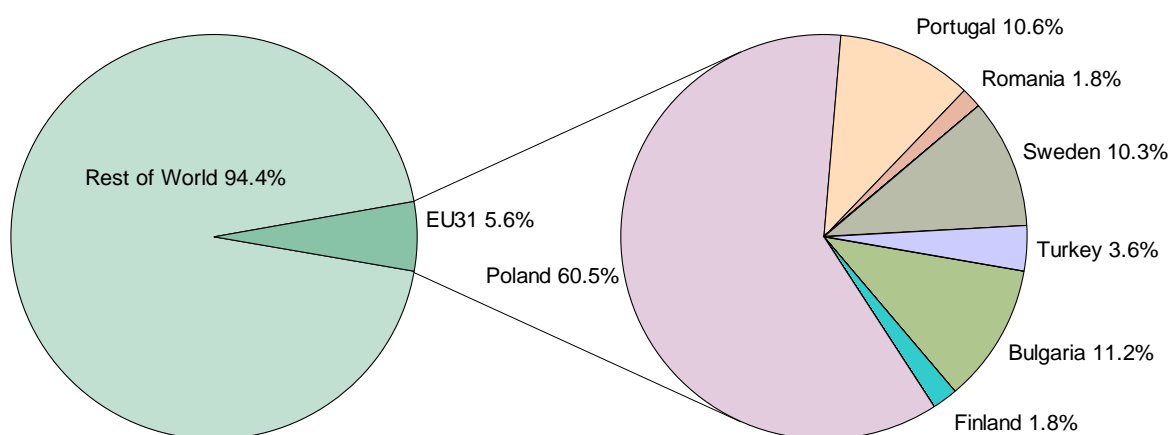
**Cobalt – EU31 trade in 2005**



## Copper

- Copper is reddish, malleable and ductile metallic element with excellent thermal and electrical conductive qualities. It is a very important industrial material and is used in the electrical, electronics, transportation and construction industries.
- Mine production in 2005 was dominated by Chile (35%) although many countries have some form of copper production. In the EU31 Poland (61%) was the largest mine producer and second largest refined metal producer, while Germany and Poland are major producers of refined copper, based on imported materials.
- Copper is widely traded and sets the unofficial benchmark for many other traded metals. Copper prices trended upwards throughout the year reaching record highs at year-end of over \$4600/tonne. Global demand continued to outstrip supply despite growth in world production of refined copper. Continued rapid growth of developing economies, especially in Asia, has led to increased demand for copper. In addition, intense fund buying and production shortfalls caused by problems at mines and smelters have caused global copper inventories to become severely depleted. The supply/demand shortfall in 2005 resulted in an annual settlement price on the LME of \$3678.89/tonne, an increase of more than 28% over 2004.

**EU31 Mine production of copper 2005**

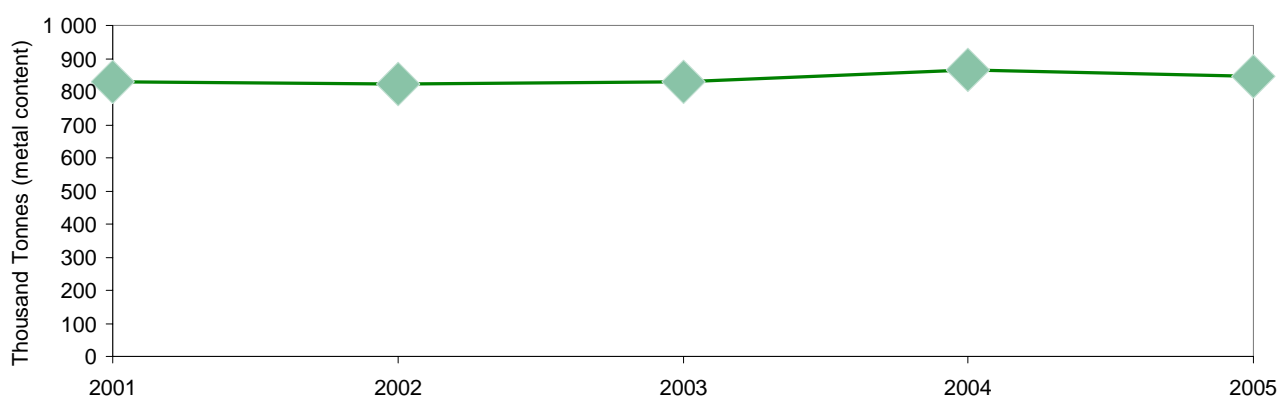


## Mine production of copper

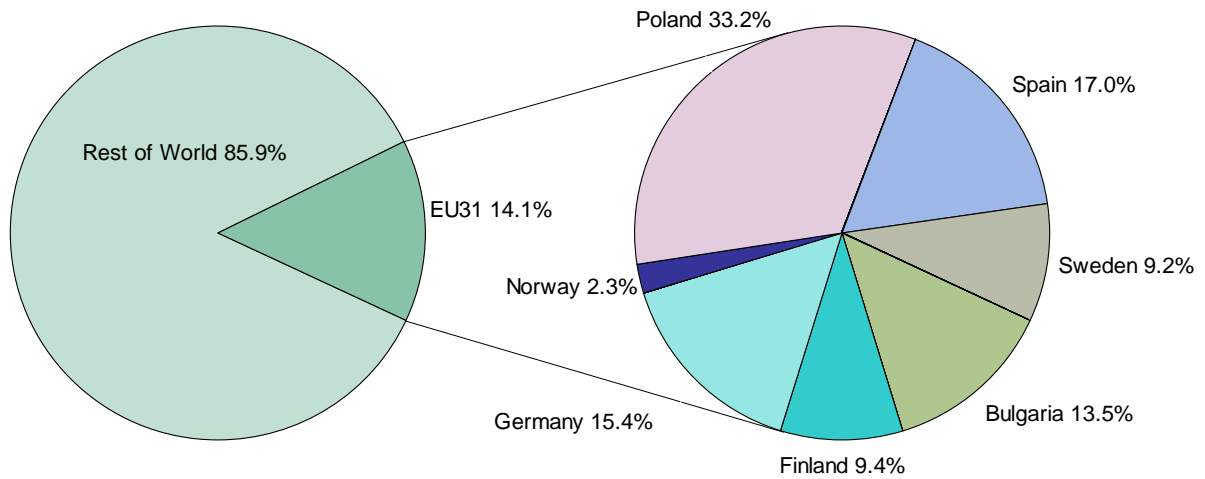
tonnes (metal content)

Country	2001	2002	2003	2004	2005
Bulgaria	97 100	84 400	80 240	79 600	94 900
Cyprus	4 600	3 700	2 500	—	—
Finland	11 600	14 400	14 900	15 500	15 500
Poland	474 000	502 800	503 544	530 768	511 799
Portugal	82 965	77 227	77 581	95 700	89 500
Romania	19 185	19 323	23 389	20 380	14 868
Spain	9 800	1 248	635	1 306	2 459
Sweden	74 269	71 991	83 143	82 415	87 068
Turkey	56 820	48 217	43 245	38 876	30 067
<b>EU31 Total</b>	<b>830 000</b>	<b>823 000</b>	<b>829 000</b>	<b>865 000</b>	<b>846 000</b>

**EU31 Mine production of copper 2001 - 05**



**EU31 Smelter production of copper 2005**



**Smelter production of copper**

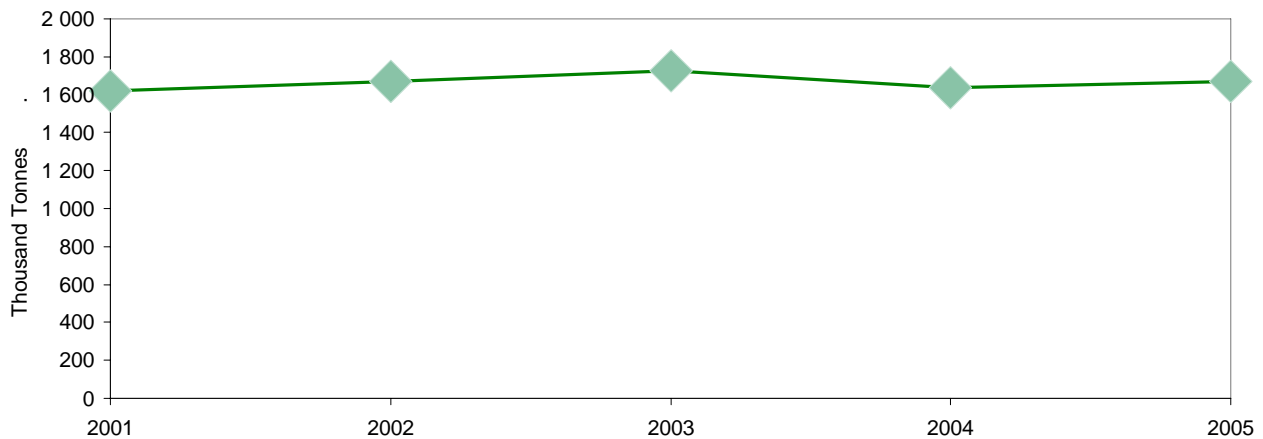
tonnes

Country	2001	2002	2003	2004	2005
Bulgaria	134 700	167 000	199 300	215 800	225 000
Finland	169 251	160 896	160 596	151 647	157 900
Germany	317 700	295 100	288 800	278 600	257 200
Norway	26 704	30 483	35 851	35 643	38 681
Poland	485 869	510 725	559 960	547 228	555 681
Romania	3 000	3 000	3 000	61	—
Spain	280 015	298 057	290 282	224 249	284 215
Sweden	179 364	186 984	175 475	174 459	153 399
Turkey	23 751	19 375	14 426	6 998	—
<b>EU31 Total</b>	<b>1 620 000</b>	<b>1 672 000</b>	<b>1 728 000</b>	<b>1 635 000</b>	<b>1 672 000</b>

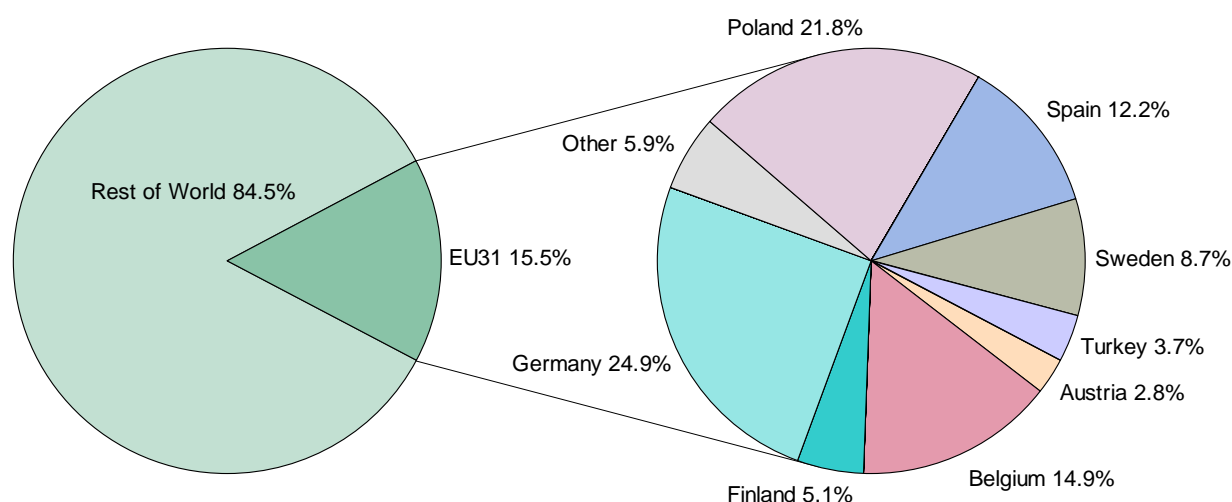
Note(s):-

(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

**EU31 Smelter production of copper 2001 - 05**



## EU31 Production of refined copper 2005



## Production of refined copper

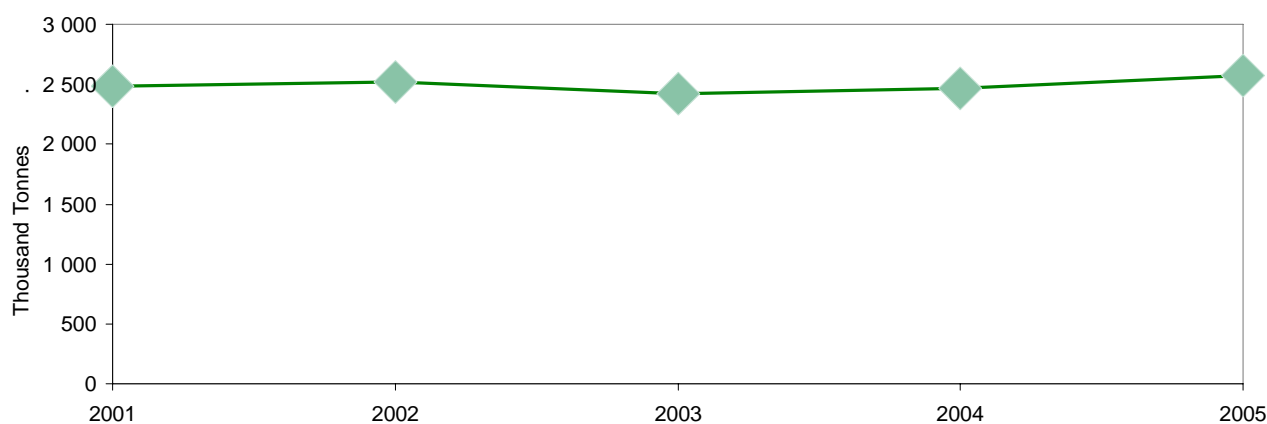
tonnes

Country	2001	2002	2003	2004	2005
Austria	66 154	64 900	65 100	74 200	72 300
Belgium	424 000	422 500	423 000	383 000	382 900
Bulgaria	34 500	40 700	45 900	55 300	60 000
Cyprus	4 604	3 695	2 552	1 344	—
Finland	115 500	126 016	135 713	132 384	132 126
Germany	693 714	695 741	597 531	652 600	638 800
Italy	30 200	32 400	26 700	33 600	32 200
Norway	26 700	30 600	35 852	35 643	38 681
Poland	498 451	508 674	529 616	550 066	560 256
Romania	17 654	11 453	16 739	24 526	20 739
Slovakia	10 584	6 989	600	—	—
Spain	290 630	312 145	293 495	228 466	313 105
Sweden	216 237	224 402	214 181	235 620	223 482
Turkey	58 400	41 000	36 900	63 000	95 000
<b>EU31 Total</b>	<b>2 487 000</b>	<b>2 521 000</b>	<b>2 424 000</b>	<b>2 470 000</b>	<b>2 570 000</b>

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

## EU31 Production of refined copper 2001 - 05



## Exports of copper

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Unwrought	84 765	74 370	81 897	71 119	83 750
Unwrought alloys	1 121	916	907	580	604
Scrap	18 439	25 765	25 606	36 476	33 274
Belgium-Luxembourg					
Matte & cement	631	15 222	...	493	...
Unwrought, unrefined	12 322	3 537	10 521	19 942	4 499
Unwrought, refined	240 995	201 367	336 637	169 556	241 363
Unwrought alloys	20 265	14 815	21 710	13 556	14 463
Scrap	136 612	127 668	152 584	169 397	177 787
Bulgaria					
Ores & concentrates	96 065	83 032	72 861	78 563	124 717
Matte & cement	1 291	4 233	4 356	6 718	5 750
Unwrought	151 681	173 720	218 482	219 415	219 009
Scrap	8 736	9 459	9 507	9 480	8 244
Croatia					
Scrap	6 506	7 001	7 497	9 613	10 814
Cyprus					
Unwrought	5 015	3 697	2 610	1 322	...
Scrap	1 307	2 808	1 266	2 221	2 548
Czech Republic					
Unwrought	1 909	1 712	978	7 834	4 251
Scrap	39 516	38 121	36 874	53 086	53 707
Denmark					
Scrap	39 979	37 058	39 487	38 573	27 227
Estonia					
Scrap	7 981	7 285	6 857	6 479	6 660
Finland					
Unwrought, unrefined	51 804	43 523	33 180	25 618	29 685
Unwrought, refined	19 935	37 256	34 333	27 650	40 170
Unwrought alloys	1 382	1 002	724	903	746
Scrap	14 032	16 462	19 693	23 543	30 577
France					
Unwrought	27 912	15 723	32 947	60 745	48 050
Unwrought alloys	11 581	9 283	6 585	11 940	9 851
Scrap	190 041	192 020	180 294	243 074	262 874
Germany					
Ores & concentrates	19 053	15 630	48 674	49 617	46 139
Unwrought, unrefined	4 989	2 215	1 592	53	232
Unwrought, refined	108 224	90 919	117 566	137 238	149 083
Unwrought alloys	27 379	26 876	21 421	21 038	20 232
Scrap	261 464	300 340	363 762	373 809	439 134
Greece					
Scrap	6 558	6 520	9 460	8 517	15 126
Hungary					
Scrap	19 952	17 867	27 405	31 741	34 861
Irish Republic					
Scrap	8 835	9 043	17 824	16 118	13 152
Italy					
Matte & cement	4 377	5 982	561	366	...
Unwrought	28 074	7 528	13 371	22 988	6 387
Unwrought alloys	16 851	12 631	12 110	16 772	14 128
Scrap	55 930	46 184	53 184	97 964	110 711
Latvia					
Scrap	8 160	7 775	6 329	7 153	9 207
Lithuania					
Scrap	10 016	9 719	8 383	7 611	5 821
Netherlands					
Unwrought	5 444	10 075	18 605	32 548	39 638
Scrap	100 488	101 624	109 595	140 909	207 551
Norway					
Unwrought	24 681	32 302	35 392	35 632	37 430
Unwrought alloys	1 665	1 421	1 195	988	1 707
Scrap	17 394	15 814	25 382	21 256	22 667



Exports continued

tonnes

Country	2001	2002	2003	2004	2005
Poland					
Unwrought	226 889	279 803	278 113	275 089	290 462
Unwrought alloys	4 680	5 020	5 329	5 007	6 183
Scrap	22 351	22 529	40 542	42 763	47 463
Portugal					
Ores & concentrates	368 150	196 709	286 781	346 534	375 312
Unwrought	36	415	747	1 165	9 356
Scrap	14 353	18 236	24 440	35 927	33 583
Romania					
Ores & concentrates	64 002	87 299	94 668	81 485	84 084
Unwrought	14 740	3 826	1 185	815	614
Scrap	9 417	19 432	16 683	15 979	22 665
Slovakia					
Unwrought	1 280	1 151	7 094	15 680	19 130
Scrap	5 475	7 711	8 889	12 764	14 752
Slovenia					
Scrap	7 999	8 615	10 550	12 564	13 054
Spain					
Ores & concentrates	79 561	6 756	2 682	4 327	14 434
Unwrought, unrefined	35 090	21 126	37 437	50 901	62 269
Unwrought, refined	23 785	23 999	46 677	32 366	44 365
Unwrought alloys	7 465	7 124	9 747	11 724	9 810
Scrap	52 154	72 157	62 879	77 850	99 600
Sweden					
Unwrought, refined	70 682	91 869	77 216	81 878	99 824
Unwrought alloys	8 827	6 486	7 104	5 040	5 247
Scrap	29 680	34 747	35 982	44 366	43 816
Switzerland					
Unwrought	128	907	1 163	1 872	10 691
Scrap	58 356	55 491	56 398	69 243	74 878
Turkey					
Ores & concentrates	136 702	209 656	151 667	180 609	145 118
Unwrought	20 176	22 324	18 709	12 846	13 187
Scrap	6 855	9 897	18 492	4 529	14 977
United Kingdom					
Ore & matte	11 075	10 724	2 729	127	54
Unwrought	10 315	32 276	2 924	7 362	16 253
Unwrought alloys	23 808	26 666	24 121	22 035	15 013
Scrap	156 121	163 579	210 169	244 749	238 557

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

## Imports of copper

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Unwrought, unrefined	—	—	—	15 203	20 081
Unwrought, refined	35 845	24 707	29 479	18 429	21 176
Unwrought alloys	3 164	2 555	3 103	2 460	2 260
Scrap	59 281	80 512	82 015	87 807	82 787
Belgium-Luxembourg					
Matte & cement	16	—	9	4 799	370
Unwrought, unrefined	148 800	209 172	291 190	291 111	237 645
Unwrought, refined	44 050	36 907	58 266	17 318	9 515
Unwrought alloys	3 657	1 659	1 641	1 510	1 906
Scrap	245 104	261 567	225 822	256 504	257 738
Bulgaria					
Ores & concentrates	316 840	281 687	454 875	561 613	632 255
Unwrought	15 655	8 392	3 880	8 599	18 613
Scrap	919	1 919	2 722	2 935	5 094

## Copper

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Czech Republic					
Unwrought	18 434	12 110	6 326	5 644	4 551
Scrap	2 759	1 656	2 080	5 601	6 114
Denmark					
Unwrought	2 600	2 560	2 324	2 065	1 702
Scrap	12 798	12 564	18 332	16 446	13 827
Finland					
Ores & concentrates	503 460	500 798	543 488	528 930	504 658
Unwrought, refined	5 489	347	82	11	35
Unwrought alloys	3 899	3 796	4 311	2 778	3 229
Scrap	3 624	3 190	2 472	1 735	2 423
France					
Matte & cement	390	58	1 651	386	19
Unwrought, unrefined	177	253	118	168	248
Unwrought, refined	564 415	576 398	578 525	590 304	516 881
Unwrought alloys	12 858	13 722	8 308	7 564	10 132
Scrap	70 698	65 362	70 422	78 853	75 464
Germany					
Ores & concentrates	1 034 722	1 037 247	880 332	1 141 843	1 149 088
Matte & cement	3 070	2 389	33 896	15 085	25 931
Unwrought, unrefined	26 579	38 455	17 319	11 635	36 671
Unwrought, refined	527 947	459 451	516 590	584 852	624 688
Unwrought alloys	35 661	26 887	38 410	24 066	26 657
Scrap	390 731	438 312	379 726	426 995	432 147
Greece					
Unwrought	129 818	126 027	107 425	120 088	90 557
Unwrought alloys	590	699	843	550	488
Scrap	2 627	2 672	1 979	1 864	930
Hungary					
Unwrought	19 937	18 994	14 327	11 365	3 269
Scrap	5 370	3 483	502	512	500
Irish Republic					
Scrap	1 080	1 087	514	16	27
Italy					
Unwrought, unrefined	1 455	636	310	216	955
Unwrought, refined	649 687	643 386	650 757	700 101	652 089
Unwrought alloys	21 575	19 779	21 862	16 723	8 053
Scrap	168 541	188 238	164 700	128 501	124 737
Netherlands					
Unwrought, unrefined	4	11	2 867	10 185	10 485
Unwrought, refined	123 138	156 095	123 682	125 310	135 004
Unwrought alloys	1 612	1 725	1 326	2 172	1 904
Scrap	65 053	70 660	80 262	98 396	92 927
Norway					
Unwrought	3 500	3 645	1 190	2 594	3 190
Scrap	7 647	7 609	12 591	11 270	12 420
Poland					
Ores & concentrates	...	5 397	...	30	43 504
Unwrought	2 135	1 484	2 257	3 071	7 118
Scrap	3 722	5 203	6 001	14 973	5 855
Portugal					
Unwrought	3 637	4 307	6 245	7 740	4 572
Scrap	1 265	838	1 383	1 874	3 329
Romania					
Unwrought	25 611	12 248	2 225	7 255	9 723
Slovakia					
Matte & cement	...	170	104	758	4 342
Unwrought	11 071	11 400	3 689	1 269	1 718
Scrap	5 462	5 604	8 448	20 776	19 977
Slovenia					
Unwrought	3 226	4 005	3 835	2 948	2 764
Scrap	3 300	3 119	3 787	3 743	5 762

Imports continued

tonnes

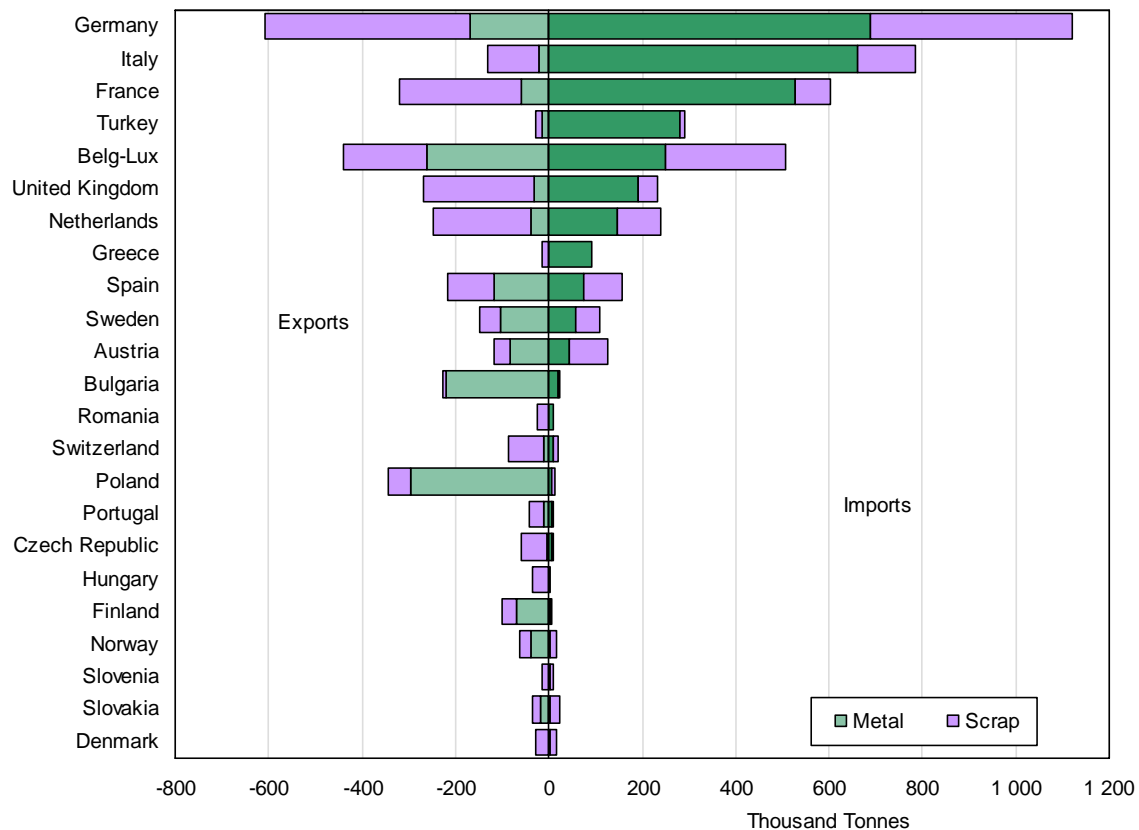
Country	2001	2002	2003	2004	2005
<b>Spain</b>					
Ores & concentrates	902 428	1 057 377	1 052 115	776 980	1 040 099
Unwrought, unrefined	16 024	9 150	15 283	2 488	312
Unwrought, refined	42 505	28 095	33 781	74 277	69 039
Unwrought alloys	6 461	7 256	4 444	5 254	4 458
Scrap	82 473	83 664	57 315	112 934	84 824
<b>Sweden</b>					
Ores & concentrates	324 398	349 409	300 566	340 858	311 085
Unwrought, unrefined	29	36	3	2	15 452
Unwrought, refined	49 088	36 976	48 468	34 912	40 106
Unwrought alloys	3 815	4 622	2 947	2 762	2 926
Scrap	31 373	43 544	52 091	76 672	50 940
<b>Switzerland</b>					
Unwrought	8 621	5 899	5 206	6 779	4 734
Unwrought alloys	3 777	3 300	3 496	4 481	3 897
Scrap	13 800	8 406	9 469	11 881	9 937
<b>Turkey</b>					
Ores & concentrates	45 075	61 302	54 573	10 370	44 633
Unwrought, unrefined	12 815	7 117	100	29 555	53 214
Unwrought, refined	135 015	205 955	229 159	217 290	223 978
Unwrought alloys	321	1 107	3 768	4 685	3 212
Scrap	5 522	7 061	29 803	34 975	9 629
<b>United Kingdom</b>					
Unwrought, unrefined	290	89	14	122	1 978
Unwrought, refined	310 894	316 578	245 152	214 067	181 767
Unwrought alloys	7 249	5 480	6 160	8 070	6 191
Scrap	19 651	19 240	17 378	15 731	42 264

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

### Copper – EU31 trade in 2005



## Diamond

- Diamond is a polymorph of carbon and is the hardest substance known. It is used in two main industries — jewellery, abrasives and cutting tools.
- Africa (chiefly Botswana, Congo D.R. and South Africa) dominates world production with 52% of all carats produced in 2005. However, Russia is the world's largest producing country (22% of world production). Australia is another significant diamond producer, however, its output is almost entirely industrial diamonds. There is no mine production of diamond in the EU31 but production of synthetic diamonds is important and Europe is a world centre for diamond trading.
- Gem quality diamonds are valued on an individual basis that takes into account their unique qualities and are seldom priced at less than \$1000/carats. Industrial diamond prices range from around \$0.40/carats–\$200/carats for large stones but are typically around \$10/carats.

## Exports of diamond

carats

Country	2001	2002	2003	2004	2005
Austria					
Unsorted	£128 000	£2 321 000	£319 000	£477 000	£188 000
Gem	£1 511 000	...	...	£1 665 000	£2 895 000
Dust	£418 000	£653 000	£190 000	£432 000	£406 000
Belgium-Luxembourg					
Gem, rough	122 500 000	...	131 000 000	154 000 000	147 000 000
Gem, cut	4 500 000	8 000 000	6 500 000	6 000 000	5 500 000
Industrial	8 000 000	8 000 000	10 500 000	7 000 000	5 500 000
Dust	24 500 000	39 500 000	38 000 000	42 500 000	40 000 000
France					
Unsorted	£264 000	£283 000	£398 000	£274 000	£518 000
Gem, rough	97 000	149 000	...	...	500 000
Gem, cut	1 000 000	...	1 000 000	1 500 000	1 500 000
Industrial	£3 438 000	£2 554 000	£915 000	£20 000	£50 000
Germany					
Unsorted	£230 000	£16 000	£138 000	£663 000	£756 000
Gem, rough	£90 000	£10 000	£87 000	£250 000	£619 000
Gem, cut	162 390	178 297	174 915	...	165 090
Industrial	£3 010 000	£1 166 000	£1 254 000	£974 000	£1 168 000
Dust	41 500 000	10 000 000	17 000 000	13 500 000	9 000 000
Irish Republic					
Gem, rough	5 525 000	7 285 000	5 040 000	...	...
Industrial	5 140 000	7 120 000	2 275 000	3 395 000	1 610 000
Italy					
Gem, cut	£15 342 000	£15 982 000	£21 938 000	£26 708 000	£30 464 000
Industrial	£111 000	£607 000	£228 000	£565 000	£666 000
Dust	57 190 000	104 155 000	42 170 000	49 130 000	48 455 000
Netherlands					
Unsorted	£2 026 000	£1 672 000	£1 490 000	£1 883 000	£928 000
Gem, rough	£3 000	£64 000	£437 000	—	—
Gem, cut	£7 891 000	£10 491 000	£8 511 000	£9 806 000	£8 687 000
Industrial	£2 887 000	£758 000	£813 000	£188 000	£842 000
Dust	...	£505 000	£776 000	£724 000	£44 000
Norway					
Gem, cut	21 000	60 000	...	40 000	90 000
Portugal					
Gem, rough	£37 983 000	£1 793 000	£3 650 000	£96 000	—
Gem, cut	£26 769 000	£23 412 000	£37 983 000	£45 779 000	£17 981 000
Spain					
Unsorted	375 000	...	...	25 000	80 000
Gem, cut	£1 890 000	£3 291 000	£2 606 000	£1 855 000	£5 275 000
Industrial	£1 481 000	£613 000	£245 000	£212 000	£325 000
Dust	235 000	615 000	385 000	3 765 000	3 760 000
Switzerland					
Gem, rough	1 110 000	55 000	65 000	140 000	195 608
Gem, cut	1 130 000	650 000	427 033	338 524	407 411
Industrial	35 000	40 000	66 354	18 185	13 934
Dust	80 615 000	81 580 000	95 290 000	120 790 000	126 190 000

Exports continued

carats

Country	2001	2002	2003	2004	2005
United Kingdom					
Unsorted	4 030 600	...	9 744 443	6 394 541	16 818 545
Gem, rough	69 542 709	86 681 020	104 300 972	78 613 304	76 400 064
Gem, cut	899 959	394 881	828 103	1 592 715	5 330 874
Industrial	11 861 312	7 837 074	12 177 638	22 821 714	21 647 850
Dust	88 612 930	...	75 401 755	149 415 960	124 529 495

Note(s):-

(1) Carats have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling

(2) See explanatory notes at the front of the volume regarding currency conversion

(3) In this table the term 'Dust' corresponds to item 7105.10 of the Harmonised System and includes both natural and synthetic diamond dust

## Imports of diamond

carats

Country	2001	2002	2003	2004	2005
Austria					
Unsorted	£2 616 000	£1 647 000	£1 734 000	£1 193 000	£1 254 000
Gem, cut	£4 963 000	£3 789 000	£4 329 000	£4 660 000	£5 743 000
Industrial	£461 000	£115 000	£105 000	£631 000	£706 000
Dust	33 000 000	20 000 000	15 000 000	24 000 000	23 000 000
Belgium-Luxembourg					
Unsorted	£80 231 000	£45 615 000	£36 269 000	£41 932 000	£37 971 000
Gem, rough	123 000 000	...	126 000 000	121 500 000	134 500 000
Gem, cut	8 500 000	9 500 000	6 500 000	7 500 000	6 500 000
Industrial	25 000 000	26 500 000	19 500 000	15 000 000	14 500 000
Dust	56 500 000	72 000 000	21 000 000	26 500 000	30 500 000
Czech Republic					
Unsorted	£156 000	£128 000	£187 000	£3 000	£300
Gem, rough	£141 000	£158 000	...	...	£18 000
Gem, cut	£226 000	£382 000	£802 000	£626 000	£1 046 000
Industrial	£430 000	£568 000	£360 000	£163 000	£391 000
Dust	£943 000	£886 000	£858 000	£776 000	£956 000
Denmark					
Gem, cut	£4 302 000	£4 006 000	£10 290 000	£9 319 000	£6 506 000
Finland					
Unsorted	35 000	...	...	55 000	120 000
Gem, cut	160 000	...	...	235 000	355 000
Industrial	20 000	...	...	...	...
Dust	345 000	445 000	365 000	320 000	450 000
France					
Unsorted	£5 592 000	£3 788 000	£3 728 000	£3 423 000	£3 168 000
Gem, cut	12 000 000	10 000 000	12 500 000	10 000 000	...
Industrial	1 500 000	5 500 000	3 000 000	9 000 000	...
Dust	24 000 000	10 500 000	10 500 000	10 000 000	7 500 000
Germany					
Gem, cut	476 717	556 534	431 612	481 924	439 171
Industrial	2 278 364	1 074 120	454 003	762 967	1 572 864
Dust	67 250 000	49 500 000	69 000 000	82 500 000	38 500 000
Greece					
Unsorted	£223 000	£367 000	£340 000	£625 000	£597 000
Gem, rough	£6 000	£83 000	£166 000	£145 000	£357 000
Gem, cut	£1 824 000	£1 437 000	£1 130 000	£1 701 000	£1 893 000
Industrial	£58 000	£220 000	£456 000	£771 000	£959 000
Dust	6 825 000	9 520 000	6 205 000	8 390 000	...
Hungary					
Dust	1 269 915	...	...	...	...
Irish Republic					
Unsorted	48 655 000	19 505 000	22 665 000	33 525 000	39 900 000
Gem, rough	2 140 000	...	8 225 000	1 815 000	3 815 000
Gem, cut	45 300 000	30 805 000	23 370 000	21 175 000	36 975 000
Industrial	46 820 000	95 650 000	3 930 000	26 740 000	30 680 000
Dust	£18 208 000	£27 972 000	£41 933 000	£29 021 000	£42 591 000

## Diamond

Imports continued

carats

Country	2001	2002	2003	2004	2005
Italy					
Unsorted	£1 087 000	£1 680 000	£1 138 000	£1 655 000	£2 576 000
Gem, rough	£890 000	£1 425 000	£1 241 000	£928 000	£1 591 000
Gem, cut	£236 885 000	£176 777 000	£180 528 000	£210 629 000	£235 326 000
Industrial	£6 802 000	£6 699 000	£4 647 000	£5 949 000	£5 236 000
Dust	101 940 000	147 020 000	117 845 000	135 820 000	142 000 000
Netherlands					
Unsorted	£2 021 000	£2 276 000	£1 858 000	£3 327 000	£344 000
Gem, rough	£2 135 000	£2 950 000	£828 000	£108 000	£79 000
Gem, cut	£20 034 000	£17 776 000	£13 846 000	£14 630 000	£14 764 000
Industrial	£850 000	£827 000	£940 000	£907 000	£2 009 000
Norway					
Unsorted	45 000	100 000	125 000	45 000	...
Gem	1 965 000	2 330 000	2 165 000	2 430 000	2 895 000
Industrial	90 000	80 000	80 000	75 000	135 000
Dust	220 000	500 000	105 000	310 000	230 000
Poland					
Gem	10 000	15 000	50 000	...	...
Industrial	165 000	105 000	75 000	...	...
Portugal					
Gem, rough	£20 914 000	£24 832 000	£26 362 000	£18 757 000	£10 968 000
Gem, cut	£8 758 000	£5 367 000	£3 926 000	£11 608 000	£7 015 000
Industrial	£738 000	£874 000	£803 000	£669 000	£565 000
Dust	740 000	750 000	690 000	710 000	...
Slovenia					
Gem, cut	25 000	15 000	...	...	...
Industrial	90 000	50 000	...	...	...
Dust	1 505 000	2 040 000	...	...	...
Spain					
Unsorted	£2 679 000	£4 900 000	£4 602 000	£5 431 000	£6 908 000
Gem, cut	£27 660 000	£25 162 000	£25 111 000	£41 732 000	£37 408 000
Industrial	£4 508 000	£1 674 000	£1 809 000	£1 412 000	£1 421 000
Dust	6 555 000	3 435 000	5 545 000	...	8 490 229
Sweden					
Unsorted	£84 000	£156 000	£203 000	£309 000	£220 000
Gem, cut	£3 634 000	£2 337 000	£3 456 000	£3 205 000	£2 406 000
Industrial	£116 000	£51 000	£30 000	£63 000	£258 000
Dust	£5 248 000	£2 554 000	£2 374 000	£2 823 000	£2 573 000
Switzerland					
Gem, rough	3 475 000	75 000	80 344	144 707	194 997
Gem, cut	875 000	850 000	642 870	820 021	1 130 984
Industrial	735 000	1 160 000	213 535	56 907	100 142
Dust	89 730 000	94 935 000	103 005 000	126 815 000	142 000 000
Turkey					
Gem	2 725 000	...	...	1 225 000	1 450 000
Dust	4 725 000	...	...	15 900 000	26 765 000
United Kingdom					
Unsorted	586 774	1 794 607	5 210 022	10 557 063	33 441 810
Gem, rough	81 302 570	70 336 037	77 712 486	68 227 020	78 735 595
Gem, cut	4 396 223	5 123 898	4 520 872	9 317 146	12 039 040
Industrial	7 344 542	7 804 225	21 518 053	30 993 560	25 367 064
Dust	74 756 325	68 359 660	92 290 565	126 277 015	125 510 400

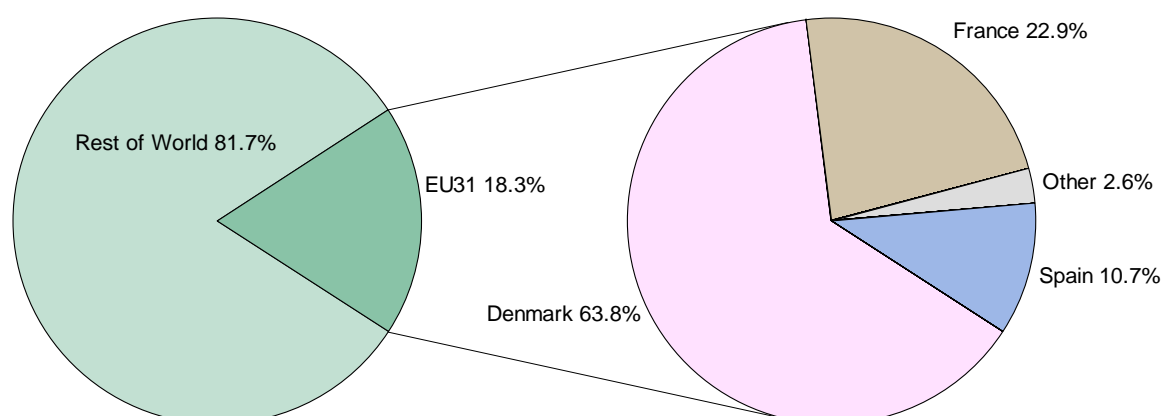
Note(s) :-

- (1) Carats have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national figure has been converted to £ sterling
- (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

## Diatomite

- Diatomite is a siliceous sedimentary rock composed of the skeletons of fossilised diatoms (microscopic plants). Clay content of the rock has a strong control on the quality of the diatomite. Diatomite is valued for its high porosity, chemical inertness and ability to absorb liquids. It is used in industry within high-quality filters, as a filler and as an industrial absorbent
- The USA is the largest producer of diatomite, with 36% of the world production. EU31 production has been reasonably stable and is dominated by Denmark, which produces 64% of EU31 diatomite. Together, the EU31 countries produced 18% of the world's diatomite in 2005.
- Diatomite (US calcined filter-aids delivered to the UK) traded between £370/tonne and £410/tonne during 2005.

**EU31 Production of diatomite 2005**



## Production of diatomite

tonnes

Country	2001	2002	2003	2004	2005
Czech Republic	5 200	5 600	4 800	5 100	4 100
Denmark					
Moler (a)	192 000	211 000	221 000	188 000	209 000
France	*85 000	*80 000	*80 000	*75 000	*75 000
Hungary	1 323	1 656	1 770	1 640	2 190
Poland	*1 000	*1 000	*700	*800	*700
Portugal	387	—	—	—	—
Romania	9 743	20 922	33 296	20 626	1 402
Spain (b)	70 000	53 558	57 934	33 799	35 000
<b>EU31 Total</b>	<b>365 000</b>	<b>374 000</b>	<b>400 000</b>	<b>325 000</b>	<b>327 000</b>

Note(s):-

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

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

(b) Including Tripoli

## EU31 Production of diatomite 2001 - 05



## Exports of diatomite

tonnes

Country	2001	2002	2003	2004	2005
Austria	5 802	5 071	4 650	5 347	5 375
Belgium-Luxembourg	3 575	3 174	1 512	1 856	1 330
Czech Republic	5 493	5 288	5 083	4 734	4 247
Denmark	*80 000	*90 000	*90 000	*90 000	*90 000
France	28 149	27 647	30 199	26 043	25 379
Germany	5 267	13 061	20 036	20 312	7 000
Hungary	264	308	284	452	12
Italy	1 776	1 194	1 217	1 745	1 138
Netherlands	1 105	6 583	1 212	1 569	804
Portugal	...	...	2 050	7 755	11
Spain	4 467	6 829	5 385	5 278	6 694
Sweden	1 605	579	491	492	4 423
Switzerland	485	1 224	110	114	136
Turkey	387	4 653	11 294	14 581	11 045
United Kingdom	1 342	816	1 003	2 123	708

## Imports of diatomite

tonnes

Country	2001	2002	2003	2004	2005
Austria	21 396	24 364	12 946	13 178	12 892
Belgium-Luxembourg	9 067	8 357	7 507	9 052	8 192
Bulgaria	1 198	8 478	1 139	1 292	1 312
Croatia	1 232	928	809	703	495
Czech Republic	1 695	1 647	1 562	1 969	2 263
Denmark	5 728	7 175	6 744	5 001	6 561
Finland	2 996	5 871	6 981	5 881	2 700
France	12 725	12 168	12 194	12 368	11 181
Germany	35 286	34 820	43 406	48 644	40 224
Greece	504	529	556	610	645
Hungary	2 845	1 633	1 593	1 390	1 158
Irish Republic	286	450	729	594	641
Italy	7 047	8 990	10 429	14 744	9 141
Latvia	263	236	392	592	389
Lithuania	319	503	1 499	917	520
Netherlands	11 800	12 979	12 069	10 806	7 967
Norway	2 021	1 400	1 596	2 500	2 044
Poland	7 284	6 961	6 394	6 387	6 465
Portugal	1 771	1 537	3 223	2 263	3 946
Romania	2 980	2 909	3 267	3 294	3 183
Slovakia	1 406	1 283	1 067	865	675
Slovenia	503	446	450	730	846
Spain	5 349	4 442	10 575	7 004	5 186

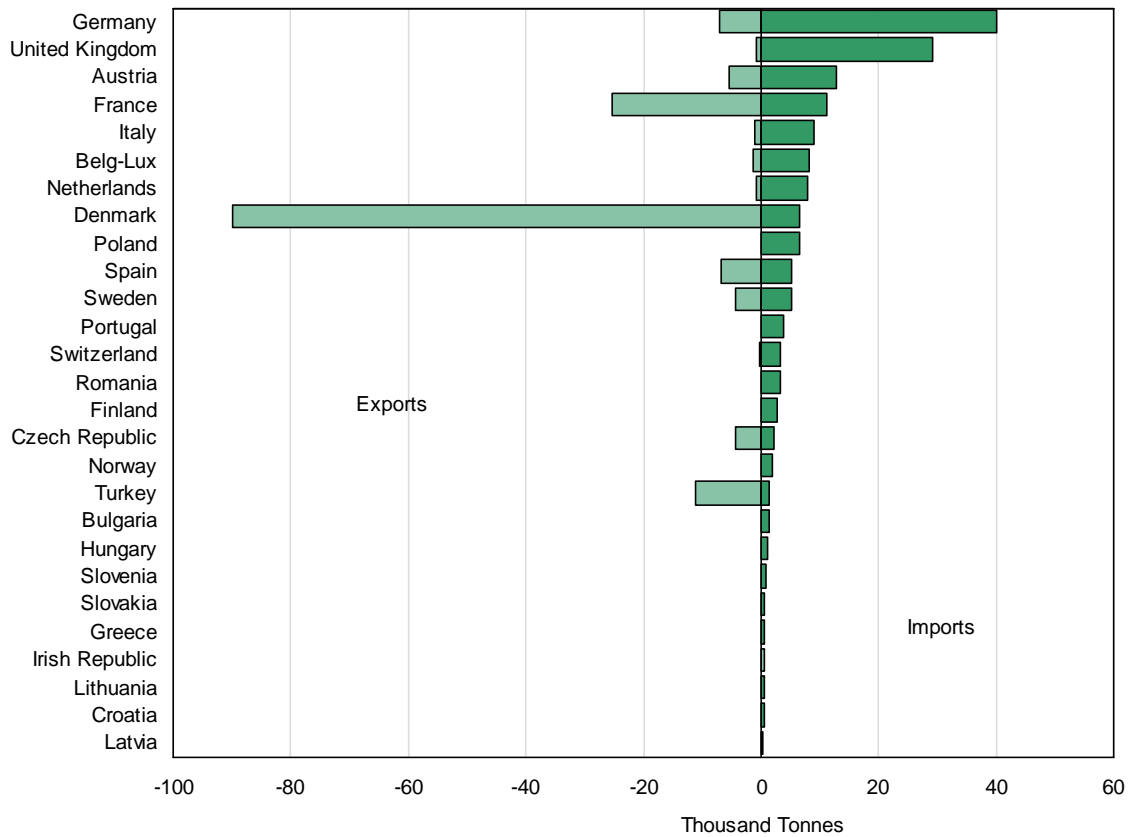


Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Sweden	4 684	3 913	4 143	5 475	5 096
Switzerland	4 332	3 534	5 425	11 204	3 291
Turkey	1 211	1 185	1 736	1 211	1 442
United Kingdom	33 474	34 490	37 217	34 988	29 208

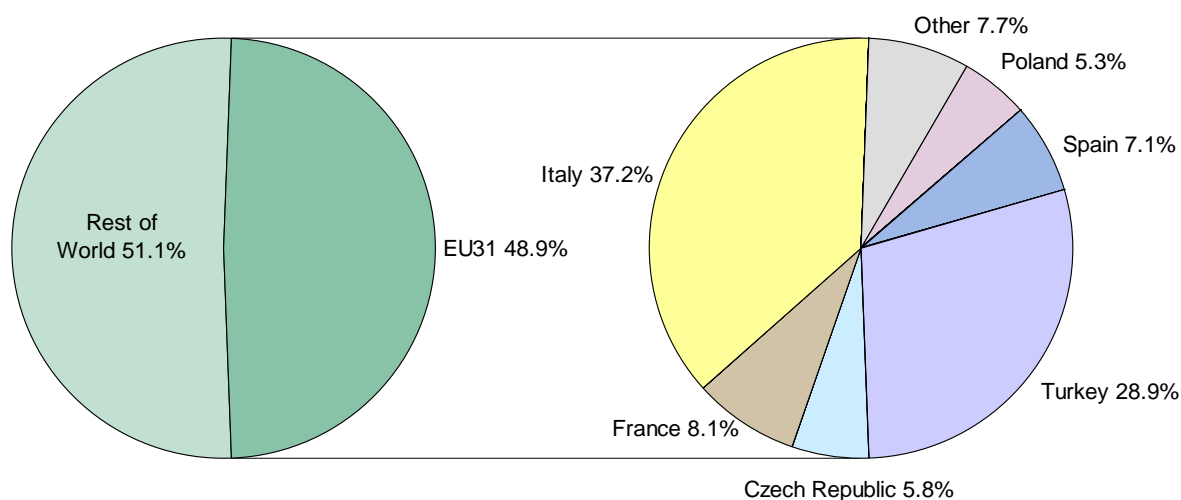
Diatomite – EU31 trade in 2005



## Feldspar

- Feldspar is an abundant rock-forming aluminosilicate mineral. It is an essential component of glass and ceramic manufacture where it behaves as a flux and adds hardness, durability and resistance to corrosion.
- Italy, with its large glass manufacturing industry, is the largest world producer (18%). Together, the EU31 countries produced 49% of world feldspar production in 2005.
- Feldspar is traded in several forms, priced between \$13/tonne (crude)–\$205/tonne (micronised).

**EU31 Production of feldspar 2005**



## Production of feldspar

tonnes

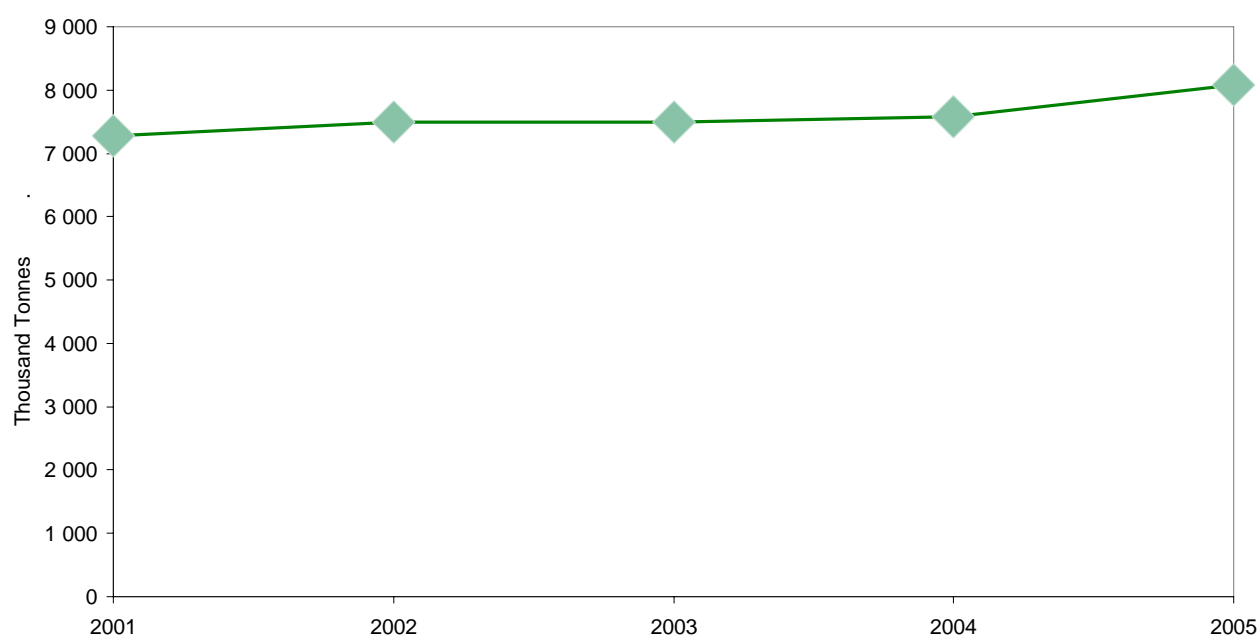
Country	2001	2002	2003	2004	2005
Bulgaria	23 000	*34 000	*35 000	*35 000	*35 000
Czech Republic	373 000	401 000	421 000	488 000	472 000
Finland	36 145	39 552	59 362	44 495	42 783
France	720 000	659 000	654 000	628 000	651 000
Germany	302 650	243 368	233 028	182 842	168 640
Greece	126 400	124 100	102 800	88 274	100 586
Italy	3 240 457	3 159 569	2 972 187	2 941 272	*3 000 000
Norway	79 510	75 184	70 000	67 000	*67 000
Poland	145 980	209 226	276 264	373 459	426 914
Portugal	112 923	141 125	129 366	98 262	*100 000
Romania	43 037	51 959	72 827	60 924	74 927
Spain	*520 000	548 964	563 580	552 507	570 000
Sweden	40 000	37 000	44 000	38 000	30 000
Turkey	1 510 293	1 766 387	1 862 310	1 983 336	2 331 971
United Kingdom (a)	2 995	1 896	1 309	2 274	2 000
<b>EU31 Total</b>	<b>7 276 000</b>	<b>7 492 000</b>	<b>7 497 000</b>	<b>7 584 000</b>	<b>8 073 000</b>

Note(s):-

(1) In addition to the countries listed, Slovakia is believed to produce feldspar

(a) China stone

## EU31 Production of feldspar 2001 - 05



## Exports of feldspar

tonnes

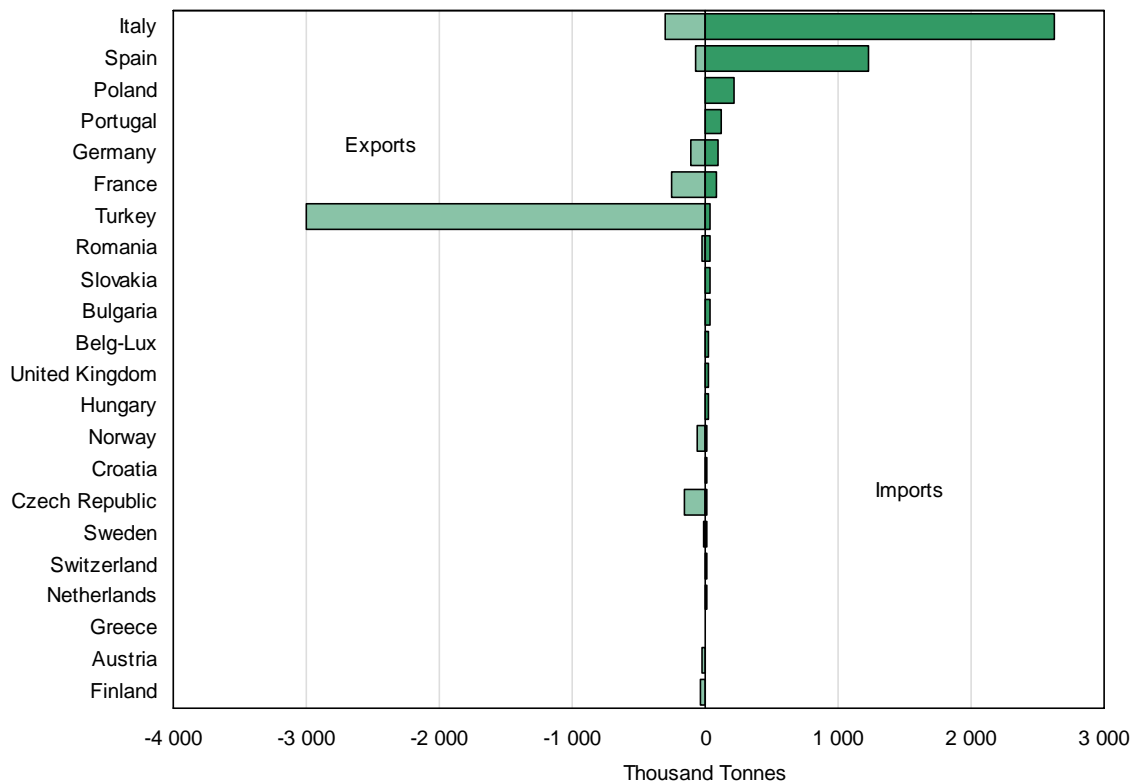
Country	2001	2002	2003	2004	2005
Austria	10 174	12 279	13 436	18 864	18 998
Czech Republic	131 699	122 206	133 868	143 941	160 469
Finland	32 570	30 444	33 632	42 612	37 386
France	385 161	290 340	286 371	219 741	255 836
Germany	63 736	134 033	102 472	118 838	113 329
Greece	67	16 764	25 176	8 515	4 755
Italy	128 544	159 403	165 128	204 096	302 715
Netherlands	693	808	749	81	17
Norway	82 030	74 549	68 076	60 972	58 821
Poland	562	649	1 626	1 441	1 509
Portugal	147	603	5	—	1 546
Romania	2 977	15 465	33 265	28 820	28 859
Spain	52 161	79 520	65 385	71 993	66 427
Sweden	27 662	25 400	23 847	23 752	16 515
Turkey	1 208 808	2 162 841	3 027 769	3 971 725	3 001 789
United Kingdom	93	209	801	261	48

## Imports of feldspar

tonnes

Country	2001	2002	2003	2004	2005
Austria	4 213	1 608	1 083	418	1 549
Belgium-Luxembourg	25 250	24 632	30 225	30 969	25 876
Bulgaria	22 072	21 852	23 367	30 805	34 723
Croatia	10 491	10 609	11 894	13 713	17 011
Czech Republic	7 226	7 975	7 388	8 785	13 315
Denmark	5 753	4 698	3 904	3 878	3 868
Finland	742	352	104	257	380
France	29 741	40 941	37 538	44 615	85 460
Germany	51 965	43 033	50 809	70 064	101 931
Greece	7 466	4 599	5 216	499	3 032
Hungary	19 213	20 250	19 131	19 205	20 184
Italy	1 865 170	1 871 798	2 291 993	2 693 951	2 623 428
Lithuania	5 065	3 259	3 380	7 461	4 166
Netherlands	7 531	11 603	11 084	9 606	7 721
Norway	14 040	13 589	13 710	15 490	17 103
Poland	144 145	168 167	155 283	201 509	215 185
Portugal	72 198	87 177	79 521	96 049	115 286
Romania	34 378	35 924	41 385	38 470	39 448
Slovakia	29 202	27 596	48 100	39 689	36 989
Slovenia	5 232	4 870	8 605	10 045	5 852
Spain	501 395	593 452	760 473	955 039	1 231 861
Sweden	6 430	6 765	5 960	7 019	9 387
Switzerland	7 408	7 541	7 229	8 347	7 977
Turkey	19 803	5 269	26 977	40 733	40 739
United Kingdom	18 361	33 196	25 764	31 601	23 139

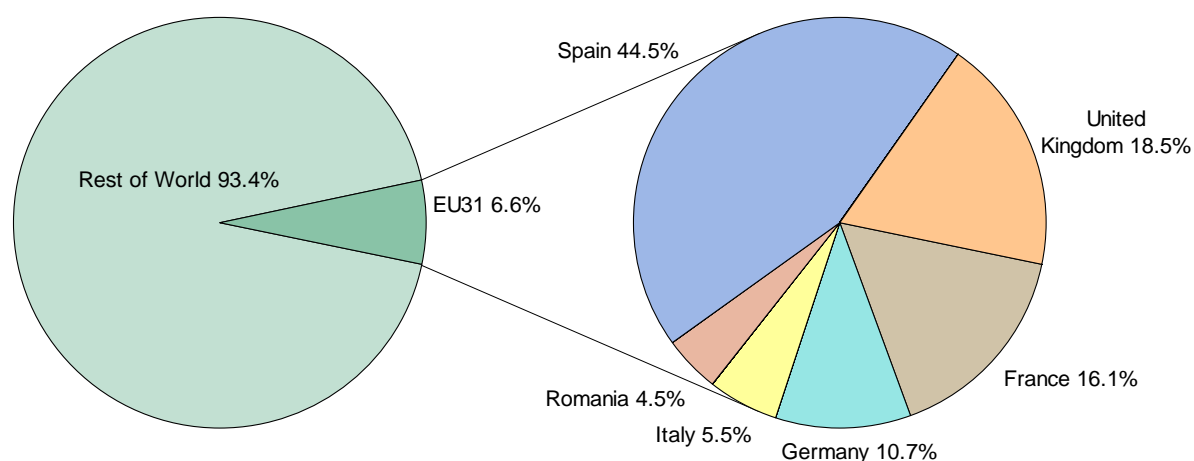
## Feldspar – EU31 trade in 2005



## Fluorspar

- Fluorspar is the commercial name for the mineral fluorite (calcium fluoride) and it is an important raw material source of fluorine. Most fluorspar production is used in the manufacture of hydrofluoric acid. Fluorspar is also used in steel and aluminium manufacture, although its use is declining.
- China dominated world production, producing 51% of all fluorspar in 2005. The EU31 countries represent 7% of world fluorspar production. Spain and the UK were the largest EU31 producers.
- Fluorspar is more sensitive to price variability than most other industrial minerals. During 2005 the price was stable, trading between \$230–\$240/tonne CIF US Gulf Port.

**EU31 Production of fluorspar 2005**

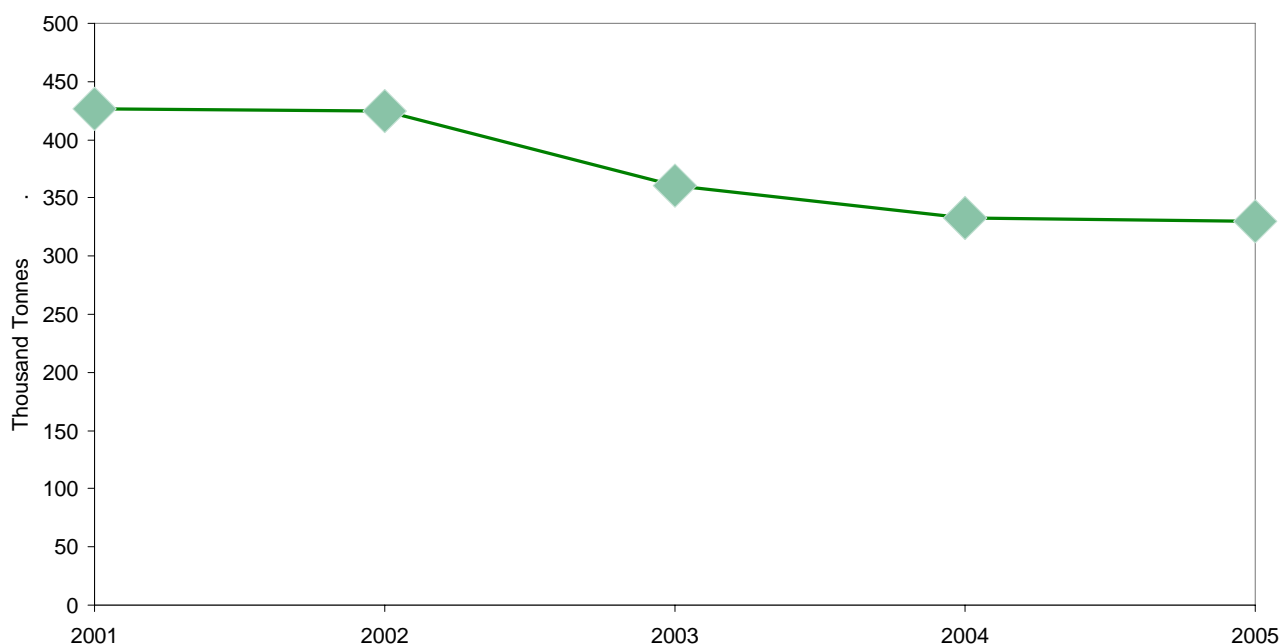


## Production of fluorspar

tonnes

Country	2001	2002	2003	2004	2005
Bulgaria	300	—	—	—	—
France	123 000	122 000	90 000	70 000	53 000
Germany	30 381	34 429	33 289	33 203	35 364
Italy	70 160	53 260	26 387	17 915	...
Romania	*15 000	*15 000	*15 000	*15 000	*15 000
Spain	134 039	141 434	139 266	145 694	146 890
Turkey	3 752	5 344	718	880	800
United Kingdom	*50 000	*53 000	*56 000	50 080	60 980
<b>EU31 Total</b>	<b>427 000</b>	<b>424 000</b>	<b>361 000</b>	<b>333 000</b>	<b>330 000</b>

## EU31 Production of fluorspar 2001 - 05



## Exports of fluorspar

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg	298	219	22 639	4 208	26 395
Czech Republic	9 442	8 131	23 471	10 073	8 677
France	38 023	47 439	18 519	12 002	6 821
Germany	16 634	22 274	17 105	17 594	24 061
Italy	20 709	31 142	28 222	20 607	28 699
Netherlands	7 399	12 752	19 186	3 019	37 113
Spain	1 132	1 106	1 745	2 221	4 434
Sweden	5 603	5 998	8 981	8 702	8 206
United Kingdom	2 373	636	519	4 593	5 803

## Imports of fluorspar

tonnes

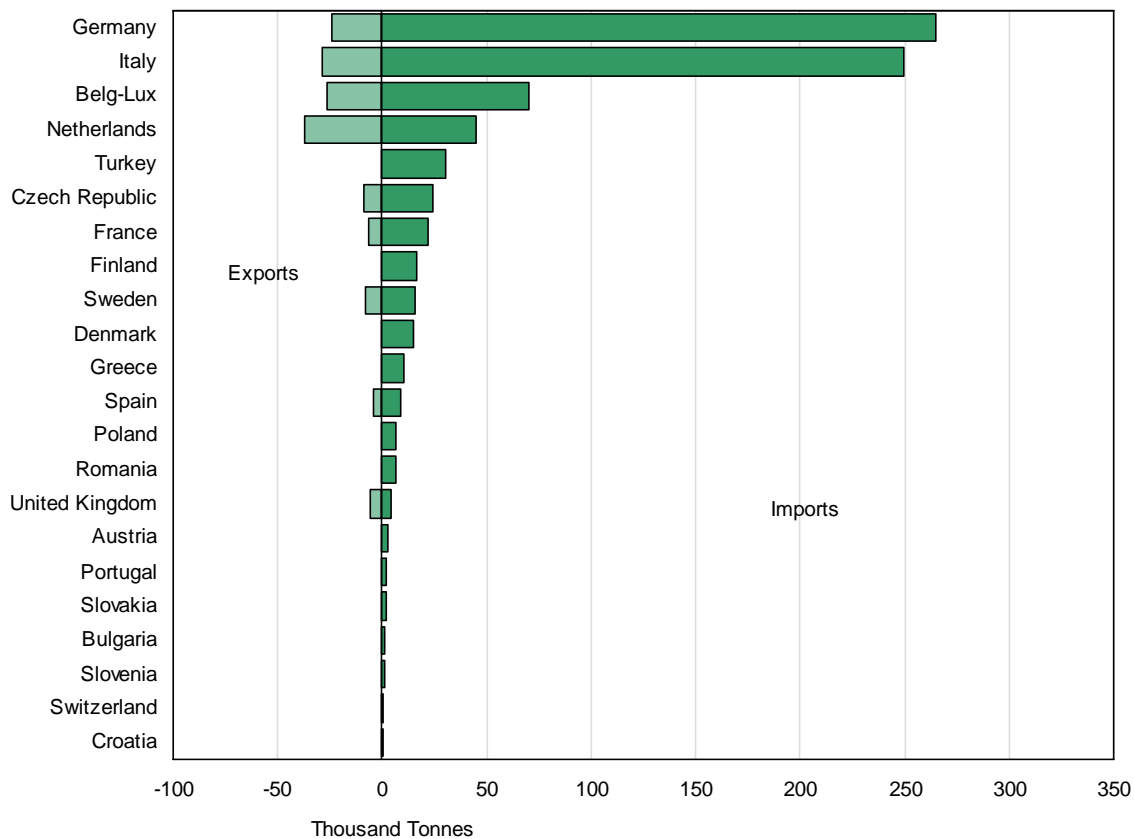
Country	2001	2002	2003	2004	2005
Austria	3 514	3 448	2 125	3 078	2 561
Belgium-Luxembourg	13 662	11 565	33 622	10 571	70 149
Bulgaria	22 601	1 296	2 143	1 882	1 210
Croatia	155	164	152	204	143
Cyprus	496	7 607	8 901	5	...
Czech Republic	27 785	18 182	16 628	28 408	24 009
Denmark	1 238	6 971	12 406	16 005	15 124
Finland	10 892	10 089	18 672	17 069	16 597
France	3 355	3 510	7 006	10 457	21 526
Germany	266 764	272 913	234 067	302 071	264 896
Greece	11 210	12 582	10 579	20 720	10 681
Hungary	6 006	3 626	3 907	4 366	...
Italy	209 672	162 510	226 780	212 975	249 756
Netherlands	65 422	55 212	63 896	108 312	45 073
Norway	38 862	13 589	—	—	...
Poland	4 789	5 609	5 858	7 501	6 290
Portugal	1 243	1 196	574	158	1 633
Romania	7 314	6 653	5 547	4 117	6 285
Slovakia	2 393	1 797	1 965	1 574	1 615
Slovenia	939	1 148	1 113	1 178	1 031
Spain	18 819	17 878	8 538	15 006	8 575

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Sweden	16 103	16 978	19 117	14 640	15 790
Switzerland	497	916	413	991	714
Turkey	16 100	13 790	18 208	31 908	30 446
United Kingdom	34 999	26 690	21 360	25 092	4 051

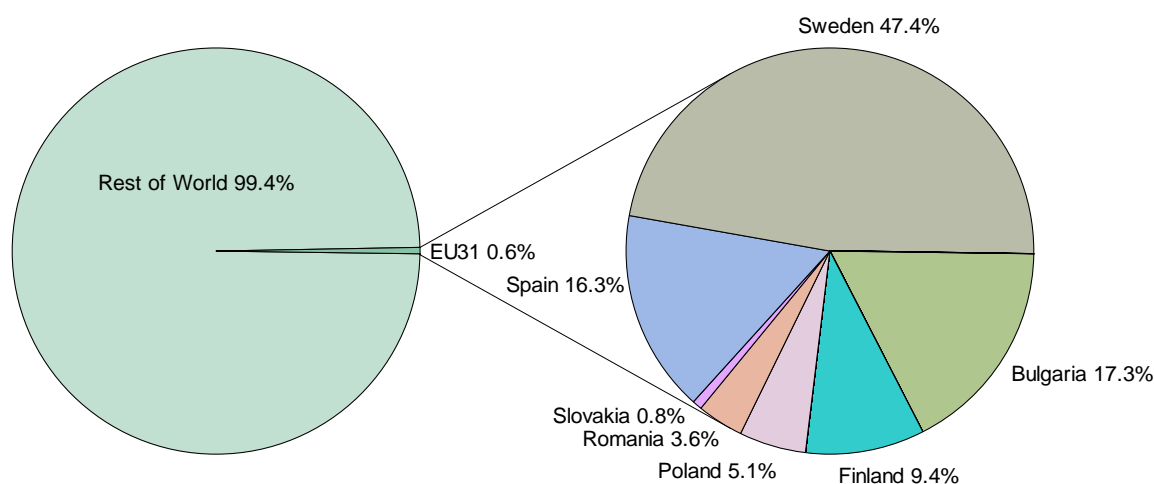
Fluorspar – EU31 trade in 2005



## Gold

- Gold is a soft, malleable metallic element unaffected by air or most reagents. It is highly valued as an investment commodity, in jewellery and in specialist electronic applications.
- South Africa, Australia and the USA were the three largest gold producers in 2005 with 34% of world production. In the EU31 Sweden (47%) and Bulgaria (17%) were the largest producers in 2005. The EU31 produced less than 1% of world output in 2005. In Europe, gold is chiefly a by-product of base metal mining.
- The gold market can be volatile and is subject to several key factors (the strongest of which seem to be investor confidence and the US dollar). Speculative buying and geopolitical tensions also contributed to the elevated prices seen during 2005. In 2005, gold traded at an annual average of US\$445/oz. Gold prices continued to increase in 2005, breaking through the US\$500/oz barrier towards year-end, the highest level for 15 years.

**EU31 Production of gold 2005**



## Mine production of gold

kilograms (metal content)

Country	2001	2002	2003	2004	2005
Bulgaria	1 700	2 612	2 270	2 431	*2 400
Finland	1 700	1 300	*1 200	*1 300	*1 300
France	2 512	1 724	1 470	—	—
Italy	522	631	*100	—	—
Poland (a)	349	296	356	527	713
Romania	1 600	1 137	1 878	1 430	*500
Slovakia	157	77	79	107	109
Spain	4 277	5 559	5 212	5 248	2 260
Sweden	4 986	5 757	5 900	6 564	6 564
Turkey	*1 100	*4 500	5 370	3 260	—
<b>EU31 Total</b>	<b>19 000</b>	<b>24 000</b>	<b>24 000</b>	<b>21 000</b>	<b>14 000</b>

Note(s):-

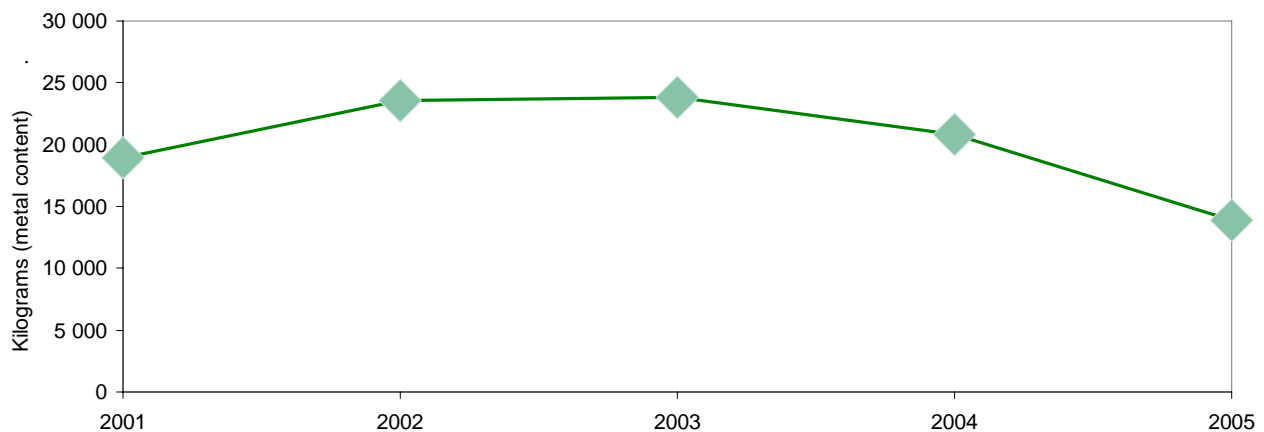
(1) In several countries substantial amounts of gold produced in small operations are not recorded in the official statistics used when compiling this table

(2) Greece and Norway are believed to produce gold

(a) Metal production



## EU31 Production of gold 2001 - 05



## Exports of gold

kilograms

Country	2001	2002	2003	2004	2005
<b>Austria</b>					
Metal	16 800	18 000	10 900	11 500	8 500
Waste & scrap	44 900	5 600	2 500	2 900	5 500
<b>Belgium-Luxembourg</b>					
Metal	3 200	2 000	500	1 200	100
Waste & scrap	£1 365 000	...	£1 316 000	...	...
<b>Czech Republic</b>					
Metal	4 431	5 468	5 113	12 247	1 100
Waste & scrap	1 373	2 453	1 349	31	600
<b>Denmark</b>					
Metal	854	4 979	894	...	...
Waste & scrap	7 789	807	343	1	120
<b>Estonia</b>					
Waste & scrap	8 044	9 895	8 812	...	3
<b>Finland</b>					
Waste & scrap	912	762	929	368	778
<b>France</b>					
Metal	31 900	29 700	34 600	31 500	18 100
Waste & scrap	77 800	40 800	33 700	70 500	29 600
<b>Germany</b>					
Metal	78 100	45 400	36 400	36 500	47 600
Waste & scrap	1 517 300	1 734 400	651 000	170 065	30 600
<b>Greece</b>					
Metal	219	509	4 714	15	3
<b>Hungary</b>					
Metal	1 110	928	...	826	200
<b>Irish Republic</b>					
Metal	£35 000	£389 000	£784 000	£1 076 000	£942 000
Waste & scrap	£3 850 000	£1 623 000	£1 520 000	£1 672 000	£1 429 000
<b>Italy</b>					
Metal	31 299	32 091	36 047	44 180	60 480
<b>Latvia</b>					
Waste & scrap	137	1	72	...	...
<b>Lithuania</b>					
Waste & scrap	10 140	20	100	...	...
<b>Netherlands</b>					
Metal	28 356	9 601	8 094	24 557	11 603
Waste & scrap	31 500	108 000	276 600	62 212	72 427
<b>Norway</b>					
Metal	2 647	2 554	2 527	2 293	2 415
Waste & scrap	5 007	1 102	174	127	137
<b>Poland</b>					
Metal	113	1 210	249	...	100
Waste & scrap	2 767	3 239	8 477	4 074	1 100

## Gold

Exports continued

kilograms

Country	2001	2002	2003	2004	2005
Portugal					
Waste & scrap	...	...	...	192 759	4 800
Slovakia					
Metal	133	255	325	274	268
Waste & scrap	494	1 600	1 012	357	986
Slovenia					
Metal	160	1 287	681	254	101
Waste & scrap	5 973	—	1 012	1 649	—
Spain					
Metal	2 046	3 867	4 793	6 490	3 520
Waste & scrap	14 030	1 126	784	2 908	38
Sweden					
Metal	6 000	12 000	10 000	19 000	18 000
Waste & scrap	79 000	24 000	...	20 000	1 000
Switzerland					
Metal	1 266 166	922 468	885 907	1 125 319	1 340 912
Waste & scrap	27 274	16 868	14 039	55 166	2 823
Turkey					
Metal	4 670	11 263	11 455	9 722	29 624
United Kingdom					
Metal	405 319	198 805	82 892	407 467	638 262
Waste & scrap	493 588	548 843	1 074 829	471 657	541 399

Note(s):-

- (1) In this table the term 'metal' includes both unwrought and partly worked gold and alloys but excludes gold coin
- (2) Kilograms have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
- (3) See explanatory notes at the front of the volume regarding currency conversion

## Imports of gold

kilograms

Country	2001	2002	2003	2004	2005
Austria					
Metal	21 300	17 300	26 500	17 300	22 100
Waste & scrap	400	1 200	200	200	1 800
Belgium-Luxembourg					
Metal	2 300	3 200	9 100	12 400	14 400
Croatia					
Metal	...	1 316	5 034	1 193	1 083
Cyprus					
Metal	1 223	938	4 561	313	359
Czech Republic					
Metal	1 402	1 288	1 596	1 957	769
Waste & scrap	392	175	338	1 911	13 000
Denmark					
Metal	911	796	...	...	2 075
Waste & scrap	842	62	57	46	72
Estonia					
Metal	...	58	2 570	74	234
Finland					
Metal	1 677	1 132	1 230	1 332	949
Waste & scrap	...	46 928	90 780	67 582	22 981
France					
Metal	42 500	35 100	30 900	*30 000	27 700
Waste & scrap	335 000	4 600	12 500	...	5 200
Germany					
Metal	71 600	44 400	40 100	49 800	56 500
Waste & scrap	1 583 000	2 021 200	1 153 500	1 375 800	1 923 600
Greece					
Metal	757	1 497	8 276	37 484	56 572
Waste & scrap	5 149	1 126	79 288	—	...
Hungary					
Metal	194	127	...	...	1 000

Imports continued

kilograms

Country	2001	2002	2003	2004	2005
Irish Republic					
Metal	£8 002 196	£6 057 000	£9 565 000	£7 480 000	£7 227 000
Waste & scrap	6 158	120	2 322	4 880	2 567
Italy					
Metal	398 542	358 654	281 157	274 841	250 938
Waste & scrap	15 694	7 584	1 685	3 612	904
Malta					
Metal	5 926	3 835	3 927	3 607	14 001
Netherlands					
Metal	19 215	11 825	10 318	16 275	24 679
Waste & scrap	1 000	561	1 044	1	1
Norway					
Metal	3 501	2 927	1 599	1 253	2 099
Waste & scrap	1 115	1 613	776	987	1 049
Poland					
Metal	985	774	588	2 301	100
Portugal					
Metal	4 791	3 303	1 893	655	6 074
Slovakia					
Metal	545	654	421	...	123
Slovenia					
Metal	1 539	2 696	612	382	374
Waste & scrap	1	...	256	363	4 219
Spain					
Metal	30 100	26 690	27 662	29 702	20 594
Waste & scrap	3 182	818	411	5 018	139
Sweden					
Metal	£7 671 705	£7 655 000	£8 382 000	£8 498 000	£8 625 000
Waste & scrap	£149 000	£1 126 000	—	£5 726	£180 000
Switzerland					
Metal	1 360 081	1 217 189	1 218 361	1 048 386	1 650 117
Waste & scrap	45 122	48 626	32 454	52 053	72 764
Turkey					
Metal	111 958	142 013	225 021	262 519	403 415
United Kingdom					
Metal	972 188	1 280 970	1 414 697	1 053 100	460 239
Waste & scrap	167 513	122 639	231 365	274 919	66 198

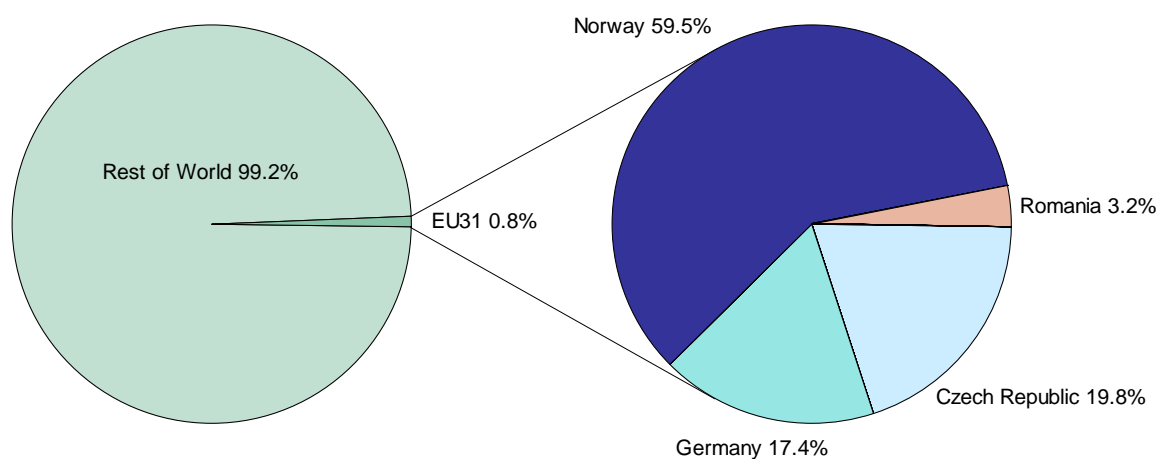
Note(s) :-

- (1) In this table the term 'metal' includes both unwrought and partly worked gold but excludes gold coin
- (2) Kilograms have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
- (3) See explanatory notes at the front of the volume regarding currency conversion

## Graphite

- Graphite is a stable form of pure carbon. It is soft, has low friction and is inert. The major use of graphite is in refractories that can withstand the temperature of molten metals and slags. The graphite imparts high thermal shock resistance, useful in furnace components and crucibles. Other uses include lubricants and in brake linings.
- EU31 production has steadily declined since 1997 from 70 000 tonnes to 15 000 tonnes. China was the largest world producer in 2005 (83%).
- Graphite is traded in several different forms. During 2005 graphite traded between \$410 and \$795/tonne, depending largely on flake size.

**EU31 Production of graphite 2005**



## Production of graphite

tonnes

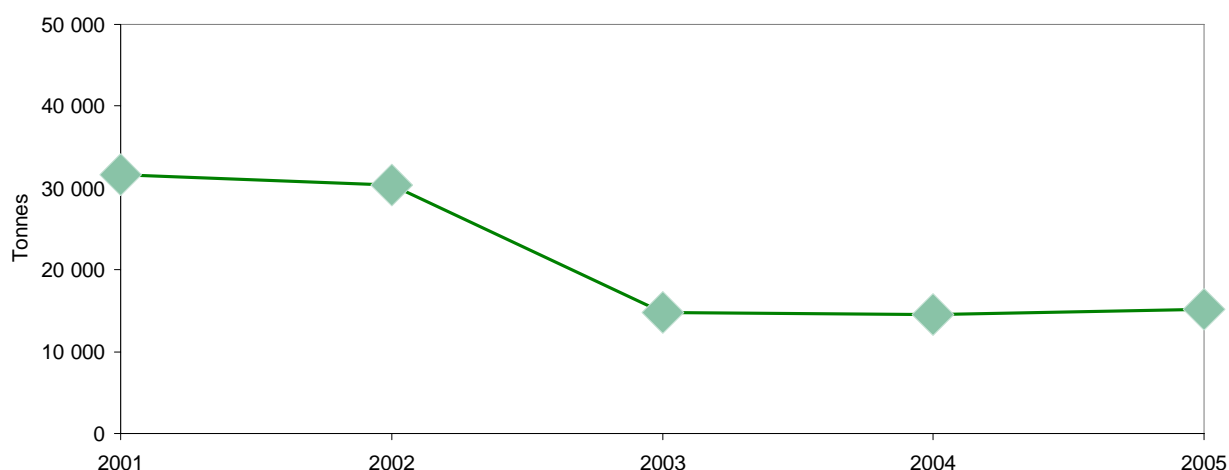
Country	2001	2002	2003	2004	2005
Austria (a)	116	—	—	—	—
Czech Republic	17 000	16 000	9 000	5 000	3 000
Germany	3 190	3 312	2 840	3 155	2 638
Norway	9 070	8 600	1 000	6 000	9 000
Romania	1 176	1 001	1 014	395	486
Sweden	1 035	—	—	—	—
Turkey	...	1 393	942	*28	—
<b>EU31 Total</b>	<b>32 000</b>	<b>30 000</b>	<b>15 000</b>	<b>15 000</b>	<b>15 000</b>

Note(s):-

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

(a) Crude

## EU31 Production of graphite 2001 - 05



## Exports of graphite

tonnes

Country	2001	2002	2003	2004	2005
Austria	3 631	3 384	4 574	5 094	7 082
Belgium-Luxembourg	4 878	5 653	9 097	581	834
Czech Republic	2 621	3 487	4 058	3 924	3 489
France	178	...	167	122	225
Germany	10 334	12 103	11 746	14 783	14 241
Italy	199	313	222	625	274
Netherlands	4 877	2 851	5 209	5 987	3 240
Norway	9 032	8 129	...	—	—
Spain	14 299	8 521	9 288	27 634	11 972
Sweden	2 164	600	302	260	195
United Kingdom	2 635	2 816	4 158	4 348	2 685

Note(s):-

(1) This table excludes synthetic graphite

## Imports of graphite

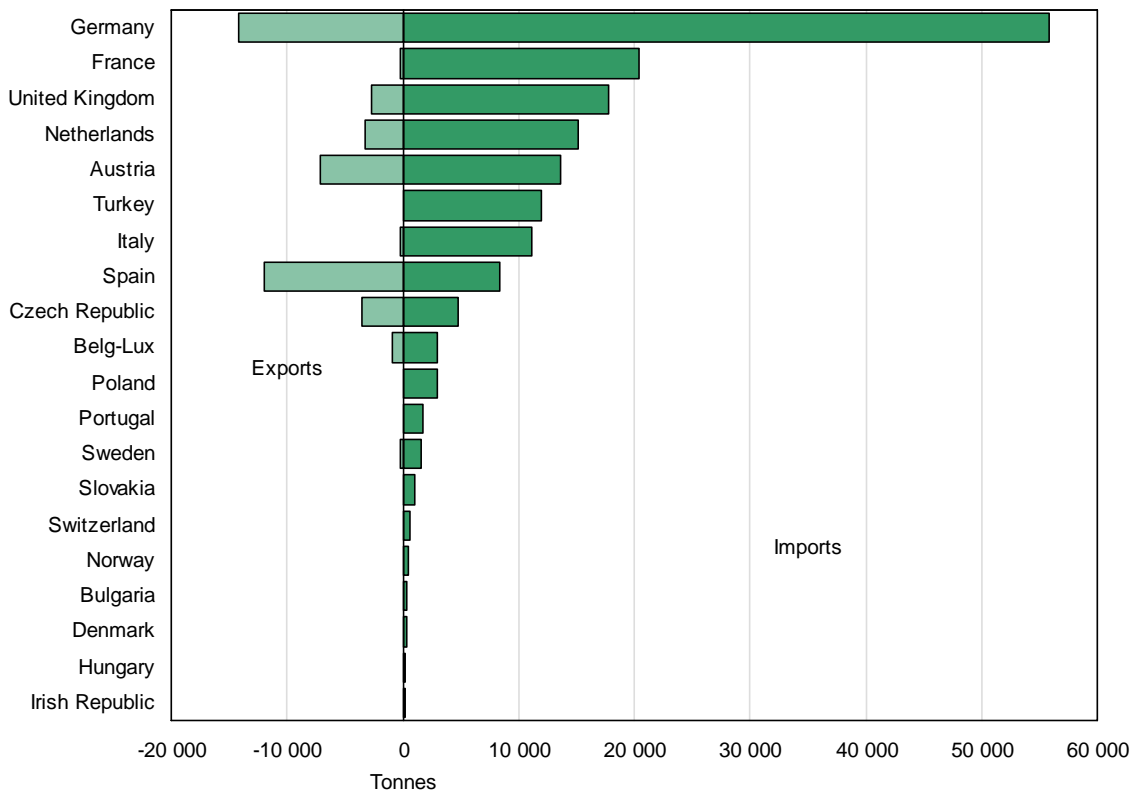
tonnes

Country	2001	2002	2003	2004	2005
Austria	5 521	6 004	4 971	7 229	13 655
Belgium-Luxembourg	9 948	10 638	12 414	3 301	3 040
Bulgaria	223	210	492	420	319
Czech Republic	1 518	1 476	2 765	3 663	4 787
Denmark	707	355	567	478	288
Finland	411	281	197	168	84
France	24 440	13 016	11 149	15 083	20 449
Germany	49 720	42 706	41 161	53 602	55 843
Greece	54	75	77	127	91
Hungary	474	528	517	234	191
Irish Republic	108	541	248	288	177
Italy	11 319	11 302	10 845	10 699	11 102
Netherlands	5 636	8 232	10 208	18 139	15 205
Norway	347	615	502	548	423
Poland	2 856	2 700	3 150	3 089	3 028
Portugal	1 297	1 436	1 129	1 317	1 722
Slovakia	1 992	2 633	2 209	1 667	1 031
Spain	7 675	8 119	7 363	9 402	8 334
Sweden	1 026	1 022	1 428	1 473	1 539
Switzerland	538	918	863	395	652
Turkey	6 431	7 010	7 429	10 212	11 956
United Kingdom	22 435	22 435	19 270	19 075	17 766

Note(s) :-

(1) This table excludes synthetic graphite

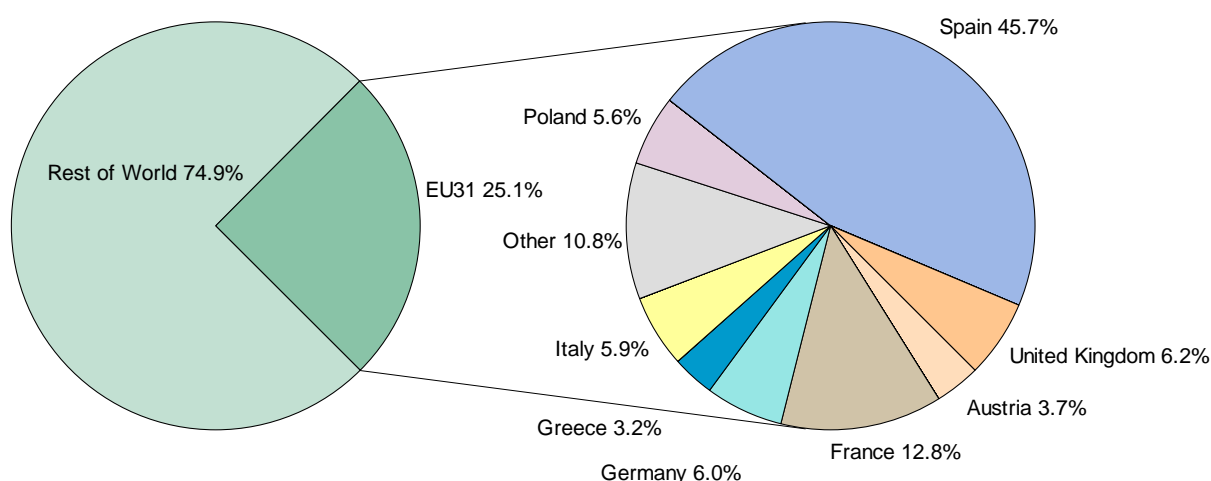
Graphite – EU31 trade in 2005



## Gypsum

- Gypsum (calcium sulphate) is a common mineral that chiefly occurs as beds or seams in sedimentary rocks. Anhydrite is a similar mineral without combined water and is considered in the following tables with gypsum. Calcined gypsum is chiefly used (80%) to make building and decorative plaster. It is used as an additive to cement, in farming as a soil conditioner, as filler and in the chemical industry.
- The EU31 produced 25% of world gypsum (non-synthetic) in 2005. The largest EU31 producer is Spain which accounted for 46% of EU31 production. The USA was the largest gypsum producer in the world in 2005 (16%).
- The overall trade situation with gypsum is becoming difficult to follow as large quantities of synthetic gypsum are made during the desulphurisation of coal-fired power station fumes and this competes with natural gypsum production. The price of crude gypsum (ex-mine US) averaged \$7.48/tonne in 2005.

**EU31 Production of gypsum 2005**



## Production of gypsum

tonnes

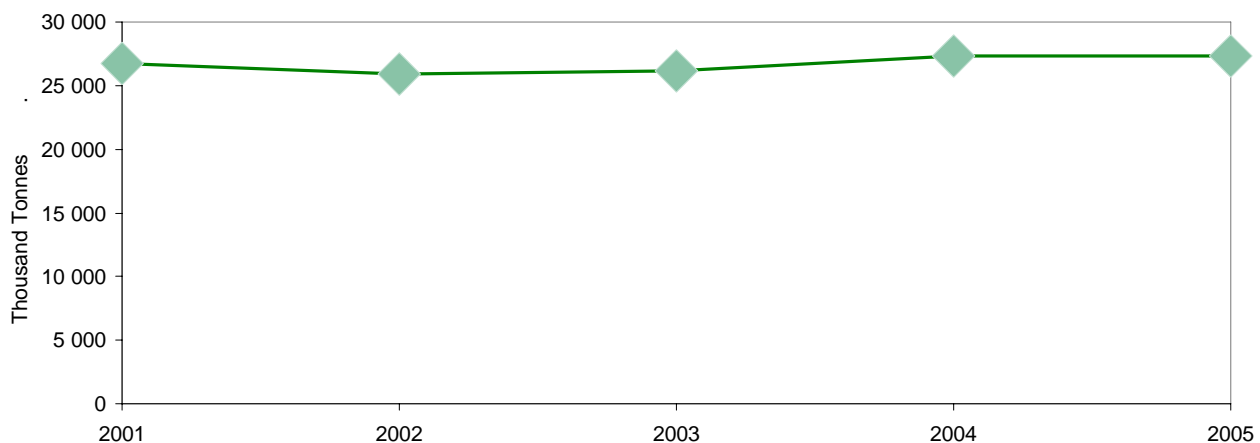
Country	2001	2002	2003	2004	2005
Austria					
Gypsum	790 478	847 117	889 727	920 809	911 162
Anhydrite	138 745	122 085	113 823	117 318	106 032
Bulgaria	166 838	156 400	165 500	175 900	187 700
Croatia	130 861	145 000	166 340	193 263	196 133
Cyprus	250 000	295 000	300 000	255 000	215 500
Czech Republic	24 000	108 000	104 000	71 000	25 000
France	*4 500 000	*3 500 000	*3 500 000	*3 500 000	*3 500 000
Germany (a)	1 966 000	1 761 000	1 748 000	1 579 000	1 644 000
Greece	808 890	890 148	731 785	856 606	865 216
Hungary (a)	231 000	108 000	62 000	55 000	19 000
Irish Republic	*500 000	*500 000	*600 000	*650 000	*700 000
Italy	1 558 882	1 531 477	1 783 903	1 615 287	...
Latvia	*100 000	(a) 220 000	(a) 160 000	(a) 230 000	(a) *230 000
Poland					
Gypsum	793 684	866 674	1 030 693	970 786	(a) 1 242 875
Anhydrite	300 356	280 031	297 088	301 161	...
Portugal	787 646	579 143	419 799	...	...
Romania	282 985	421 235	409 516	490 372	532 867
Slovakia (a)	168 800	121 680	93 800	127 100	107 500
Spain	*10 920 000	11 218 410	11 366 375	12 533 972	12 500 000
Switzerland	*300 000	*300 000	*300 000	*300 000	*300 000
Turkey	328 656	264 038	196 668	250 099	24 421
United Kingdom	*1 700 000	*1 700 000	*1 700 000	1 686 000	*1 700 000
<b>EU31 Total</b>	<b>26 700 000</b>	<b>25 900 000</b>	<b>26 100 000</b>	<b>27 300 000</b>	<b>27 300 000</b>

Note(s):-

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

(a) Including anhydrite

## EU31 Production of gypsum 2001 - 05



## Exports of gypsum

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Crude	54 034	46 524	21 562	22 732	21 433
Calcined	72 827	82 493	97 840	100 444	94 207
Belgium-Luxembourg					
Crude	104 842	59 688	64 538	91 110	46 691
Calcined	3 998	3 628	2 556	175 496	2 709
Bulgaria					
Crude & calcined	2 841	2 406	1 868	2 231	2 347
Croatia					
Crude & calcined	20 032	28 318	...	...	...
Cyprus					
Crude & calcined	209 179	169 213	184 389	215 297	73 741
Czech Republic					
Crude	39 414	87 247	92 133	90 750	33 307
Calcined	6 674	3 967	4 718	5 563	4 272
Denmark					
Crude	86 764	110 317	83 754	81 318	111 720
Calcined	141 866	155 843	65 842	13 837	25 474
Finland					
Crude & calcined	4 710	5 026	981	440	451
France					
Crude	478 877	427 138	335 780	324 894	250 845
Calcined	282 629	286 568	297 326	311 437	350 955
Germany					
Crude	123 299	176 734	142 263	197 613	259 631
Calcined	705 776	695 565	1 070 873	1 033 057	991 946
Greece					
Crude	56 967	44 953	112 510	106 082	88 187
Irish Republic					
Crude	820	817	873	919	1 022
Calcined	37 919	22 181	33 382	40 636	42 212
Italy					
Crude	47 185	24 560	1 032	8 040	12 641
Calcined	74 209	54 393	38 778	42 223	41 404
Latvia					
Crude & calcined	35 302	55 225	58 186	24 782	48 896
Netherlands					
Crude	22 169	24 263	32 752	37 920	53 351
Calcined	2 350	26 463	7 905	11 088	61 508
Norway					
Crude	19 336	19 241	27 287	30 825	49 443
Poland					
Crude & calcined	21 449	21 259	24 706	29 467	33 277
Romania					
Crude & calcined	6 115	6 473	10 539	14 277	15 089
Slovakia					
Crude & calcined	69	154	184	679	246



Exports continued

tonnes

Country	2001	2002	2003	2004	2005
Spain					
Crude	2 590 879	2 818 090	2 732 211	2 820 367	3 228 806
Calcined	460 778	517 466	473 180	470 437	391 274
Sweden					
Crude & calcined	5 692	6 350	5 993	7 343	7 832
Switzerland					
Crude	25 122	1 709	44	158	7
Calcined	1 738	1 667	1 680	1 002	1 088
Turkey					
Crude	9 073	320	1 282	7 859	4 346
Calcined	151 055	210 898	308 189	434 910	477 710
United Kingdom					
Crude	3 049	14 460	2 601	3 903	2 299
Calcined	29 474	44 827	39 515	49 945	54 356

Note(s):-

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

**Imports of gypsum**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Crude	16 701	17 429	23 705	16 985	15 280
Calcined	41 988	48 808	59 897	70 261	66 118
Belgium-Luxembourg					
Crude	701 760	719 403	524 938	713 502	768 702
Calcined	329 502	322 930	290 348	366 504	460 067
Bulgaria					
Crude	33 737	47 984	38 119	49 426	18 684
Calcined	9 692	17 476	22 615	35 558	49 163
Croatia					
Crude	25 633	28 326	35 732	14 974	41 665
Calcined	20 046	29 147	33 419	37 499	33 316
Czech Republic					
Crude	9 523	14 790	20 266	29 328	19 253
Calcined	23 410	23 899	32 810	43 894	37 637
Denmark					
Crude	256 834	223 666	282 006	283 604	317 736
Calcined	8 952	34 509	36 882	38 650	45 691
Estonia					
Crude & calcined	13 236	20 355	23 314	80 834	20 957
Finland					
Crude	292 833	286 347	231 517	278 645	341 680
Calcined	7 725	7 682	7 066	7 010	7 517
France					
Crude	205 820	168 598	266 857	311 411	361 820
Calcined	44 697	48 920	45 214	85 845	60 358
Germany					
Crude	225 631	186 338	100 269	102 596	66 590
Calcined	34 767	59 707	91 143	116 628	73 647
Greece					
Crude	504	350	362	826	801
Calcined	26 386	1 501	1 361	13 614	5 270
Hungary					
Crude & calcined	48 842	53 147	59 741	64 726	60 336
Irish Republic					
Crude	8 615	10 931	373	536	1 056
Calcined	444	914	2 228	6 015	20 024
Italy					
Crude	2 479	2 391	1 947	5 024	6 134
Calcined	23 487	22 706	17 681	22 515	22 076
Latvia					
Crude & calcined	3 459	3 138	3 232	2 931	3 563

## Gypsum

Imports continued

tonnes

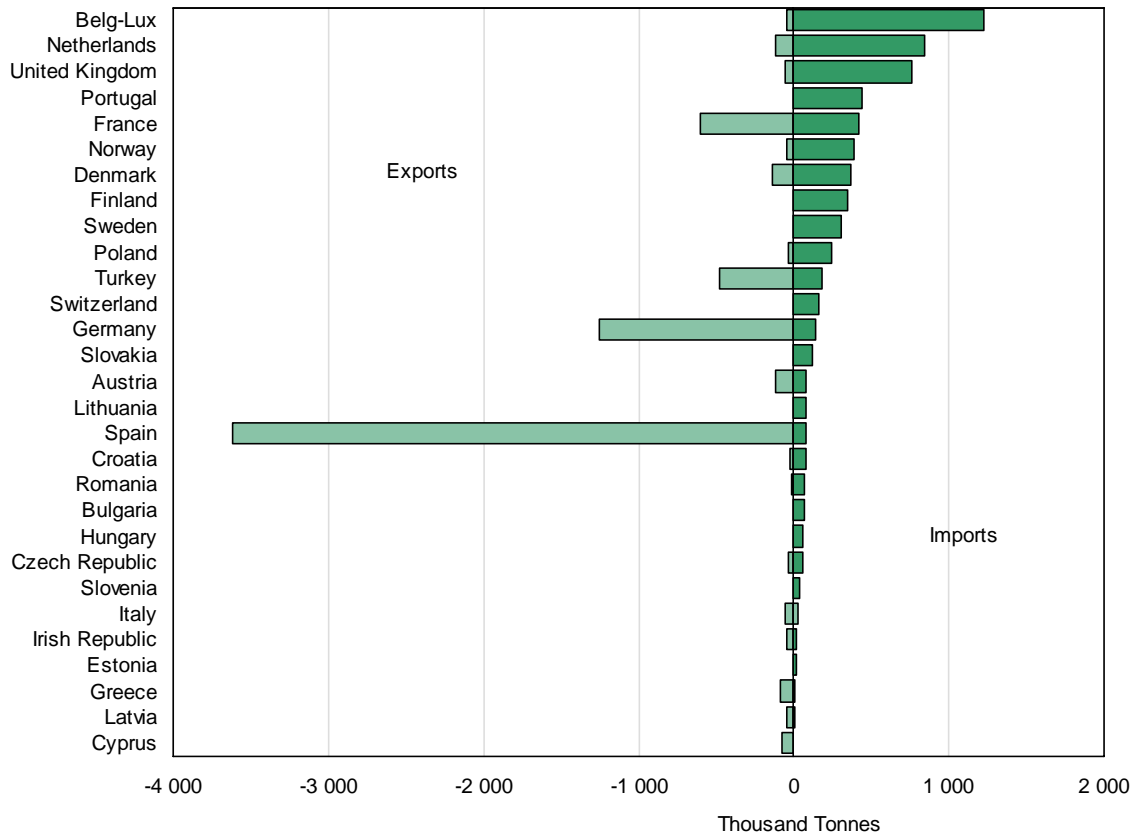
Country	2001	2002	2003	2004	2005
Lithuania					
Crude	22 275	36 355	1 495	39 653	58 859
Calcined	16 723	11 630	45 996	16 245	20 990
Netherlands					
Crude	222 337	208 013	132 882	176 349	155 519
Calcined	274 769	381 920	387 829	492 478	686 085
Norway					
Crude	36 175	59 945	49 398	109 069	119 962
Calcined	308 328	315 517	295 160	259 001	274 006
Poland					
Crude	22 813	46 123	101 589	163 227	150 622
Calcined	125 354	124 727	123 919	100 886	91 356
Portugal					
Crude	40 509	33 696	60 120	82 603	79 370
Calcined	374 719	371 705	338 228	340 665	361 284
Romania	109 719	102 708	48 336	37 805	69 027
Slovakia					
Crude & calcined	40 702	125 948	121 461	110 803	116 252
Slovenia	70 509	74 660	59 685	46 703	36 817
Spain					
Crude	47 567	51 797	65 152	43 004	47 585
Calcined	8 143	38 659	142 719	14 462	32 078
Sweden					
Crude	177 264	211 432	269 711	269 060	206 972
Calcined	87 144	82 831	103 481	160 784	97 746
Switzerland					
Crude	65 203	64 517	50 760	64 677	76 460
Calcined	66 156	72 876	75 394	81 971	88 511
Turkey	66 472	90 335	160 214	170 958	183 553
United Kingdom					
Crude	755 112	(a) 646 889	(a) 903 068	(a) 227 068	(a) 761 117
Calcined	31 481	...	...	...	...

Note(s) :-

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

(a) Including calcined

### Gypsum – EU31 trade in 2005



## Iodine

- Iodine is a bluish-black lustrous, solid, non-metal with antiseptic and other medicinal properties, used in sanitation, animal feed and pharmaceutical products. It is also a catalyst.
- World production is dominated by Chile (62%). The EU31 are entirely import dependent for iodine.
- Crude iodine crystals (50 kg drums, 99.5% min) traded in the range of \$22–25/kg during 2005.

### Exports of iodine

kilograms

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg	1 908 400	2 351 000	4 904 400	3 646 100	3 460 200
Czech Republic	...	267	330	537	1 000
France	74 900	107 000	30 900	30 500	40 900
Germany	570 400	2 637 000	583 100	640 400	465 800
Irish Republic	2 500	2 000	9 600	—	1 462
Italy	2 892	3 000	2 065	3 080	14 499
Lithuania	13 000	1 832	827	7 502	33
Netherlands	...	147 664	527 769	58 633	59 228
Norway	64	3 000	1 509	—	—
Spain	300 485	115 000	27 811	31 156	21 089
Sweden	1 000	2 000	4 000	—	4 000
Turkey	2 307	2 570	209	117	1 250
United Kingdom	507 363	207 341	169 145	107 007	197 086

### Imports of iodine

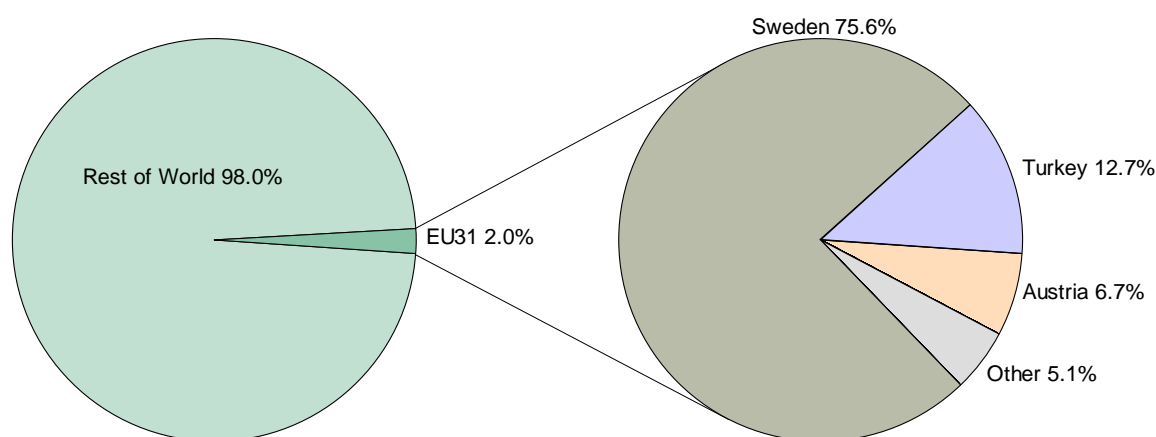
kilograms

Country	2001	2002	2003	2004	2005
Austria	101 600	81 000	85 500	124 100	92 700
Belgium-Luxembourg	2 006 900	2 357 000	4 817 700	3 419 800	3 332 800
Bulgaria	5 319	4 636	11 250	6 755	5 080
Cyprus	17 000	29 894	8 685	226	67
Czech Republic	24 000	18 819	29 637	31 428	28 400
Denmark	24 614	19 000	21 037	9 080	13 249
Finland	4 491	9 000	4 879	27 020	6 209
France	1 469 800	1 553 000	1 563 800	1 317 700	1 685 200
Germany	1 752 800	1 208 000	1 318 400	1 422 800	1 302 300
Greece	1 766	1 000	2 593	1 673	2 247
Irish Republic	44 664	5 000	8 712	18 215	11 921
Italy	1 049 291	1 218 000	1 167 573	1 127 906	854 831
Lithuania	7 000	1 376	1 050	1 796	6 929
Netherlands	2 156 800	1 269 000	632 000	357 225	21 015
Norway	118 903	684 000	1 105 811	1 294 934	1 748 110
Poland	20 000	13 312	23 875	18 687	10 200
Portugal	76 686	25 000	28 807	14 717	12 000
Slovenia	2 200	150	180	172	387
Spain	1 247 590	796 000	784 718	710 814	781 787
Sweden	1 000	5 000	5 000	1 000	2 000
Switzerland	28 203	14 000	27 226	7 428	7 949
Turkey	39 422	30 450	15 405	31 736	18 547
United Kingdom	1 015 061	744 234	825 813	802 782	1 092 633

## Iron ore

- There are two main commercial ores of iron— magnetite and haematite (both iron oxides). Iron is also recovered from pyrites (FeS<sub>2</sub>). Iron ore is mined, processed and smelted chiefly to produce steel in integrated steel plants. Pig iron, for use as iron, is a minor part of production.
- The largest world producer was China (27%). World exports were dominated by Brazil and Australia. EU31 iron ore production was only 2% of the world total in 2005. Sweden is the largest EU31 producer (76%); Sweden and Norway are the only net exporters.
- Iron ore demand closely follows demand for steel which remained very strong during 2005 mainly driven by rapid growth in China. Iron ore prices increased by more than 70% in 2005 (following a 19% increase in 2004) largely resulting from imbalances in supply and demand. International iron ore prices are generally determined through annual negotiations between producers and consumers. Itabira material traded at US\$0.55/dry metric tonne unit and US\$0.56/dry metric tonne unit for Carajás ore. Australian iron ore (Mt Newman high grade fines) was priced at US\$0.62/dry metric tonne unit.

**EU31 Production of iron ore 2005**



## Production of iron ore

tonnes

Country	2001	2002	2003	2004	2005
Austria (c)	1 843 275	1 941 759	2 124 787	1 889 419	2 047 950
Bulgaria	324 800	373 000	466 100	82 700	—
France	36 587	21 367	—	—	—
Germany (a) (b)	407 002	419 371	429 170	412 238	362 106
Norway	395 000	490 000	410 000	586 100	713 000
Romania	221 000	248 000	244 000	231 417	220 788
Slovakia	435 492	326 300	287 000	305 072	258 500
Spain	55 058	24 489	571	10 879	—
Sweden	19 486 000	20 281 000	21 498 000	22 272 000	23 255 000
Turkey	4 434 621	3 432 775	3 429 070	3 856 536	3 889 934
United Kingdom	510	464	*500	*500	*500
<b>EU31 Total</b>	<b>27 639 000</b>	<b>27 559 000</b>	<b>28 889 000</b>	<b>29 647 000</b>	<b>30 748 000</b>

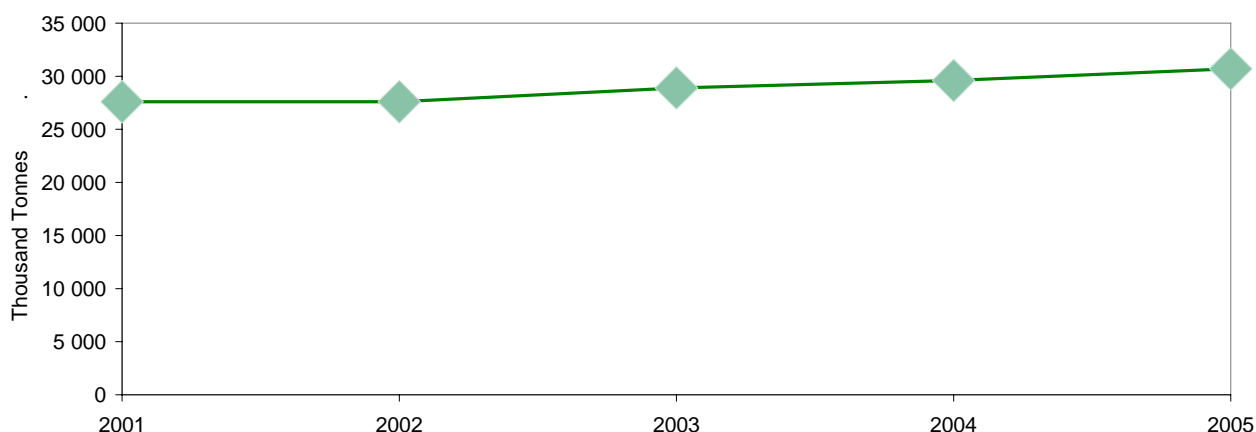
Note(s):-

(a) Including manganiferous iron ore

(b) Used as aggregate in the construction industry

(c) Including micaceous iron oxide

## EU31 Production of iron ore 2001 - 05



## Exports of iron ore

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg	43 578	70 035	43 752	23 450	81 560
France	38 116	16 649	43 473	38 413	106 849
Germany					
Iron ore	16 280	15 521	9 376	8 756	7 023
Burnt pyrites	6 112	6 907	6 491	3 241	7 257
Italy					
Burnt pyrites	57 643	46 294	30 848	11 086	9 410
Netherlands	29 724	42 244	20 881	1 384 740	1 977 963
Norway					
Iron ore	33 727	620 478	530 851	648 583	721 975
Burnt pyrites	46 323	62 214	62 315	117 389	14 730
Slovakia	112 227	127 174	76 957	135 398	8 581
Spain					
Burnt pyrites	168 181	189 404	105 203	171 292	230 985
Sweden	13 619 293	14 233 450	15 559 741	17 336 835	17 597 351

## Imports of iron ore

tonnes

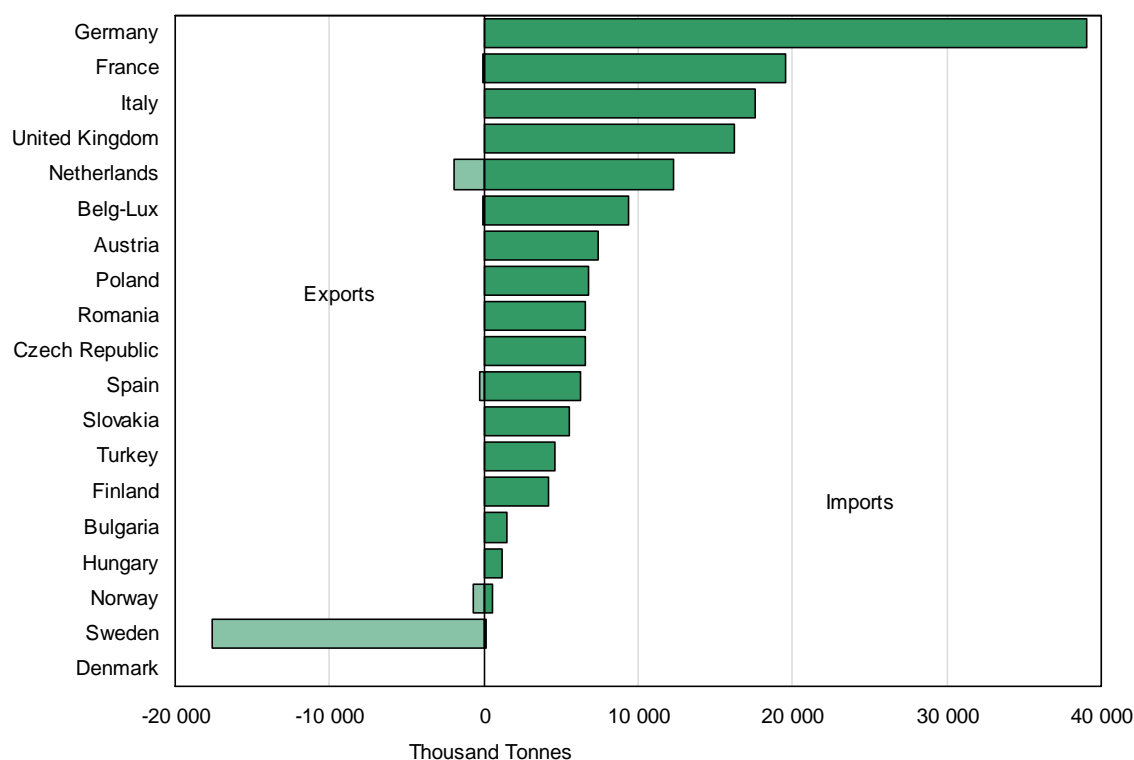
Country	2001	2002	2003	2004	2005
Austria	...	...	5 691 360	5 783 359	7 423 015
Belgium-Luxembourg	11 223 322	12 204 732	11 577 845	10 655 707	9 384 885
Bulgaria					
Iron ore	1 359 466	1 302 809	1 850 563	1 570 605	1 050 925
Burnt pyrites	2 666	1 307	128 640	357 898	437 710
Czech Republic	6 891 369	6 811 707	8 221 566	7 636 968	6 576 885
Denmark					
Burnt pyrites	47 038	60 659	52 806	81 071	85 975
Finland					
Iron ore	3 916 207	3 791 710	4 212 158	3 921 507	4 215 633
Burnt pyrites	56	13 132	26 163	63	—
France					
Iron ore	16 707 431	19 069 088	18 890 174	20 777 700	19 506 894
Burnt pyrites	24 758	0	3 348	65	160
Germany					
Iron ore	40 094 653	44 297 518	33 876 167	43 317 039	39 061 160
Burnt pyrites	55 380	44 838	56 249	37 194	20 496
Greece					
Burnt pyrites	125 242	58 666	132	4 601	180

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Hungary	1 702 510	1 718 394	1 864 033	1 063 931	1 210 543
Italy					
Iron ore	10 263 020	9 283 941	8 842 872	10 578 006	11 244 293
Burnt pyrites	55 502 623	5 614 311	6 445 903	6 136 765	6 307 527
Netherlands					
Iron ore	6 310 886	7 369 802	8 740 391	12 622 628	12 285 177
Burnt pyrites	106 277	23 596	22 545	26 717	—
Norway	224 442	206 650	178 025	495 047	526 713
Poland					
Iron ore	6 378 630	5 674 667	6 817 467	8 627 650	5 785 200
Burnt pyrites	1 322 662	1 273 170	1 764 657	2 303 655	1 003 456
Portugal	141 064	829	421	448	118
Romania	3 874 940	6 198 085	6 977 977	6 609 026	6 601 393
Slovakia	3 269 165	4 990 546	5 704 522	2 745 925	5 510 508
Spain	6 641 053	6 158 325	5 765 648	6 118 975	6 248 366
Sweden					
Iron ore	108 597	115 528	110 920	102 101	100 072
Burnt pyrites	15 763	41 970	29 658	36 351	6 095
Switzerland					
Burnt pyrites	15 897	12 239	9 157	4 283	6 293
Turkey					
Iron ore	1 726 891	2 879 135	2 144 607	2 070 545	2 095 737
Burnt pyrites	893 595	2 499 655	3 048 337	2 503 319	2 525 709
United Kingdom					
Iron ore	15 351 877	13 316 026	16 121 350	15 298 713	16 204 615
Burnt pyrites	17 130	...	19 230	2 436	1 911

## Iron ore – EU31 trade in 2005



## Production of pig iron

tonnes

Country	2001	2002	2003	2004	2005
Austria	4 392 878	4 607 000	4 676 742	4 846 740	5 400 000
Belgium	7 732 111	7 988 396	7 812 593	8 224 000	7 254 000
Bulgaria	1 211 000	1 072 000	1 386 000	1 200 000	1 200 000
Czech Republic	4 670 700	4 839 880	5 207 000	5 385 000	4 627 000
Finland	2 851 821	2 828 275	3 092 051	3 036 566	3 056 165
France	11 884 224	13 093 042	12 615 893	13 087 705	12 595 584
Germany	29 394 000	29 967 000	30 071 000	30 628 000	29 300 000
Hungary	1 225 714	1 334 000	1 332 000	1 350 000	1 329 000
Italy	10 581 000	9 746 000	10 123 000	10 566 000	11 392 000
Netherlands	5 305 000	5 367 000	5 846 000	6 011 000	6 000 000
Norway	70 000	108 000	*110 000	*100 000	*100 000
Poland	5 440 047	5 296 410	5 585 094	6 292 341	4 458 161
Portugal	82 000	—	—	—	—
Romania	3 242 994	3 979 346	4 101 409	4 243 956	4 097 921
Slovakia	3 254 600	3 533 150	3 892 000	3 765 000	3 681 000
Spain	4 094 000	3 973 000	3 645 000	4 036 000	4 200 000
Sweden	3 725 000	3 815 000	3 819 000	3 992 000	3 800 000
Switzerland	*80 000	*80 000	*80 000	*80 000	*80 000
Turkey	5 289 000	5 003 000	5 693 764	5 835 889	6 371 084
United Kingdom	9 870 400	8 560 600	10 277 800	10 179 600	10 200 000
EU31 Total	114 400 000	115 190 000	119 370 000	122 860 000	119 140 000

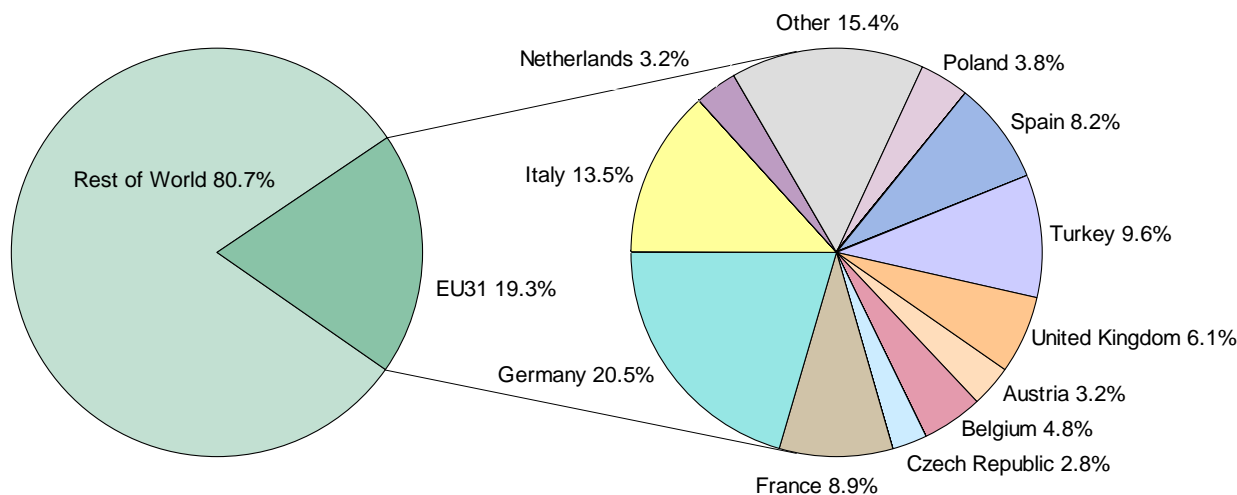
Note(s):-

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

## Crude steel

- Crude steel is the end result of smelting iron ore. It is produced in a wide variety of forms including slabs, coils, bars, rods and plates — depending on customer requirements. Steel is a ubiquitous product and has a multitude of applications. Alloying with other metals changes the fundamental properties of crude steel to meet specialised requirements. Recycled, or secondary, steel is a significant part of EU31 and world total steel production.
- The majority of industrialised countries in the world produce steel. In 2005 the largest producer was China (31%). In the EU31 the largest producer was Germany, which produced 21% of EU31 steel output.
- World steel prices declined in 2005, hot-rolled coil (world export prices, fob) starting the year around US\$600/tonne, began to decline in April, reaching a low in mid 2005 of US\$400/tonne.

EU31 Production of crude steel 2005





## Production of crude steel

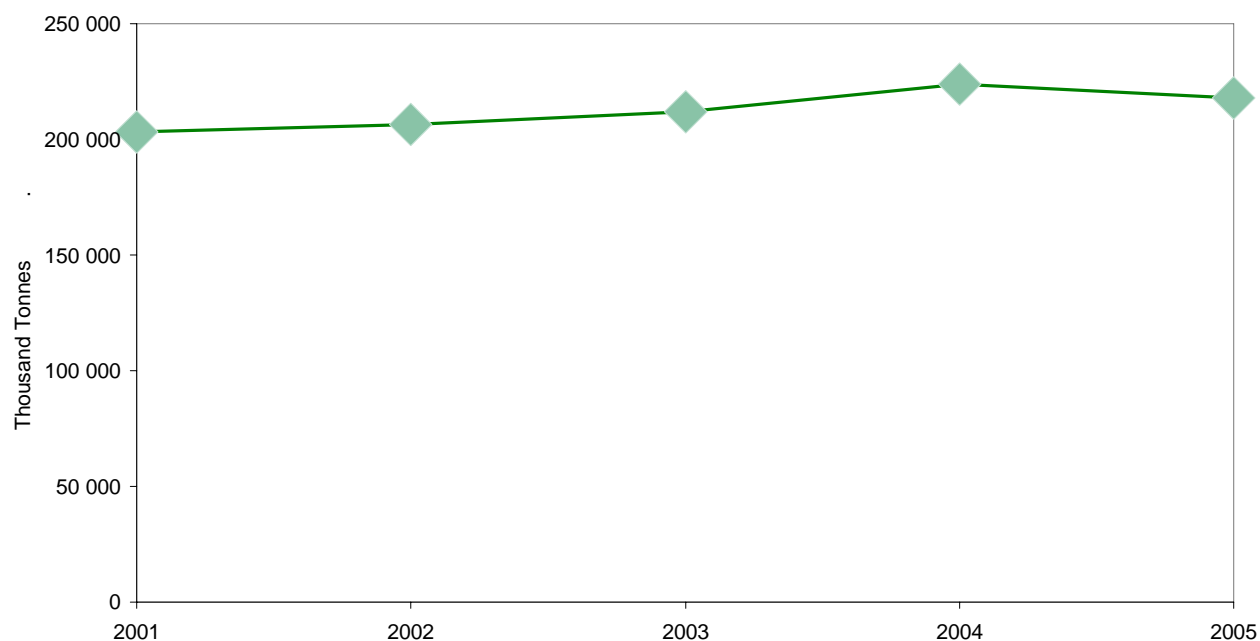
tonnes

Country	2001	2002	2003	2004	2005
Austria	5 870 000	6 189 000	6 261 000	6 530 000	7 031 000
Belgium	10 741 493	11 322 008	11 114 775	11 697 000	10 422 000
Bulgaria	1 972 000	1 860 000	1 950 000	2 106 000	1 940 000
Croatia	57 993	33 851	43 380	85 947	73 640
Czech Republic	6 315 900	6 511 970	6 783 000	7 033 000	6 189 000
Denmark	746 000	392 000	—	—	—
Finland	3 938 122	4 002 914	4 766 203	4 832 427	4 738 446
France	19 190 552	20 258 473	19 757 864	20 770 252	19 480 777
Germany	44 803 000	45 015 000	44 809 000	46 377 000	44 524 000
Greece	1 281 000	1 835 000	1 701 000	1 967 000	2 266 000
Hungary	2 064 507	2 138 146	2 044 526	1 944 017	2 004 250
Irish Republic	150 000	—	—	—	—
Italy	26 544 000	26 302 000	27 058 000	28 477 000	29 319 000
Latvia	515 000	507 000	546 000	550 000	550 000
Luxembourg	2 724 679	2 736 000	2 675 000	2 684 000	2 194 000
Netherlands	5 902 000	6 117 000	6 561 000	6 848 000	6 919 000
Norway	635 000	698 000	703 000	725 000	705 000
Poland	8 809 211	8 367 434	9 107 384	10 578 482	8 335 898
Portugal	727 000	894 000	1 000 000	1 400 000	1 400 000
Romania	4 935 623	5 490 434	5 692 496	6 076 600	5 631 566
Slovakia	3 988 600	4 275 470	4 588 000	4 454 000	4 485 000
Slovenia	462 000	481 000	541 000	566 000	583 000
Spain	16 504 000	16 408 000	16 407 000	17 700 000	17 826 000
Sweden	5 518 100	5 753 300	5 707 300	5 978 100	5 725 700
Switzerland	*1 000 000	*1 000 000	*1 000 000	*1 000 000	1 160 000
Turkey	14 382 257	16 045 522	17 644 020	19 868 118	20 961 240
United Kingdom	13 542 700	11 667 100	13 268 000	13 765 700	13 226 000
<b>EU31 Total</b>	<b>203 321 000</b>	<b>206 301 000</b>	<b>211 729 000</b>	<b>224 014 000</b>	<b>217 691 000</b>

Note(s):-

- (1) Unless otherwise indicated, these figures include production from scrap  
(2) Small amounts of steel are believed to be produced in Estonia and Lithuania

EU31 Production of crude steel 2001 - 05



## Ferro-alloys

- Ferro-alloys are alloys with iron of a number of metals used exclusively as additives to steel with the object of modifying its properties. Silicon metal is normally included with ferro-alloys as it is used for the same purpose.
- Ferro-alloy production is usually undertaken close to the mine site or at distant locations where cheap energy supplies are available.
- China is the largest producer but South Africa is the largest exporter – predominantly of ferro-chrome. In the EU31, Norway is the largest producer and exporter, based on imported metal ores and indigenous resources of silica.

### Production of ferro-alloys

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Ferro-molybdenum	4 900	4 930	4 400	4 700	5 000
Ferro-nickel	2 600	2 150	2 000	1 900	2 500
Ferro-vanadium	5 800	5 500	5 300	5 800	6 250
Belgium					
Ferro-vanadium	926	1 492	...	...	...
Bulgaria					
Ferro-silicon	*8 000	*8 000	*8 000	*8 000	*8 000
Croatia					
Ferro-chrome	361	—	—	—	—
Czech Republic					
Ferro-vanadium	*2 500	*3 000	*3 000	*3 500	*3 500
Finland					
Ferro-chrome	236 000	248 000	250 000	264 492	234 881
France					
Ferro-manganese & spiegeleisen	414 200	416 569	*300 000	*106 000	...
Ferro-silico-manganese	65 248	66 215	*107 000	*64 000	...
Ferro-silicon	*100 000	*100 000	*100 000	*100 000	*100 000
Silicon metal	89 896	84 768	*85 000	*85 000	*85 000
Germany					
Ferro-chrome	19 308	20 018	18 318	24 857	22 672
Other ferro-alloys	*30 000	*30 000	*30 000	*30 000	*30 000
Silicon metal	27 739	25 257	27 870	28 773	29 349
Greece					
Ferro-nickel	88 755	96 000	90 000	91 000	96 000
Italy					
Ferro-manganese	*40 000	*40 000	*40 000	*40 000	*40 000
Ferro-silico-manganese	*100 000	*100 000	*100 000	*100 000	*100 000
Norway					
Ferro-chrome	82 600	61 100	—	—	—
Ferro-manganese	111 823	126 960	*130 000	*130 000	*130 000
Ferro-silico-manganese	277 938	252 723	*250 000	*260 000	*290 000
Ferro-silicon	427 590	359 944	...	389 599	...
Other ferro-alloys	47 600	48 500	*50 000	*60 000	*60 000
Silicon metal	134 958	152 981	...	193 566	178 572
Poland					
Ferro-chrome	—	106	188	—	—
Ferro-manganese	497	602	979	46 898	7 782
Ferro-silico-manganese	20 007	7 338	*7 000	—	10 242
Ferro-silicon	48 608	41 759	92 687	83 552	65 118
Other ferro-alloys	4 039	4 200	—	1 419	3 663
Romania					
Ferro-manganese	384	—	—	191	18 625
Ferro-silico-manganese	71 921	84 720	141 899	194 754	100 957
Ferro-silicon	5 823	—	—	—	—
Slovakia					
Ferro-chrome	5 968	5 695	1 924	1 784	867
Ferro-silico-manganese	46 288	62 084	52 733	64 862	47 843
Ferro-silicon	55 577	35 920	41 539	34 684	16 512
Other ferro-alloys	46 357	24 657	44 589	68 096	48 161
Slovenia					
Ferro-silicon	*9 000	*9 000	*12 000	*18 000	*11 000

Production continued

tonnes

Country	2001	2002	2003	2004	2005
Spain					
Ferro-manganese	24 804	33 218	*35 000	*35 000	*35 000
Ferro-silico-manganese	102 110	103 494	*100 000	*100 000	*100 000
Ferro-silicon	53 427	56 994	*60 000	*60 000	*60 000
Silicon metal	29 114	26 071	*25 000	*25 000	*25 000
Sweden					
Ferro-chrome	107 036	118 800	106 100	127 300	127 500
Ferro-silicon	21 197	21 500	17 100	18 500	9 800
Turkey					
Ferro-chrome	50 735	11 200	35 393	28 701	26 043
Ferro-silico-chrome	5 895	7 245	6 805	5 526	—

## Exports of iron, steel and ferro-alloys

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Ferro-alloys	6 154	16 390	17 202	5 999	9 476
Silicon metal	140	470	751	598	628
Ingots, blooms, billets	177 057	217 580	256 981	334 124	484 431
Scrap	754 489	777 267	842 323	1 099 278	1 024 301
Belgium-Luxembourg					
Pig iron	116 359	172 175	227 815	225 486	201 577
Sponge & powder	4 395	13 263	18 741	29 127	15 850
Ferro-chrome	39 937	41 565	39 778	32 998	31 851
Ferro-silico-chrome	...	3 593	10 381	7 214	9 107
Ferro-silico-magnesium	1 171	38	79	39	11
Ferro-manganese	24 367	23 985	16 246	9 621	11 674
Ferro-silico-manganese	31 139	29 953	38 032	41 307	29 858
Ferro-molybdenum	...	...	...	19 219	22 420
Ferro-silicon	30 427	30 962	18 856	31 000	21 812
Other ferro-alloys	9 135	4 342	9 678	6 445	6 700
Silicon metal	12 440	5 873	8 227	6 078	9 095
Ingots, blooms, billets	498 122	548 174	395 499	368 589	639 936
Scrap	1 799 938	1 821 636	2 310 658	2 851 040	2 712 683
Bulgaria					
Ferro-alloys	4 225	5 088	8 045	5 646	3 072
Ingots, blooms, billets	410 940	111 719	355 397	277 332	97 757
Scrap	375 118	459 322	572 559	769 559	784 778
Croatia					
Scrap	133 451	197 532	235 322	279 852	318 840
Cyprus					
Scrap	26 839	38 154	41 926	46 316	55 240
Czech Republic					
Pig iron	25 352	28 844	50 125	55 687	15 526
Ferro-chrome	2 300	287	77	1 016	524
Ferro-vanadium	2 195	2 949	3 012	3 417	2 613
Other ferro-alloys	2 412	4 445	6 630	12 098	19 067
Silicon metal	816	859	778	4 488	512
Ingots, blooms, billets	250 740	287 557	249 522	267 912	251 513
Scrap	1 000 515	1 057 822	1 178 514	1 930 343	1 351 676
Denmark					
Ingots, blooms, billets	59 258	21 432	8 119	16 223	1 203
Scrap	770 311	1 058 048	1 310 175	1 564 469	1 402 982
Estonia					
Pig iron (b)	*700	*500	...	...	...
Ferro-chrome	2 283	—	5 695	45	...
Other ferro-alloys	4 269	10 270	17 725	1 193	665
Silicon metal	21	1	...	...	...
Scrap	380 328	326 407	376 554	358 185	440 622

## Iron, Steel and Ferro-Alloys

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
Finland					
Ferro-chrome & ferro-silico-chrome	82 590	80 026	33 499	35 780	39 341
Ingots, blooms, billets	130 066	186 989	501 945	624 170	436 083
Scrap	362 373	359 153	374 778	315 977	286 494
France					
Pig iron	4 426	3 378	153	679	350
Sponge & powder	6 895	5 983	6 231	5 221	6 465
Ferro-chrome	2 478	3 747	1 456	1 074	857
Ferro-silico-magnesium	5 714	6 521	5 262	5 521	6 829
Ferro-manganese	26 049	26 302	28 094	14 360	7 181
Ferro-silico-manganese	62 877	73 647	53 270	63 483	76 021
Ferro-molybdenum	410	348	300	538	547
Ferro-nickel	712	104	2	7	25
Ferro-niobium	784	361	926	521	240
Ferro-silicon	43 956	53 682	65 871	65 881	69 551
Ferro-titanium & Fe-Si-Ti	1 842	1 434	1 463	1 305	1 542
Ferro-vanadium	21	25	50	53	98
Other ferro-alloys	45 650	35 746	37 534	34 781	34 138
Ingots, blooms, billets	2 621 568	3 419 270	3 420 829	3 833 258	3 914 427
Scrap	4 161 312	4 656 513	4 990 462	5 578 148	4 955 474
Germany					
Pig iron	75 137	67 365	56 571	112 911	82 834
Sponge & powder	30 585	83 354	95 612	148 734	175 291
Ferro-chrome	34 379	33 992	30 640	22 758	26 472
Ferro-silico-chrome	3 115	608	1	79	4
Ferro-silico-magnesium	6 912	6 825	5 551	13 887	14 254
Ferro-manganese	19 346	13 036	8 937	13 776	12 660
Ferro-silico-manganese	13 743	11 520	10 306	9 286	2 928
Ferro-molybdenum	903	1 283	2 054	2 597	3 867
Ferro-nickel	...	57	94	625	31
Ferro-niobium	816	828	713	1 076	1 448
Ferro-phosphorus	1 149	1 163	691	786	936
Ferro-silicon	66 920	64 000	60 016	61 239	53 979
Ferro-titanium & Fe-Si-Ti	2 877	3 607	2 478	3 069	5 263
Ferro-tungsten & Fe-Si-W	112	106	268	178	176
Ferro-vanadium	373	634	653	600	528
Other ferro-alloys	20 321	22 860	21 610	27 285	25 838
Silicon metal	10 632	10 060	16 141	18 064	—
Ingots, blooms, billets	2 032 350	2 011 458	2 563 182	2 104 580	1 950 158
Scrap	6 598 673	6 880 778	6 718 904	6 956 839	6 692 022
Greece					
Ferro-alloys	10 175	7 976	1 742	5 528	1 044
Ingots, blooms, billets	5 083	1 157	2 908	64 105	48
Scrap	47 721	39 806	56 047	59 502	37 164
Hungary					
Ferro-alloys	651	694	436	701	234
Ingots, blooms, billets	47 954	87 994	32 452	24 042	24 923
Scrap	462 209	553 847	618 827	887 069	761 464
Irish Republic					
Scrap	133 287	228 807	292 971	347 479	352 028
Italy					
Pig iron	47 031	58 982	40 069	41 068	15 740
Sponge & powder	2 095	651	130	62	163
Ferro-chrome	1 843	9 576	7 290	8 411	3 753
Ferro-silico-magnesium	10	2 119	1 673	3 163	30
Ferro-manganese	17 472	5 382	6 322	8 857	10 380
Ferro-silico-manganese	3 371	2 055	1 392	3 167	3 511
Ferro-molybdenum	525	351	352	162	90
Ferro-nickel	...	...	...	...	3 967
Ferro-silicon	3 143	2 697	3 287	3 594	5 035
Ferro-vanadium	1 023	2 873	817	63	3
Other ferro-alloys	1 107	975	488	2 859	1 023
Silicon metal	743	1 092	583	1 667	3 931
Ingots, blooms, billets	770 001	786 800	546 474	402 967	698 402
Scrap	151 196	153 190	173 616	211 385	185 688

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
Latvia					
Ferro-chrome	24 000	11 000	20	19	...
Scrap	37 885	6 328	6 415	64 936	217 361
Lithuania					
Scrap	563 394	704 948	618 231	677 727	599 084
Malta					
Scrap	18 594	20 322	23 093	12 424	5 252
Netherlands					
Pig iron	62 667	5 131	7 377	31 821	40 552
Sponge & powder	76 545	107 474	15 255	15 794	46 464
Ferro-chrome	27 898	9 122	38 469	70 272	81 105
Ferro-silico-chrome	32	5	68	18	508
Ferro-manganese	26 335	23 131	25 842	53 367	49 203
Ferro-silico-manganese	25 958	7 037	20 830	16 109	13 994
Ferro-molybdenum	3 401	1 242	1 610	2 712	4 304
Ferro-nickel	10 796	4 159	4 112	9 855	23 252
Ferro-niobium	7 512	130	131	47	126
Ferro-silicon	4 937	9 899	27 511	27 328	95 845
Ferro-titanium & Fe-Si-Ti	780	225	213	660	6 235
Ferro-tungsten & Fe-Si-W	380	217	264	193	624
Ferro-vanadium	2 194	910	2 838	2 901	22 495
Other ferro-alloys	9 767	9 379	10 519	5 925	9 700
Silicon metal	14 014	8 819	15 957	10 319	40 393
Ingots, blooms, billets	312 200	538 825	239 603	309 454	152 593
Scrap	3 072 052	3 064 283	3 242 779	3 859 394	4 140 362
Norway					
Pig iron (b)	*46 600	*119 400	*118 400	*123 700	*66 800
Ferro-chrome (b)	*76 100	*87 500	*1 900	*600	*200
Ferro-manganese (b)	*193 000	*169 600	*213 700	*338 900	*272 100
Ferro-silico-manganese	275 291	240 477	255 243	264 163	289 497
Ferro-silicon	324 858	251 252	194 246	256 018	179 503
Other ferro-alloys	48 994	49 366	53 913	59 696	55 564
Silicon metal	153 017	150 681	151 476	176 458	168 790
Ingots, blooms, billets	110 888	126 094	160 127	148 514	151 882
Scrap	150 020	227 592	263 510	270 903	267 051
Poland					
Pig iron	40 670	3 003	16 023	57 696	4 917
Ferro-manganese & Fe-Si-Mn	20	3 637	1 451	66 666	22 713
Ferro-silicon	50 649	43 021	84 406	85 538	64 974
Other ferro-alloys	10 522	96	86	195	915
Ingots, blooms, billets	948 473	1 034 776	975 777	1 585 494	1 249 618
Scrap	1 269 594	1 535 305	1 804 181	1 973 116	1 426 831
Portugal					
Ingots, blooms, billets	44 980	15 058	33 032	184 547	159 868
Scrap	246 777	231 761	201 189	259 297	330 536
Romania					
Pig iron	2 548	2 686	6 367	3 339	...
Sponge & powder	7 264	7 797	6 886	9 187	12 522
Ferro-silico-manganese	(a) ...	(a) ...	124 557	179 788	142 617
Other ferro-alloys	66 286	88 368	2 529	3 891	8 657
Ingots, blooms, billets	435 748	162 991	130 415	161 438	100 515
Scrap	1 679 265	2 070 119	2 386 017	2 394 490	1 661 747
Slovakia					
Pig iron	23 551	13 213	37 145	73 303	31 261
Ferro-manganese	36 573	47 074	37 139	57 440	41 918
Ferro-silico-manganese	47 734	56 484	54 945	66 902	51 623
Ferro-silicon	53 701	39 550	42 018	40 135	29 130
Other ferro-alloys	18 111	14 541	10 013	11 834	10 741
Ingots, blooms, billets	202 645	191 414	125 822	286 072	289 090
Scrap	375 552	450 126	497 645	544 714	390 620
Slovenia					
Ferro-alloys	27 200	31 083	34 420	37 714	51 410
Silicon metal	...	40	188	1 608	252
Ingots, blooms, billets	11 953	8 292	13 311	15 327	12 647
Scrap	136 041	126 233	113 448	186 726	225 627

## Iron, Steel and Ferro-Alloys

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
<b>Spain</b>					
Pig iron	2 900	4 177	2 751	3 258	12 709
Sponge & powder	4 956	3 920	4 447	4 914	4 397
Ferro-chrome	466	472	369	551	775
Ferro-manganese	66 834	73 506	62 260	82 733	101 850
Ferro-silico-manganese	34 622	29 297	44 214	40 130	42 916
Ferro-molybdenum	120	326	342	60	331
Ferro-silicon	5 826	14 730	13 140	19 332	11 843
Other ferro-alloys	1 120	750	891	558	992
Silicon metal	14 027	17 621	11 035	13 254	16 742
Ingots, blooms, billets	263 813	241 944	182 247	130 079	118 414
Scrap	45 419	93 970	103 413	205 298	140 200
<b>Sweden</b>					
Pig iron	35 593	30 079	118 378	116 550	99 496
Sponge & powder	11 324	11 356	9 311	12 306	9 064
Ferro-chrome	1 023	617	1 070	1 830	1 801
Ferro-silico-magnesium	1 102	392	479	235	60
Ferro-manganese & Fe-Si-Mn	1 189	6 903	1 159	1 605	3 456
Ferro-molybdenum	65	745	71	87	158
Ferro-phosphorus	399	1 203	463	281	294
Ferro-silicon	762	736	182	441	731
Ferro-vanadium	24	427	27	99	249
Other ferro-alloys	3 138	6 903	1 527	2 796	1 525
Silicon metal	1 766	6 742	2 790	6 387	6 049
Ingots, blooms, billets	197 800	297 913	166 876	367 562	232 958
Scrap	560 297	722 509	708 654	741 254	863 474
<b>Switzerland</b>					
Ingots, blooms, billets	2 459	31 317	51 008	51 639	83 219
Scrap	457 523	412 341	451 452	539 629	561 972
<b>Turkey</b>					
Pig iron	109 862	12 895	1 060	50 165	9 358
Ferro-chrome	15 446	61 163	53 695	16 286	38 738
Other ferro-alloys	673	1 156	5 361	5 092	5 474
Ingots, blooms, billets	2 132 421	2 734 188	3 178 909	3 769 934	2 174 257
Scrap	28 937	34 512	48 741	82 460	64 281
<b>United Kingdom</b>					
Pig iron	6 749	3 376	1 459	957	1 387
Sponge & powder	3 164	3 134	3 666	4 003	3 605
Ferro-chrome & ferro-silico-chrome	1 206	814	1 711	2 384	6 238
Ferro-silico-magnesium	...	...	...	316	542
Ferro-manganese	792	1 874	434	1 554	661
Ferro-silico-manganese	8	116	42	8 247	5 003
Ferro-molybdenum	9 278	11 965	14 081	14 213	11 501
Ferro-nickel	104	368	424	125	55
Ferro-niobium	280	46	59	47	79
Ferro-phosphorus	26	57	109	1 336	189
Ferro-silicon	2 247	3 155	1 845	2 699	2 652
Ferro-titanium & Fe-Si-Ti	16 422	16 334	14 676	20 703	17 361
Ferro-vanadium	118	55	39	17	156
Other ferro-alloys	6 013	9 226	6 349	5 544	6 204
Silicon metal	1 914	4 050	2 699	1 555	2 466
Ingots, blooms, billets	746 730	560 796	1 305 976	1 712 102	2 246 377
Scrap	4 821 840	5 538 569	7 174 934	6 772 111	6 105 955

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) Included with 'other ferro-alloys'

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

## Imports of iron, steel and ferro-alloys

Country	2001	2002	2003	2004	2005
<b>Austria</b>					
Pig iron	34 724	30 284	34 462	66 196	51 982
Sponge & powder	10 385	14 873	12 042	10 917	25 214
Ferro-chrome	33 710	24 412	32 874	43 438	41 046
Ferro-silico-magnesium	829	877	969	627	678
Ferro-manganese	24 511	37 772	34 748	39 026	37 865
Ferro-silico-manganese	5 054	4 829	11 795	6 817	26 572
Ferro-molybdenum	1 087	1 348	1 066	1 011	617
Ferro-niobium & ferro-niobium-tantalum	543	781	1 669	934	899
Ferro-phosphorus	990	1 023	1 645	1 433	1 749
Ferro-silicon	20 884	23 493	36 918	47 223	32 445
Ferro-titanium & Fe-Si-Ti	737	1 136	1 427	961	1 121
Ferro-tungsten & Fe-Si-W	845	562	712	589	535
Ferro-vanadium	622	571	643	587	256
Other ferro-alloys	3 640	3 083	3 631	3 321	3 981
Silicon metal	8 478	10 273	9 822	9 127	11 698
Ingots, blooms, billets	163 944	120 409	99 393	156 796	108 004
Scrap	833 909	865 061	936 512	1 017 497	1 113 082
<b>Belgium-Luxembourg</b>					
Pig iron	233 325	270 015	291 507	396 174	330 709
Sponge & powder	8 425	13 234	26 084	107 639	48 915
Ferro-chrome	155 561	176 217	198 691	215 638	220 896
Ferro-silico-chrome	7 992	3 426	12 392	7 435	9 587
Ferro-silico-magnesium	1 414	425	327	993	1 656
Ferro-manganese	63 766	67 683	54 564	49 305	60 564
Ferro-silico-manganese	58 555	56 769	54 676	56 622	60 454
Ferro-molybdenum	2 355	3 573	5 141	4 317	5 199
Ferro-nickel	36 455	42 337	32 673	51 796	61 454
Ferro-niobium	849	720	719	712	849
Ferro-phosphorus	604	769	1 124	1 237	1 700
Ferro-silicon	67 460	73 251	63 474	93 591	79 901
Ferro-titanium & Fe-Si-Ti	1 436	1 761	2 069	1 677	2 141
Ferro-tungsten & Fe-Si-W	...	...	...	...	309
Ferro-vanadium	331	182	412	568	650
Other ferro-alloys	4 791	8 591	5 186	9 673	10 854
Silicon metal	12 750	14 985	15 579	15 136	18 563
Ingots, blooms, billets	2 631 575	2 383 948	3 894 592	2 814 705	3 452 850
Scrap	2 740 480	3 146 151	3 896 924	4 413 160	3 761 788
<b>Bulgaria</b>					
Pig iron	21 281	16 304	45 935	14 228	19 624
Ferro-manganese	4 707	2 047	5 152	5 116	5 540
Other ferro-alloys	7 256	4 440	9 232	7 441	6 539
Silicon metal	...	137	232	663	585
Ingots, blooms, billets	62 056	7 951	116 005	280 895	275 001
Scrap	55 376	43 260	74 445	90 491	108 450
<b>Croatia</b>					
Pig iron	12 560	14 124	14 821	15 175	15 270
Ferro-alloys	1 706	2 265	2 421	2 980	2 893
Silicon metal	438	391	350	510	261
Ingots, blooms, billets	22 673	13 527	18 523	3 562	12 421
Scrap	7 569	3 937	5 361	7 156	18 407
<b>Czech Republic</b>					
Pig iron	91 906	90 568	72 151	88 014	88 549
Sponge & powder	670	5 739	21 478	5 661	6 130
Ferro-chrome	39 975	43 181	13 193	16 248	16 772
Ferro-manganese	20 716	21 055	24 154	27 051	30 921
Ferro-silico-manganese	25 660	26 130	55 989	59 361	53 258
Ferro-molybdenum	1 157	1 054	1 346	1 710	1 744
Ferro-silicon	20 640	20 570	26 721	34 812	34 114
Ferro-vanadium	278	250	225	395	564
Other ferro-alloys	8 092	7 851	8 745	9 817	10 959
Silicon metal	2 832	2 713	4 095	8 401	2 589
Ingots, blooms, billets	272 751	263 839	268 231	352 672	484 450
Scrap	347 858	372 348	506 094	593 330	392 135

## Iron, Steel and Ferro-Alloys

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Denmark					
Pig iron	112 108	59 866	5 678	14 844	12 720
Sponge & powder	1 943	14 155	6 471	103 479	29 188
Ferro-manganese	3 497	1 674	16	38	161
Ferro-silico-manganese	6 079	2 071	...	...	818
Ferro-silicon	2 479	337	2 495	3 564	2 548
Other ferro-alloys	13 822	784	459	712	366
Silicon metal	1 686	2 179	1 521	1 061	659
Ingots, blooms, billets	11 604	75 117	588 317	598 552	551 407
Scrap	326 574	325 841	237 035	250 551	313 558
Estonia					
Pig iron	...	...	...	...	240
Ferro-alloys	12 273	9 905	16 840	2 132	2 125
Silicon metal	649	946	1 827	574	125
Scrap	28 995	17 142	35 654	85 689	111 930
Finland					
Pig iron	42 707	72 083	41 213	30 453	27 160
Sponge & powder	12 235	16 335	28 412	16 906	969
Ferro-chrome	5 073	5 690	9 395	6 562	7 404
Ferro-manganese	13 199	12 744	16 237	15 805	14 728
Ferro-silico-manganese	29 989	32 832	41 466	40 800	38 375
Ferro-molybdenum	1 873	2 333	2 776	2 709	2 293
Ferro-nickel	61 421	61 244	71 996	60 213	47 531
Ferro-niobium	426	485	494	470	478
Ferro-phosphorus	221	139	506	570	489
Ferro-silicon	18 928	20 729	37 976	32 507	25 723
Ferro-titanium & Fe-Si-Ti	1 271	1 271	1 632	2 063	1 912
Ferro-vanadium	175	222	238	250	243
Other ferro-alloys	4 767	3 162	3 640	4 448	4 505
Silicon metal	3 007	2 397	1 601	2 097	1 306
Ingots, blooms, billets	448 017	350 229	196 611	253 730	51 678
Scrap	482 372	476 516	781 633	865 142	756 267
France					
Pig iron	235 212	225 850	254 512	237 824	249 585
Sponge & powder	124 727	140 863	148 215	151 090	184 661
Ferro-chrome	253 110	310 760	260 231	224 722	192 129
Ferro-silico-chrome	127	2 116	1 524	59	122
Ferro-silico-magnesium	2 006	2 166	1 840	1 524	920
Ferro-manganese	42 103	57 442	46 048	96 276	55 239
Ferro-silico-manganese	53 527	64 538	73 362	61 446	58 403
Ferro-molybdenum	5 803	4 839	4 643	5 474	5 235
Ferro-nickel	27 640	36 725	28 974	10 966	9 229
Ferro-niobium	2 133	1 703	2 286	2 297	2 722
Ferro-phosphorus	2 550	2 464	2 160	2 942	2 536
Ferro-silicon	68 969	87 071	70 729	62 260	71 269
Ferro-titanium & Fe-Si-Ti	5 259	5 441	4 828	4 768	6 448
Ferro-tungsten & Fe-Si-W	622	283	485	346	523
Ferro-vanadium	1 401	940	1 063	1 031	1 351
Other ferro-alloys	42 196	16 543	16 253	18 670	27 582
Silicon metal	22 084	19 212	16 489	19 299	25 257
Ingots, blooms, billets	2 120 903	1 777 677	1 595 528	1 803 335	1 621 219
Scrap	2 934 281	2 833 589	3 019 857	3 449 108	2 819 160



Imports continued

tonnes

Country	2001	2002	2003	2004	2005
<b>Germany</b>					
Pig iron	280 829	229 592	221 451	342 152	320 481
Sponge & powder	288 427	80 690	142 967	180 615	156 048
Ferro-chrome	381 746	383 712	478 203	440 993	454 703
Ferro-silico-chrome	6 087	2 740	8 354	11 367	1 429
Ferro-silico-magnesium	12 538	12 651	1 103	1 722	6 831
Ferro-manganese	198 415	183 336	178 917	175 176	170 967
Ferro-silico-manganese	130 975	147 113	144 637	172 164	172 967
Ferro-molybdenum	11 104	12 126	10 369	13 214	15 594
Ferro-nickel	80 666	89 782	82 618	90 614	157 091
Ferro-niobium	3 268	3 746	3 197	3 864	4 361
Ferro-phosphorus	5 285	5 807	4 728	4 131	4 985
Ferro-silicon	209 195	195 233	231 346	237 700	238 120
Ferro-titanium & Fe-Si-Ti	8 310	11 188	8 862	6 845	10 302
Ferro-tungsten & Fe-Si-W	561	498	486	400	600
Ferro-vanadium	6 832	4 767	5 471	4 006	4 843
Other ferro-alloys	33 594	43 225	25 367	22 754	25 139
Silicon metal	94 338	108 062	120 821	130 408	156 690
Ingots, blooms, billets	1 310 471	1 160 168	1 306 210	1 945 817	2 331 264
Scrap	3 560 264	3 804 881	4 364 130	5 411 710	5 026 286
<b>Greece</b>					
Pig iron	14 682	15 085	10 844	15 494	6 415
Ferro-manganese	2 188	1 695	2 454	2 604	1 293
Ferro-silico-manganese	15 462	24 110	19 505	23 808	31 657
Ferro-silicon	11 059	3 990	7 353	7 899	6 339
Other ferro-alloys	163	642	540	1 022	1 148
Silicon metal	873	856	1 140	1 055	1 126
Ingots, blooms, billets	505 889	148 798	211 021	229 854	90 412
Scrap	776 523	1 179 017	1 138 900	1 178 451	1 545 912
<b>Hungary</b>					
Pig iron	23 983	23 881	19 312	14 429	8 808
Ferro-manganese	10 441	10 908	11 503	9 152	2 898
Ferro-silicon	5 736	5 173	5 530	5 295	5 013
Other ferro-alloys	5 764	6 406	4 089	4 376	5 417
Silicon metal	2 772	3 567	4 686	5 196	2 260
Ingots, blooms, billets	168 833	82 919	91 664	82 336	102 861
Scrap	111 440	135 594	112 463	62 753	45 860
<b>Irish Republic</b>					
Pig iron	3 401	5 120	4 808	3 812	3 215
Ferro-alloys	3 772	663	224	286	474
Silicon metal	1 032	219	431	367	221
Ingots, blooms, billets	1 203	1 601	1 291	1 487	1 637
Scrap	26 285	1 420	786	1 277	1 137
<b>Italy</b>					
Pig iron	1 308 092	1 121 250	1 209 778	1 304 367	1 729 086
Sponge & powder	220 836	289 728	316 524	206 956	424 810
Ferro-chrome	303 726	378 402	368 649	400 159	428 716
Ferro-silico-chrome	...	189	30	5	32
Ferro-silico-magnesium	4 570	7 651	6 601	7 826	5 409
Ferro-manganese	74 801	77 121	69 901	79 827	84 920
Ferro-silico-manganese	95 270	151 140	150 805	182 945	174 391
Ferro-molybdenum	5 063	3 866	4 954	7 289	7 294
Ferro-nickel	36 887	60 680	59 367	82 107	141 603
Ferro-niobium	1 431	1 523	1 408	1 403	2 457
Ferro-phosphorus	917	1 021	662	830	987
Ferro-silicon	134 547	114 779	130 582	119 820	141 789
Ferro-titanium & Fe-Si-Ti	3 120	2 462	3 065	3 379	3 978
Ferro-tungsten & Fe-Si-W	177	108	123	229	208
Ferro-vanadium	2 014	2 180	1 759	1 890	1 945
Other ferro-alloys	14 245	17 338	15 096	17 062	17 384
Silicon metal	42 596	37 799	48 298	46 108	49 129
Ingots, blooms, billets	2 270 890	2 138 491	2 510 222	3 874 346	4 310 404
Scrap	4 348 543	4 045 986	4 380 744	5 606 124	5 367 259

## Iron, Steel and Ferro-Alloys

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Latvia					
Pig iron	14 209	14 351	79 359	75 448	54 639
Ferro-alloys	7 585	8 980	10 920	16 240	12 222
Silicon metal	1 895	2 572	5 638	2 220	1 711
Ingots, blooms, billets	91 262	99 588	172 092	195 467	206 550
Scrap	178 503	160 459	174 272	171 941	161 538
Lithuania					
Scrap	32 421	96 950	30 508	82 325	74 816
Netherlands					
Pig iron	132 065	144 375	63 821	71 664	107 828
Sponge & powder	42 829	114 868	71 606	59 030	131 170
Ferro-chrome	126 622	114 878	68 424	176 862	170 806
Ferro-silico-chrome	2 487	398	6	616	621
Ferro-silico-magnesium	318	3 212	1 305	...	...
Ferro-manganese	42 022	42 054	72 916	112 073	115 972
Ferro-silico-manganese	35 316	40 133	54 901	33 492	30 114
Ferro-molybdenum	8 781	1 457	1 800	5 282	5 100
Ferro-nickel	23 658	12 428	9 213	38 872	39 305
Ferro-niobium	7 888	31	16	16	51
Ferro-phosphorus	2 720	1 976	1 421	...	...
Ferro-silicon	90 882	129 678	110 329	153 435	145 459
Ferro-titanium & Fe-Si-Ti	1 736	1 565	2 083	4 272	11 496
Ferro-tungsten & Fe-Si-W	370	393	405	625	1 148
Ferro-vanadium	1 969	3 240	3 565	3 608	5 100
Other ferro-alloys	4 798	6 654	4 002	5 680	7 412
Silicon metal	32 276	33 395	43 195	36 792	52 931
Ingots, blooms, billets	119 504	102 428	124 817	302 637	322 908
Scrap	1 272 600	1 378 767	1 751 693	2 250 964	2 030 115
Norway					
Pig iron	18 207	16 844	14 639	8 823	10 841
Sponge & powder	44 037	48 170	45 271	38 519	13 729
Ferro-chrome	762	499	571	860	1 251
Ferro-manganese	10 848	3 987	5 921	9 703	6 154
Ferro-silico-manganese	19	716	3 560	933	1 071
Ferro-silicon	13 610	14 177	19 180	11 684	25 663
Other ferro-alloys	2 145	1 543	2 016	1 679	1 877
Silicon metal	8 649	8 629	13 424	17 653	26 714
Ingots, blooms, billets	161 217	132 220	101 819	150 611	142 986
Scrap	334 136	347 080	381 683	416 062	345 634
Poland					
Pig iron	146 508	103 349	86 108	150 163	239 240
Sponge & powder	1 876	13 193	34 091	34 456	24 490
Ferro-chrome	7 729	7 716	8 073	10 352	10 863
Ferro-manganese	43 277	42 851	37 530	46 414	29 230
Ferro-silico-manganese	28 401	40 023	53 968	64 985	51 197
Ferro-molybdenum	809	833	829	1 138	1 178
Ferro-silicon	24 657	25 664	27 132	29 551	22 769
Ferro-vanadium	386	308	228	393	313
Other ferro-alloys	6 424	6 431	6 322	7 454	11 871
Silicon metal	5 665	6 208	10 586	9 967	9 243
Ingots, blooms, billets	48 142	31 962	85 027	191 722	298 314
Scrap	104 820	69 947	96 426	278 271	238 113
Portugal					
Pig iron	23 395	25 139	12 763	16 089	19 713
Ferro-manganese	603	490	779	889	885
Ferro-silico-manganese	3 204	2 331	5 757	1 742	10 021
Ferro-molybdenum	168	126	85	193	759
Ferro-silicon	3 439	2 296	2 339	1 881	3 028
Other ferro-alloys	5 774	4 636	3 809	2 788	8 440
Ingots, blooms, billets	73 499	123 087	5 829	7 167	10 538
Scrap	184 327	218 978	353 646	292 753	653 988
Romania					
Ferro-alloys	59 826	66 087	69 411	92 302	88 454
Silicon metal	1 759	1 590	5 888	3 401	2 813
Ingots, blooms, billets	648 391	724 751	510 940	559 793	448 454

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
<b>Slovakia</b>					
Pig iron	19 209	20 219	14 998	29 498	39 400
Sponge & powder	26	15 318	11 704	11 141	13 832
Ferro-alloys	24 870	31 332	36 038	35 878	44 534
Silicon metal	50	6 496	7 593	8 199	6 279
Ingots, blooms, billets	4 015	29 081	17 534	15 927	10 753
Scrap	383 068	475 898	389 383	241 718	197 550
<b>Slovenia</b>					
Pig iron	13 497	14 851	19 260	27 783	32 217
Ferro-alloys	28 298	32 616	34 959	44 254	71 299
Silicon metal	3 547	4 059	6 483	10 171	6 393
Ingots, blooms, billets	5 800	3 620	3 312	3 199	3 505
Scrap	249 517	262 294	316 188	386 832	434 585
<b>Spain</b>					
Pig iron	321 671	397 194	434 682	593 588	806 327
Sponge & powder	738 608	640 298	593 176	670 063	516 423
Ferro-chrome	246 756	229 425	579 714	221 156	200 543
Ferro-silico-chrome	2 951	1 878	...	48	1 017
Ferro-silico-magnesium	4 035	3 529	3 979	6 183	5 256
Ferro-manganese	53 221	45 100	27 846	19 817	16 489
Ferro-silico-manganese	26 375	28 237	56 110	75 061	66 531
Ferro-molybdenum	3 077	3 486	4 042	3 456	6 327
Ferro-nickel	49 769	51 626	60 141	58 664	59 113
Ferro-niobium	271	335	348	491	906
Ferro-phosphorus	2 127	2 051	2 020	2 072	2 036
Ferro-silicon	50 862	43 230	56 258	56 736	39 623
Ferro-titanium & Fe-Si-Ti	1 059	496	1 017	1 212	1 880
Ferro-vanadium	1 688	971	1 050	1 077	824
Other ferro-alloys	11 130	9 865	6 818	11 175	12 821
Silicon metal	3 816	4 528	3 677	5 660	4 160
Ingots, blooms, billets	855 775	1 062 109	1 524 971	1 495 840	1 219 342
Scrap	6 290 607	5 533 584	6 389 902	7 093 195	6 975 101
<b>Sweden</b>					
Pig iron	40 289	26 215	24 894	29 369	38 223
Sponge & powder	3 704	2 667	2 746	3 074	2 091
Ferro-chrome	92 574	109 391	85 830	72 926	86 040
Ferro-silico-chrome	3 239	2 789	1 094	2 521	2 030
Ferro-silico-magnesium	2 180	1 195	1 060	932	914
Ferro-manganese	33 034	33 238	37 190	32 782	43 005
Ferro-silico-manganese	17 309	13 357	19 493	17 887	18 995
Ferro-molybdenum	3 585	3 728	3 797	4 369	5 364
Ferro-nickel	12 418	8 765	8 738	948	7 431
Ferro-niobium	623	747	732	809	1 156
Ferro-phosphorus	777	1 553	739	920	314
Ferro-silicon	42 809	41 278	41 098	38 534	48 950
Ferro-titanium & Fe-Si-Ti	1 736	1 709	1 405	1 627	3 212
Ferro-tungsten & Fe-Si-W	867	183	321	564	195
Ferro-vanadium	855	1 037	1 059	1 375	1 316
Other ferro-alloys	7 631	5 822	4 519	6 534	5 888
Silicon metal	5 095	10 639	6 316	10 542	10 832
Ingots, blooms, billets	366 264	426 018	495 734	491 102	294 616
Scrap	376 456	429 341	351 024	271 041	254 358
<b>Switzerland</b>					
Pig iron	33 986	19 466	22 120	22 954	24 628
Sponge & powder	6 176	6 163	6 792	7 631	9 035
Ferro-aluminium	1	48	24	...	...
Ferro-chrome	1 020	978	1 504	1 161	1 203
Ferro-manganese	6 161	7 567	7 406	7 884	9 033
Ferro-silico-manganese	4 655	5 156	4 444	6 481	4 341
Ferro-silicon	5 952	4 291	5 417	5 194	4 630
Other ferro-alloys	1 511	1 198	1 070	1 203	1 602
Silicon metal	701	1 168	716	694	1 135
Ingots, blooms, billets	44 303	16 032	17 132	20 896	38 694
Scrap	246 179	347 211	412 584	544 911	390 607

## Iron, Steel and Ferro-Alloys

Imports continued

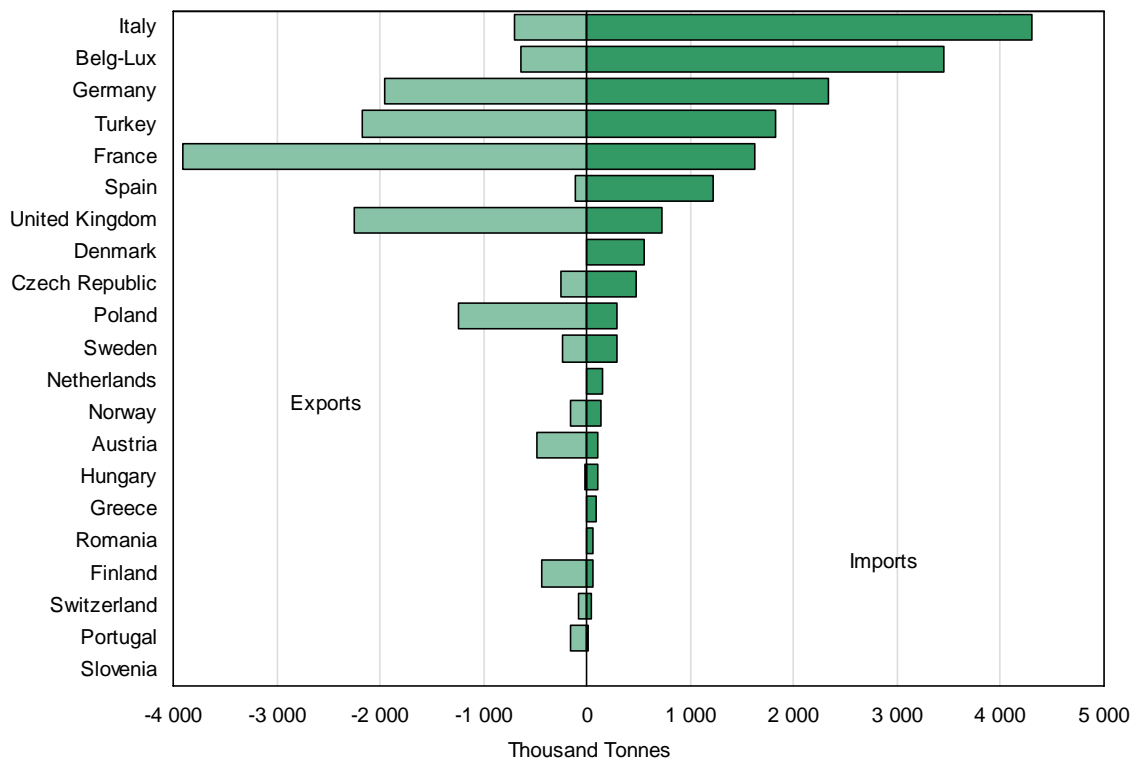
tonnes

Country	2001	2002	2003	2004	2005
Turkey					
Pig iron	155 350	324 368	306 901	286 589	396 658
Sponge & powder	22 674	84 443	75 798	18 084	68 952
Ferro-manganese	34 409	48 178	70 866	44 406	43 631
Ferro-silico-manganese	78 749	157 650	178 594	189 294	159 496
Ferro-molybdenum	579	776	816	838	1 253
Ferro-niobium	90	167	189	211	433
Ferro-silicon	44 864	55 575	126 532	82 543	57 501
Other ferro-alloys	9 372	10 644	11 063	13 926	18 373
Silicon metal	1 468	2 730	7 968	4 649	4 794
Ingots, blooms, billets	1 039 166	896 891	1 618 384	1 531 529	1 816 973
Scrap	4 993 240	9 749 780	12 818 350	12 892 546	13 010 728
United Kingdom					
Pig iron	159 725	124 682	116 724	105 007	102 531
Sponge & powder	23 551	23 673	21 503	21 059	21 914
Ferro-chrome	98 994	112 898	68 405	112 234	63 478
Ferro-silico-chrome	5 136	2 309	63	—	728
Ferro-silico-magnesium	5 318	5 820	5 663	4 969	5 448
Ferro-manganese	73 507	86 681	76 686	91 533	79 045
Ferro-silico-manganese	53 747	64 565	53 421	63 633	57 136
Ferro-molybdenum	351	338	434	836	861
Ferro-nickel	7 166	11 010	16 437	14 628	11 325
Ferro-niobium	1 261	1 029	1 148	1 236	1 175
Ferro-phosphorus	2 163	1 503	2 124	1 687	3 261
Ferro-silicon	72 663	76 046	75 469	71 973	58 225
Ferro-titanium & Fe-Si-Ti	2 465	2 729	2 042	2 457	1 883
Ferro-tungsten & Fe-Si-W	96	32	60	10	36
Ferro-vanadium	727	748	1 071	1 262	609
Other ferro-alloys	4 073	4 258	2 195	2 275	2 427
Silicon metal	86 026	80 766	100 472	100 233	77 103
Ingots, blooms, billets	388 350	1 453 884	540 537	758 615	722 452
Scrap	178 923	113 107	139 089	225 483	180 261

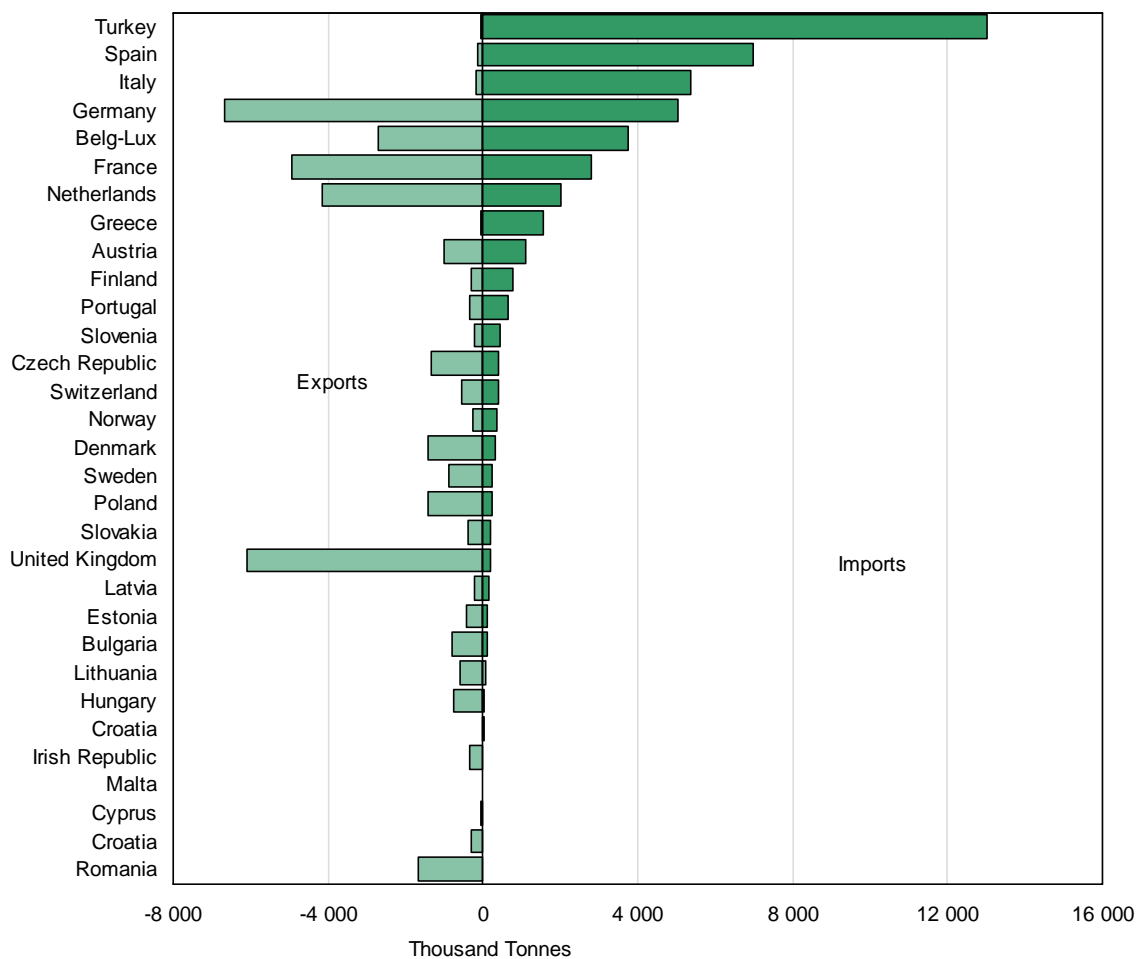
Note(s) :-

- (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

**Iron and steel ingots, blooms and billets – EU31 trade in 2005**



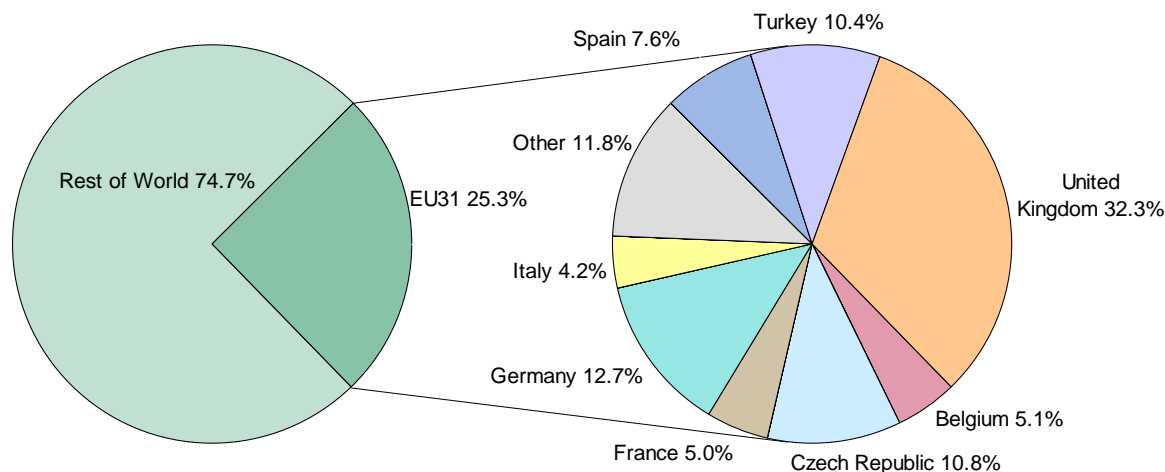
**Iron and steel scrap – EU31 trade in 2005**



## Kaolin

- Kaolin is the market name for the clay mineral kaolinite. Unlike ceramic and refractory clays, kaolinite is usually processed to eliminate impurities and to tailor the product for end-use. Kaolin has many industrial applications; the main ones are in the manufacture of paper, ceramics, rubber, plastics, paint, cement and glass-fibres. Paper manufacture is the largest end-use of kaolin, up to 30% of printing paper can be kaolin.
- Kaolin production is fairly stable in the EU31 countries, which in 2005 produced 25% of world kaolin. The UK is the largest producer and exporter in the EU31 and third biggest in the world. Because of its paper industry, the largest EU31 consumer is Finland.
- Kaolin is traded in several different forms; in 2005 refined, ex-works ranged from £44/tonne–£110/tonne.

**EU31 Production of kaolin 2005**



## Production of kaolin

tonnes

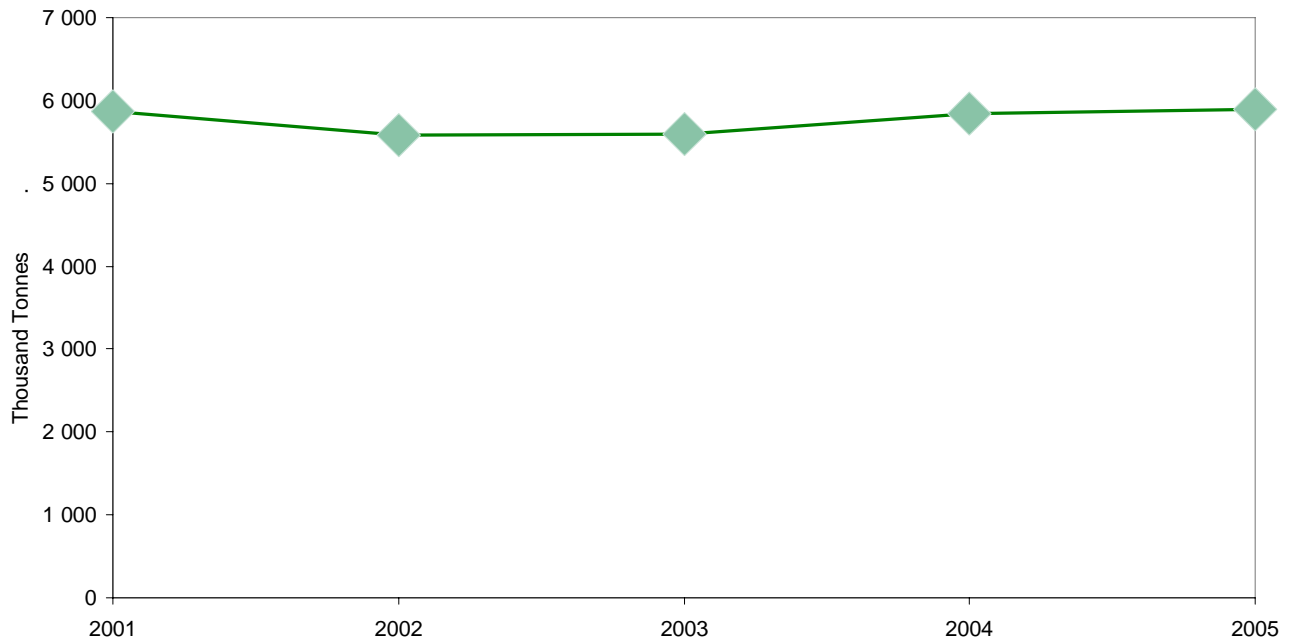
Country	2001	2002	2003	2004	2005
Austria	20 047	21 212	15 034	16 345	55 508
Belgium	*300 000	*300 000	*300 000	*300 000	*300 000
Bulgaria	*140 000	*150 000	*120 000	*190 000	*200 000
Czech Republic (c)	561 600	562 300	582 100	639 100	639 300
France	377 000	339 000	335 000	316 000	293 000
Germany (b)	696 832	740 821	738 123	*740 000	*750 000
Greece	60 075	57 885	59 680	53 438	49 912
Hungary	...	...	...	3 300	1 300
Italy	295 263	174 990	224 755	246 608	...
Poland (d)	103 220	89 372	106 761	130 596	159 207
Portugal	148 706	147 448	169 669	*170 000	...
Romania	21 867	22 517	25 741	22 338	26 772
Slovakia	34 730	24 600	24 800	89 424	34 830
Spain (d)	*400 000	419 483	427 193	437 990	450 000
Turkey	505 773	372 344	370 455	536 008	615 271
United Kingdom (a) (e)	2 204 156	2 162 815	2 097 137	1 944 955	1 910 874
<b>EU31 Total</b>	<b>5 900 000</b>	<b>5 600 000</b>	<b>5 600 000</b>	<b>5 800 000</b>	<b>5 900 000</b>

Note(s):-

(1) In addition to the countries listed Denmark is believed to produce kaolin

- (a) Sales
- (b) Washed and dried
- (c) Beneficiated
- (d) Washed
- (e) Dry weight

## EU31 Production of kaolin 2001 - 05



## Exports of kaolin

tonnes

Country	2001	2002	2003	2004	2005
Austria	2 998	3 105	1 870	2 277	3 019
Belgium-Luxembourg	357 363	332 718	539 940	664 743	777 451
Bulgaria	115 257	113 538	124 396	114 399	124 899
Croatia	2 620	5 319	4 362	351	15
Czech Republic	455 089	443 674	441 545	483 636	268 850
Denmark	1 050	688	583	461	637
Finland	7 561	10 698	10 032	8 111	7 378
France	290 332	325 323	1 613 484	484 554	421 927
Germany	350 804	333 927	359 926	369 141	301 870
Greece	723	884	976	131	129
Hungary	3 121	3 539	2 388	7 180	6 252
Italy	58 835	47 652	37 357	29 995	40 800
Netherlands	282 035	234 669	335 299	307 337	441 248
Poland	6 321	3 538	10 408	9 941	6 194
Portugal	11 944	15 318	10 131	11 383	31 484
Spain	155 446	159 759	172 414	154 667	192 735
Sweden	7 199	8 200	8 791	15 544	18 473
Turkey	227 159	190 404	299 843	267 817	146 562
United Kingdom (a)	1 928 230	1 899 220	1 862 437	1 728 161	1 698 747

Note(s):-

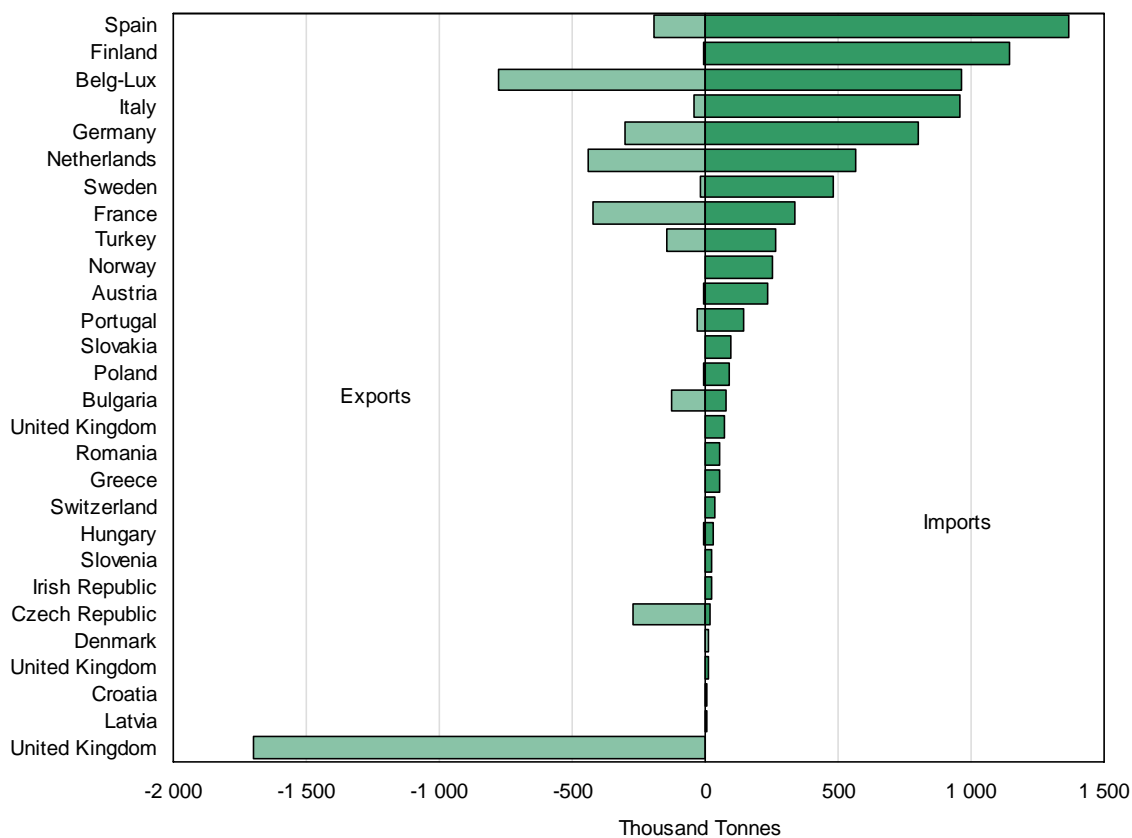
(a) Dry weight

## Imports of kaolin

tonnes

Country	2001	2002	2003	2004	2005
Austria	254 030	249 132	228 674	249 353	234 906
Belgium-Luxembourg	467 193	607 908	890 277	1 023 999	962 536
Bulgaria	26 805	28 486	36 360	75 425	76 231
Croatia	6 357	6 046	6 303	6 472	7 941
Cyprus	369	380	487	299	154
Czech Republic	19 514	12 791	15 466	14 034	16 895
Denmark	19 369	34 441	20 987	13 056	14 117
Finland	1 355 460	1 207 343	1 305 240	1 301 806	1 144 335
France	380 166	386 197	325 358	349 353	338 848
Germany	749 260	750 621	771 902	774 307	803 001
Greece	23 933	43 586	52 833	56 380	54 293
Hungary	34 000	30 130	28 472	23 417	33 075
Irish Republic	11 505	20 919	19 186	22 213	22 764
Italy	1 020 131	952 526	947 116	939 832	956 948
Latvia	3 386	4 933	4 962	5 096	5 016
Lithuania	...	...	...	...	802
Netherlands	455 737	444 622	560 878	646 638	564 518
Norway	251 950	234 592	241 975	237 725	250 879
Poland	66 759	77 155	81 181	89 139	90 931
Portugal	151 525	125 201	135 681	124 508	143 943
Romania	71 015	71 628	82 981	71 987	55 653
Slovakia	93 735	111 841	88 513	76 440	94 705
Slovenia	25 583	27 112	29 449	28 782	25 928
Spain	796 040	792 920	999 504	1 209 303	1 366 226
Sweden	422 071	437 528	467 111	452 215	480 358
Switzerland	37 383	37 298	45 012	41 350	37 368
Turkey	117 550	149 559	197 684	218 838	265 530
United Kingdom	102 839	58 993	72 719	126 501	84 750

## Kaolin – EU31 trade in 2005

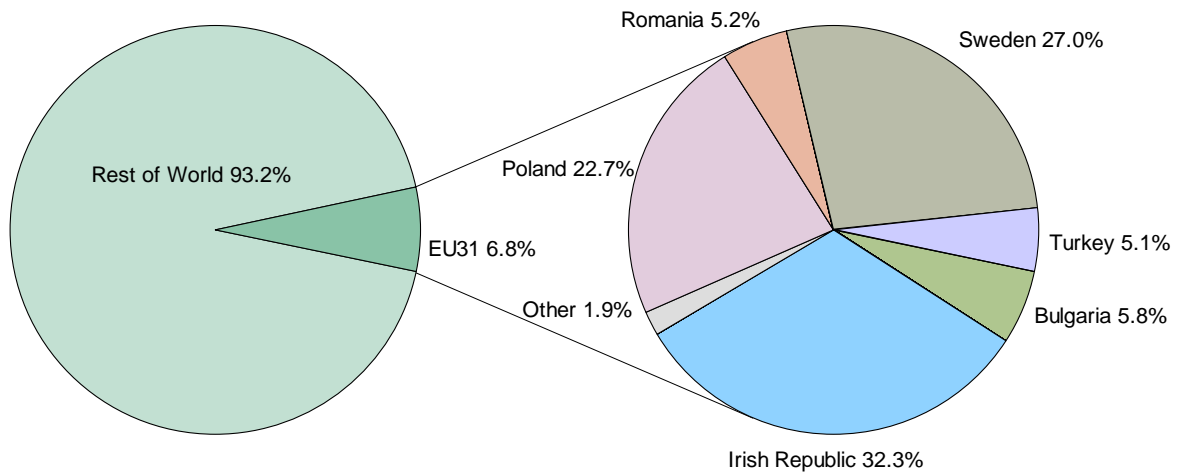




## Lead

- Lead is a very soft, highly malleable, ductile metallic element with low electrical conductivity. It is also very dense and strongly resistant to corrosion, although it tarnishes rapidly in air. The main use is in lead-acid batteries, although lead is also widely used in architecture, plumbing, ordinance, solder, radiation shielding and insecticides.
- China was the largest producer of lead in 2005 (31%), although many countries refine this metal. In the EU31 the largest mine producer of lead was the Republic of Ireland (32%) and the largest producers of refined lead, based on imported materials and recycling, were Germany (22%) and the UK (19%).
- Despite environmental and health concerns consumption of lead has increased recently, resulting in a minor supply deficit. The price of lead increased gradually during 2005 with LME prices ranging from £805 -£1020/tonne.

**EU31 Mine production of lead 2005**

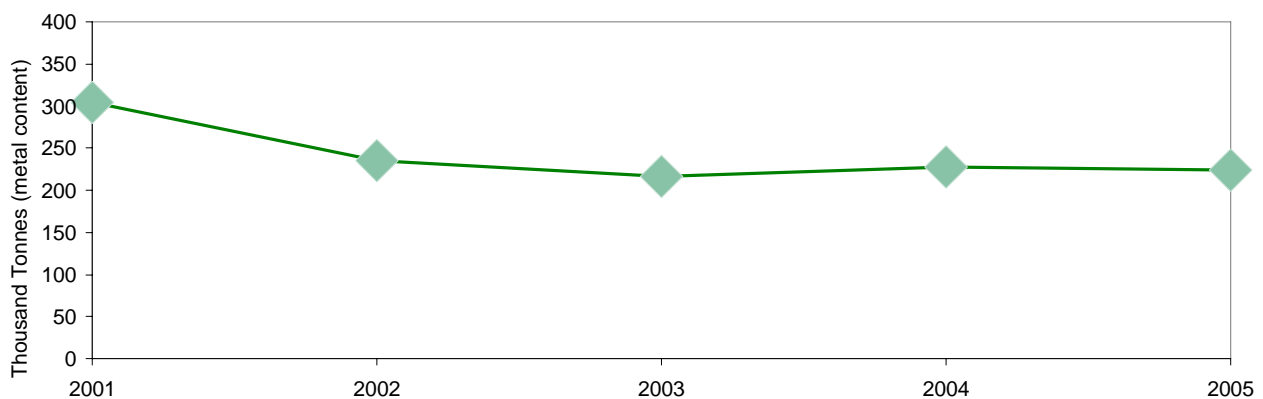


## Mine production of lead

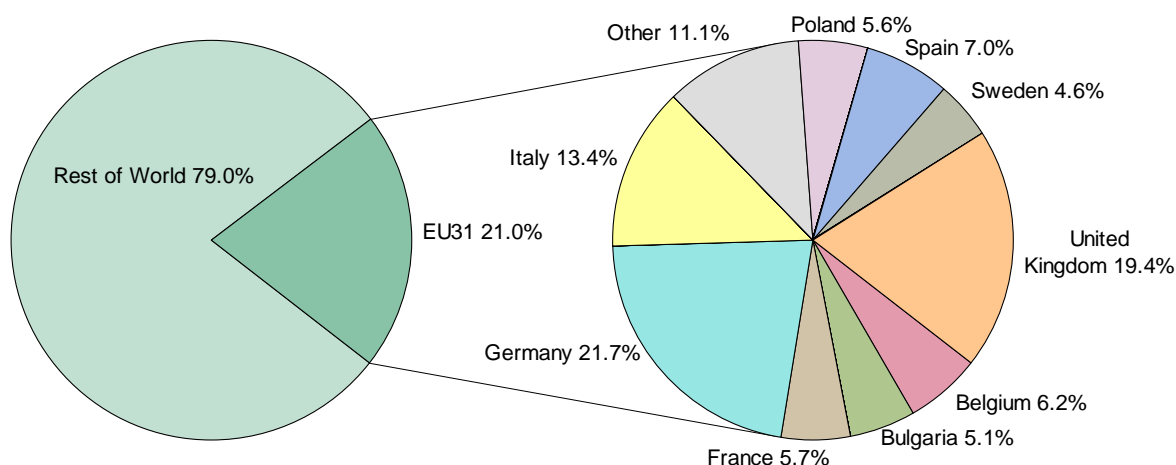
tonnes (metal content)

Country	2001	2002	2003	2004	2005
Bulgaria	18 500	19 800	19 950	18 970	13 000
Greece	26 588	29 300	2 000	—	3 000
Irish Republic	44 500	41 700	50 300	63 800	72 200
Italy	2 700	3 200	2 700	800	*800
Poland	52 600	56 600	54 700	52 700	50 900
Romania	19 676	17 500	15 747	18 297	11 610
Spain	35 573	6 171	1 765	—	—
Sweden	85 975	42 954	50 962	54 347	60 445
Turkey	17 884	17 277	17 483	18 792	11 341
United Kingdom	*800	*700	*700	*500	*500
<b>EU31 Total</b>	<b>304 800</b>	<b>235 200</b>	<b>216 300</b>	<b>228 210</b>	<b>223 800</b>

**EU31 Mine production of lead 2001 - 05**



## EU31 Production of refined lead 2005



## Production of refined lead

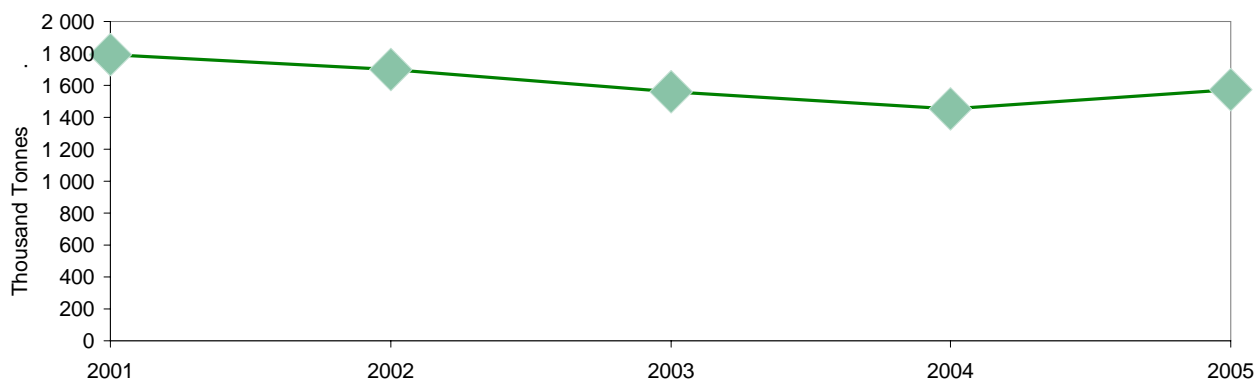
tonnes

Country	2001	2002	2003	2004	2005
Austria	23 666	*23 000	*20 000	*26 000	*24 000
Belgium	100 000	88 000	65 000	62 000	97 200
Bulgaria	83 000	67 500	74 000	69 000	80 800
Czech Republic	30 500	*30 500	*30 000	*30 000	26 000
Estonia	—	—	—	3 000	*7 000
France	231 400	203 400	91 000	89 000	*90 000
Germany	373 600	379 905	356 900	359 200	341 700
Greece	*6 000	*6 000	*6 000	*6 000	*6 000
Irish Republic	9 800	6 600	7 800	19 600	22 500
Italy	226 500	196 000	214 100	201 600	211 000
Netherlands	20 000	18 000	17 000	17 000	17 000
Poland	66 000	65 800	74 300	73 900	87 800
Portugal	*6 000	*6 000	*6 000	*6 000	*6 000
Romania	22 000	23 000	28 000	32 590	32 903
Slovenia	15 400	15 400	15 000	*15 000	15 000
Spain	121 600	115 552	99 100	105 600	110 000
Sweden	75 608	63 451	73 340	73 548	72 600
Switzerland	10 250	8 700	9 600	9 300	9 600
Turkey	*9 000	*9 000	*9 000	*9 000	*9 000
United Kingdom	366 305	374 646	364 574	245 938	305 350
<b>EU31 Total</b>	<b>1 797 000</b>	<b>1 700 000</b>	<b>1 561 000</b>	<b>1 453 000</b>	<b>1 571 000</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

## EU31 Production of refined lead 2001 - 05



## Exports of lead

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Unwrought	6 375	7 831	8 988	14 504	10 746
Belgium-Luxembourg					
Ores & concentrates	96 613	104 187	84 545	109 580	96 610
Unwrought	96 885	84 303	104 827	93 316	110 372
Scrap	9 465	6 981	6 307	12 736	9 142
Bulgaria					
Unwrought	68 749	58 789	61 799	54 686	69 825
Croatia					
Scrap	809	749	750	853	794
Cyprus					
Scrap	1 965	1 874	2 073	1 711	1 212
Czech Republic					
Unwrought	6 786	5 724	7 112	7 230	8 665
Scrap	3 750	3 346	2 926	3 059	4 948
Denmark					
Unwrought	3 090	3 048	3 011	1 930	1 312
Scrap	1 864	1 338	1 885	1 805	3 067
Estonia					
Unwrought	58	...	412	3 846	7 774
Scrap	459	437	520	1 414	153
Finland					
Scrap	811	338	159	884	3 589
France					
Unwrought	62 680	60 095	12 868	6 182	6 920
Scrap	21 979	23 473	27 789	27 003	24 683
Germany					
Ores & concentrates	8 868	22 024	31 512	3 423	102
Unwrought	160 412	169 142	129 550	120 361	122 120
Scrap	12 669	13 646	15 468	12 412	11 064
Greece					
Unwrought	6 127	1 712	107	...	4 017
Hungary					
Scrap	1 944	1 421	1 237	2 377	2 987
Irish Republic					
Ores & concentrates	58 150	21 069	56 141	84 115	92 813
Italy					
Unwrought	8 646	20 987	26 711	28 295	18 244
Scrap	2 716	4 792	5 652	1 262	2 477
Lithuania					
Scrap	1 129	931	3 239	6 613	7 848
Netherlands					
Unwrought	1 256	1 263	23 942	34 426	24 382
Scrap	26 188	5 670	8 732	12 395	11 950
Norway					
Scrap	15 693	5 188	987	601	1 013
Poland					
Ores & concentrates	73 989	77 493	86 395	94 126	92 226
Unwrought	44 691	38 602	42 518	39 287	44 008
Scrap	1 921	2 107	2 408	963	1 652
Portugal					
Unwrought	567	3 769	2 367	1 988	1 269
Scrap	3 506	2 733	3 502	3 452	4 127
Romania					
Ores & concentrates	15 585	36 089	30 390	25 092	25 012
Unwrought	16 142	16 544	23 388	20 894	22 120
Scrap	1 483	1 518	964	1 689	3 295
Slovakia					
Unwrought	2 873	984	3 124	(b) *2 000	1 662
Slovenia					
Unwrought	6 587	3 757	5 136	4 701	5 818
Spain					
Ores & concentrates	97 594	13	5 057	6 057	2
Unwrought	6 098	9 458	6 219	8 301	9 805
Scrap	3 684	6 797	7 028	6 399	9 128

## Lead

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
Sweden					
Ores & concentrates	118 723	63 204	59 340	60 105	62 155
Unwrought	54 414	61 079	71 217	68 215	70 042
Scrap	545	424	237	554	307
Switzerland					
Unwrought	4 074	7 160	7 086	5 407	4 657
Scrap	4 479	2 565	2 267	1 320	2 932
Turkey					
Ores & concentrates (a)	11 172	42 390	18 619	27 179	24 590
Unwrought	4 985	4 728	1 484	6 190	2 875
United Kingdom					
Unwrought	93 552	101 832	61 682	34 859	52 593
Unwrought alloys	42 308	57 249	44 091	31 148	38 806
Scrap	10 700	17 116	28 569	32 934	27 248

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) Complex lead-zinc ore

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

## Imports of lead

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Unwrought	46 677	44 878	37 927	39 533	23 062
Scrap	1 921	1 844	2 672	2 192	1 068
Belgium-Luxembourg					
Ores & concentrates	101 613	115 471	80 203	117 597	134 300
Unwrought	30 894	27 490	20 874	27 042	18 807
Scrap	38 002	25 527	28 028	26 904	26 699
Bulgaria					
Ores & concentrates	83 051	52 368	64 751	74 163	83 398
Unwrought	2 252	2 218	1 759	5 558	10 723
Scrap	1 714	2 800	816	441	1 227
Croatia					
Unwrought	841	1 635	988	1 460	1 492
Cyprus					
Unwrought	2 359	2 367	918	317	172
Czech Republic					
Unwrought	58 777	56 941	55 699	73 472	418 804
Denmark					
Unwrought	3 447	2 073	816	2 072	2 135
Scrap	1 535	2 489	2 237	2 366	2 288
Finland					
Unwrought	1 825	3 032	2 753	2 582	2 854
Scrap	287	137	139	41	29
France					
Ores & concentrates	182 072	146 270	...	...	253
Unwrought	80 869	80 812	103 439	91 979	109 426
Scrap	40 099	44 079	30 508	34 513	33 818
Germany					
Ores & concentrates	267 848	228 055	193 156	202 309	171 533
Unwrought	189 697	158 048	159 860	112 975	108 533
Scrap	19 056	19 472	9 075	11 757	15 419
Greece					
Unwrought	5 970	5 309	4 633	28 460	5 112
Scrap	882	3 349	5 496	1 284	85
Hungary					
Unwrought	10 117	6 552	7 148	4 545	5 028

Imports continued

tonnes

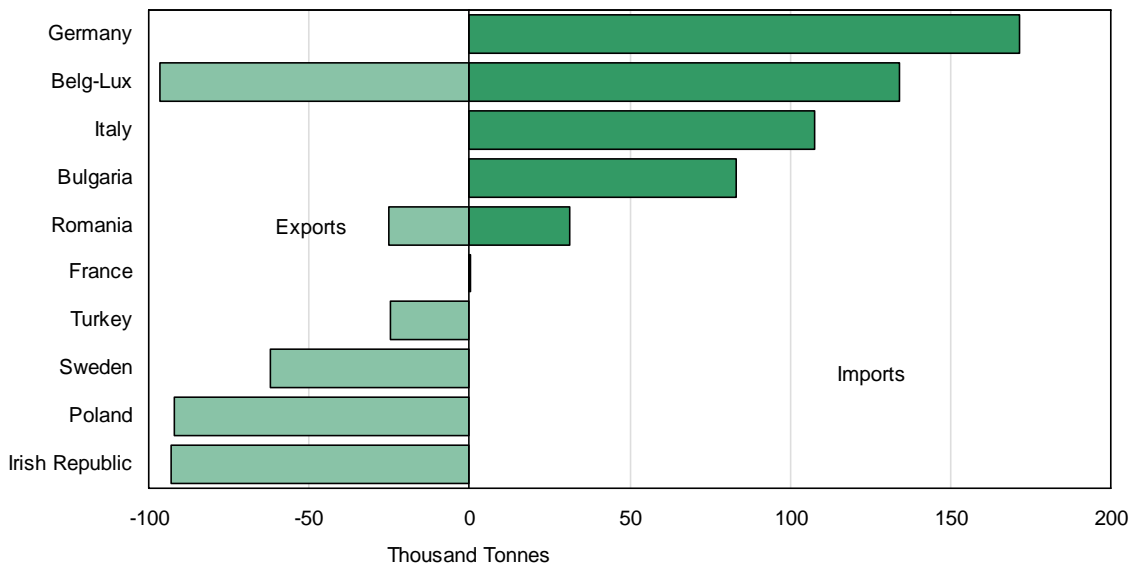
Country	2001	2002	2003	2004	2005
Irish Republic					
Unwrought	24 432	35 376	28 438	26 896	30 999
Scrap	9 163	9 985	7 798	18 290	28 530
Italy					
Ores & concentrates	109 714	98 430	86 985	99 015	107 685
Unwrought	90 537	111 214	88 333	114 546	72 181
Scrap	6 346	4 737	3 669	3 877	3 333
Netherlands					
Unwrought	9 316	17 070	66 405	83 391	36 051
Scrap	8 427	8 824	8 034	7 818	9 700
Norway					
Unwrought	3 213	3 971	2 024	2 970	4 882
Poland					
Unwrought	33 400	43 821	47 030	50 189	53 095
Portugal					
Unwrought	20 604	16 952	15 624	18 885	21 198
Romania					
Ores & concentrates	30 678	32 043	14 899	26 920	31 085
Unwrought	3 767	2 811	1 111	1 667	1 620
Slovenia					
Unwrought	10 738	12 629	13 604	12 854	10 262
Scrap	215	783	538	1 223	1 382
Spain					
Unwrought	117 501	178 929	129 925	154 828	174 618
Scrap	13 311	19 914	21 943	27 866	30 499
Sweden					
Unwrought	6 777	5 023	4 190	6 088	6 098
Scrap	2 548	1 970	2 463	4 062	3 538
Switzerland					
Unwrought	7 098	5 943	6 047	7 831	8 067
Turkey					
Unwrought	41 970	64 513	71 665	71 606	71 680
United Kingdom					
Ores & concentrates (a)	*33 000	*30 000	*5 000	—	—
Unwrought , base bullion (b)	184 518	184 060	168 228	127 970	173 910
Unwrought, other	33 202	32 468	28 132	51 382	31 347
Scrap	15 633	4 946	6 043	6 278	3 898

Note(s) :-

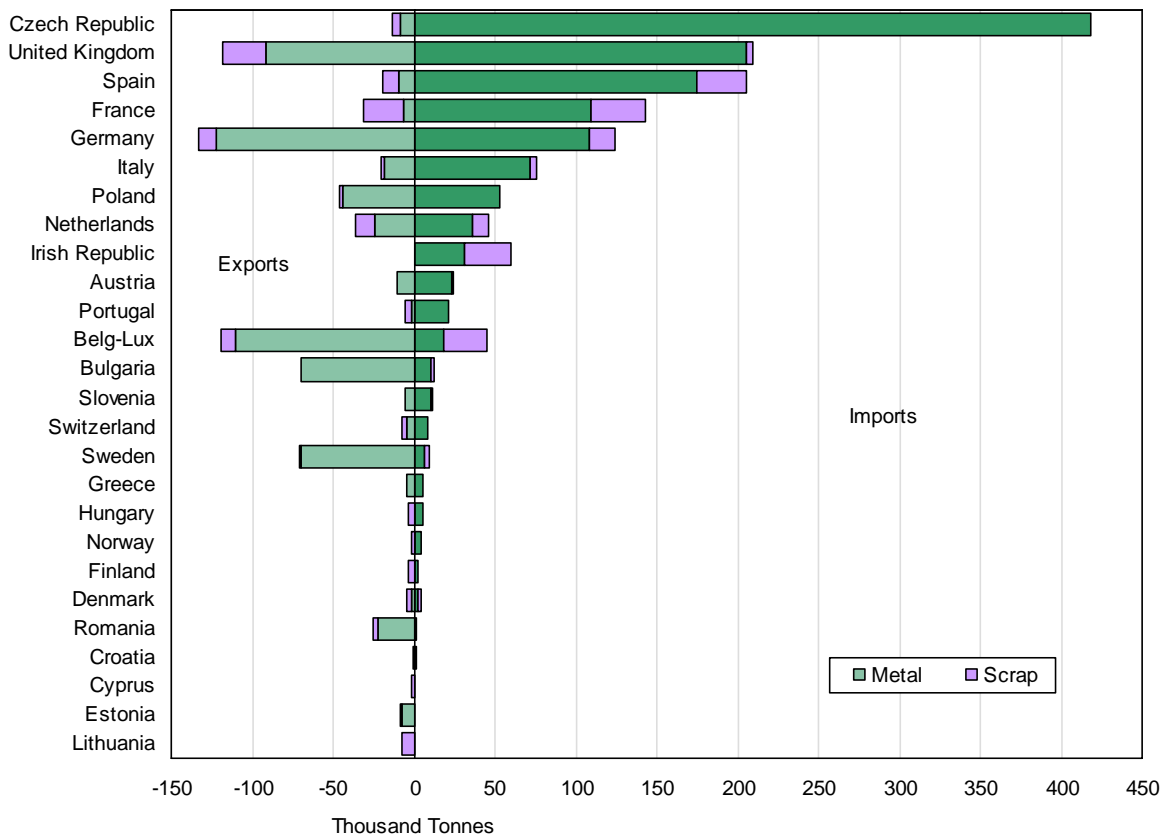
- (1) In this table the term 'unwrought' lead corresponds to item 7801 of the Harmonised System and comprises base bullion, pigs, unwrought bars etc.
- (2) The term 'unwrought' as used here includes alloys unless these are separately specified

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

Lead ore – EU31 trade in 2005



Lead – EU31 trade in 2005



## Lithium minerals

- Lithium is a very light metallic element. It is mainly used as lithium compounds that act as fluxes in the ceramics and glass industries, and in lubricants. The metal is an important alloying agent in primary aluminium. Lithium is increasingly being used in rechargeable batteries.
- Lithium is produced in only a few countries of which Australia was the largest lithium mineral producer in 2005 (approximately 40% of world production). Chile was the largest producer by lithium content (52% of world production). In the EU31 Portugal is the only country producing lithium.
- The lithium minerals spodumene and petalite, with lithium carbonate, are the usual traded forms. Prices were stable throughout 2005 ranging between \$165–\$350/tonne for mineral concentrates and \$2–\$2.5/lb for carbonate.

## Production of lithium minerals

tonnes

Country	2001	2002	2003	2004	2005
Portugal					
Lepidolite	11 571	16 325	24 606	28 696	...
EU31 Total (Li content)	197	278	418	488	...

## Exports of lithium

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg					
Oxides	470	548	982	1 837	1 545
Carbonate	3 392	3 935	4 000	10 053	4 999
France					
Carbonate	3 130	2 955	2 382	1 166	462
Germany					
Oxides	647	532	649	625	...
Carbonate	1 771	1 768	2 484	2 660	2 991
Italy					
Oxides	8	58	47	11	6
Carbonate	87	138	162	206	269
Netherlands					
Oxides	590	203	190	187	115
Carbonate	205	104	89	199	224
Slovenia					
Carbonate	91	68	64	89	96
Spain					
Carbonate	1 617	639	373	3 157	1 123
Switzerland					
Oxides	96	53	78	80	78
United Kingdom					
Oxides	95	186	169	285	125
Carbonate	214	147	193	160	203

**Imports of lithium**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Carbonate	114	113	118	115	182
Belgium-Luxembourg					
Oxides	784	1 159	1 197	(a) *2 000	2 014
Carbonate	5 136	5 879	5 086	6 108	6 205
France					
Oxides	420	329	347	407	482
Carbonate	1 133	1 612	1 381	1 484	1 392
Germany					
Oxides	5 100	3 198	4 405	3 699	4 209
Carbonate	4 187	4 825	6 018	7 189	8 101
Italy					
Oxides	168	209	237	148	223
Carbonate	1 659	1 581	1 686	1 505	2 263
Netherlands					
Oxides	539	217	237	270	178
Carbonate	897	854	956	1 081	1 171
Poland					
Oxides	39	69	74	132	136
Carbonate	46	55	56	117	128
Slovenia					
Oxides	116	80	88	127	116
Spain					
Oxides	347	357	436	329	480
Carbonate	713	1 046	983	759	1 553
Sweden					
Oxides	130	155	113	162	176
Carbonate	183	179	186	208	259
Switzerland					
Oxides	91	97	89	89	81
Turkey					
Oxides	70	136	120	179	183
Carbonate	134	157	278	417	433
United Kingdom					
Oxides	374	409	554	498	446
Carbonate	499	626	687	490	657

Note(s) :-

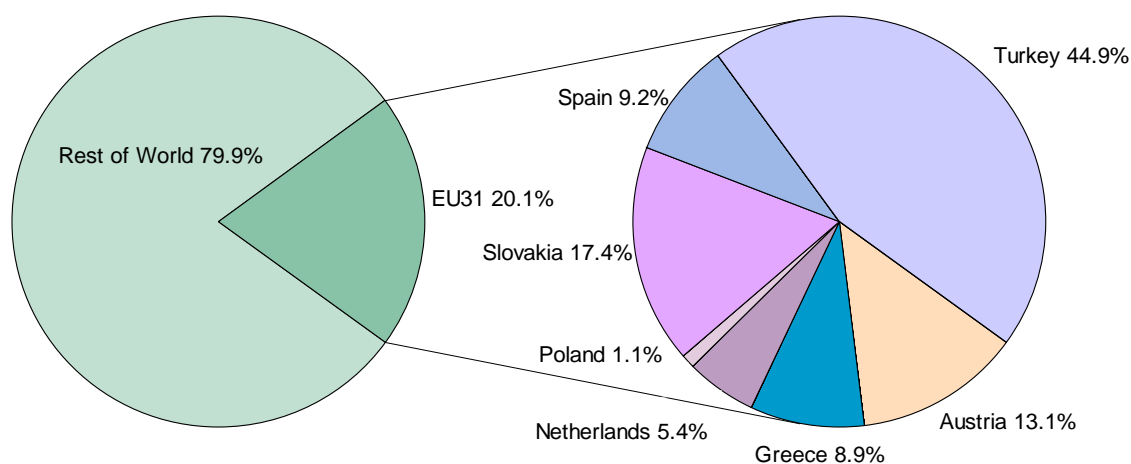
(a) BGS estimates, based on known exports into certain countries



## Magnesite

- Magnesite is the commonly used name for magnesium carbonate rock. Magnesite has excellent thermal resistance and is most commonly used as refractory bricks in furnaces. It is also used in fertilisers.
- Economic deposits of magnesite are rare. Only 22 countries produced magnesite in 2005, of which China was the largest (approximately 59% of world production). The largest EU31 producer was Turkey (45%).
- In 2005 Chinese dead burned, 94–95% MgO, lump, FOB China traded at a minimum of \$175/tonne.

### EU31 Production of magnesite 2005



### Production of magnesite

tonnes

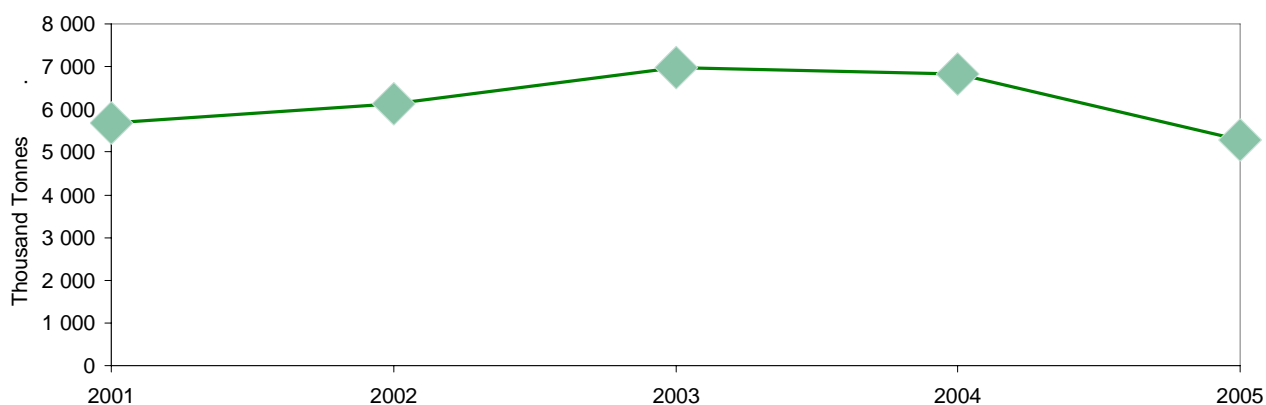
Country	2001	2002	2003	2004	2005
Austria	680 534	728 235	766 525	715 459	693 754
Greece	442 800	553 700	542 800	552 300	471 000
Netherlands (a)	250 000	226 000	261 194	245 495	285 336
Poland	22 200	22 100	27 200	57 900	*58 000
Slovakia	961 212	929 630	1 640 900	965 900	920 100
Spain	598 000	637 024	517 030	567 504	485 800
Turkey	2 738 086	3 044 440	3 224 278	3 732 952	2 372 206
<b>EU31 Total</b>	<b>5 693 000</b>	<b>6 141 000</b>	<b>6 980 000</b>	<b>6 838 000</b>	<b>5 286 000</b>

Note(s):-

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

(a) Chloride produced from solution mining

### EU31 Production of magnesite 2001 - 05



**Exports of magnesite and magnesia**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Magnesite	82	5 489	2 401	642	1 338
Magnesia	54 021	44 729	50 263	73 037	59 283
Belgium-Luxembourg					
Magnesite	276	440	7 061	512	575
Magnesia	60 846	73 182	134 268	53 755	52 665
Czech Republic	702	59	1 924	3 790	6 273
France					
Magnesia	9 561	14 126	23 037	37 930	45 661
Germany					
Magnesite	233	186	878	218	61
Magnesia	90 154	66 559	45 840	66 422	81 021
Greece					
Magnesite	18 555	35 594	40	—	—
Magnesia	128 124	94 668	65 673	130 910	140 083
Irish Republic					
Magnesite	635	...	52	6	...
Magnesia	22 816	65 483	65 549	69 105	82 417
Italy					
Magnesite	2 521	3 170	2 141	2 868	3 489
Magnesia	57 158	52 206	17 414	9 779	12 130
Netherlands					
Magnesite	2 502	2 944	12 352	8 704	1 452
Magnesia	448 602	438 407	384 711	431 175	492 077
Slovakia	377 755	343 123	396 477	414 176	385 949
Spain					
Magnesite	9 201	24 152	23 640	25 557	901
Magnesia	150 632	154 661	158 844	185 811	189 005
Turkey					
Magnesite	37 723	52 446	45 534	39 670	41 353
Magnesia	190 347	213 384	196 613	230 675	198 081
United Kingdom					
Magnesite	78	337	34	49	87
Magnesia	40 023	26 460	26 248	24 796	20 077

Note(s):-

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

**Imports of magnesite and magnesia**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Magnesite	2 878	13 115	12 935	4 814	17 019
Magnesia	26 220	20 545	9 325	181 050	188 449
Belgium-Luxembourg					
Magnesite	12 733	2 547	7 167	505	767
Magnesia	90 663	73 514	151 590	65 125	84 730
Bulgaria	5 463	6 544	5 815	6 354	8 500
Croatia	764	949	1 006	1 479	1 647
Czech Republic					
Magnesite	4 362	3 516	5 528	5 973	6 860
Magnesia	33 375	32 090	34 377	42 226	43 277
Denmark					
Magnesite	1 204	1 085	2 499	1 984	2 002
Magnesia	4 770	3 731	2 297	2 575	4 560
Finland					
Magnesia	12 856	10 159	17 096	11 567	16 476
France					
Magnesite	13 047	9 434	3 193	1 701	3 427
Magnesia	148 516	146 526	149 468	148 780	161 488
Germany					
Magnesite	16 285	19 665	7 724	4 684	6 353
Magnesia	451 522	453 680	348 042	348 766	515 089

Imports continued

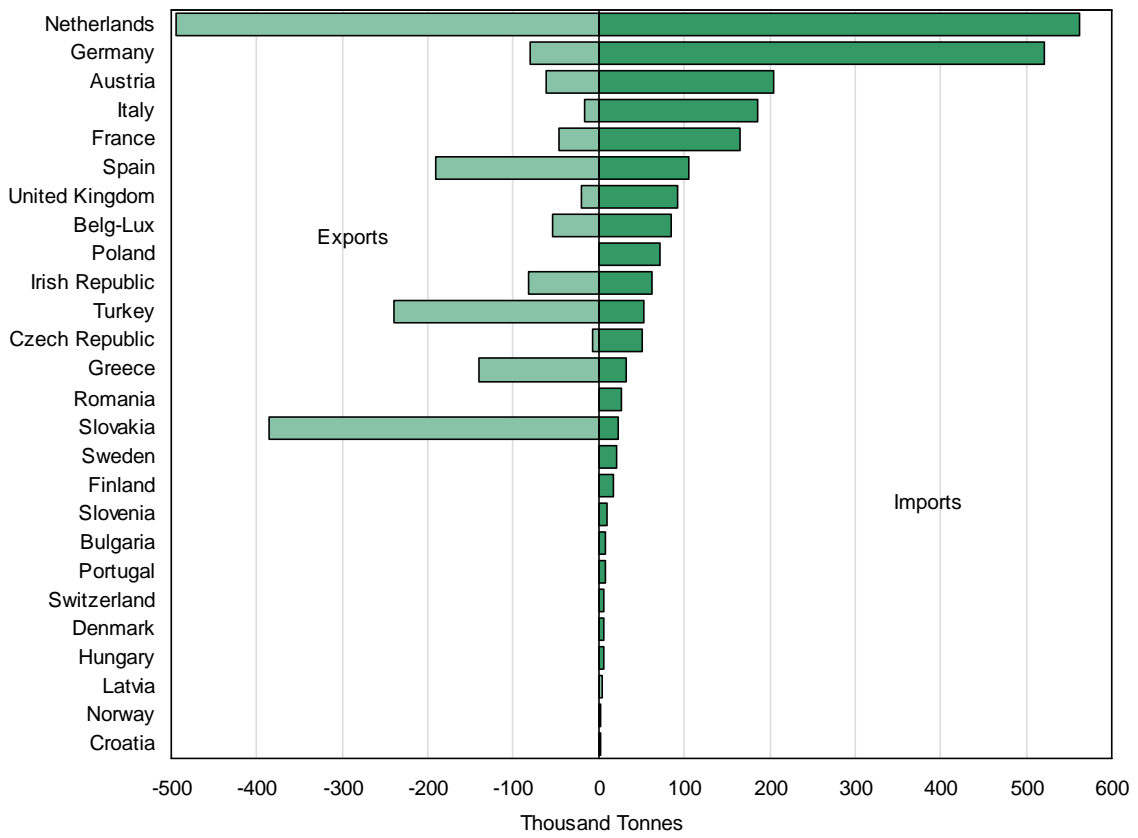
tonnes

Country	2001	2002	2003	2004	2005
Greece					
Magnesite	13 087	19 308	23 470	20 579	14 250
Magnesia	11 507	7 442	10 427	11 985	17 232
Hungary	12 032	32 296	10 463	7 003	6 251
Irish Republic					
Magnesite	108	1 500	15 449	25 886	12 653
Magnesia	47 947	59 905	43 802	49 664	49 466
Italy					
Magnesite	32 911	18 687	17 326	9 429	23 536
Magnesia	106 250	120 820	129 672	163 273	161 432
Latvia	3 071	3 021	3 518	5 297	3 344
Netherlands					
Magnesite	2 242	5 758	13 139	20 619	3 057
Magnesia	377 804	362 706	392 299	644 428	558 764
Norway					
Magnesite	4 013	3 148	3 736	2 587	2 125
Magnesia	403	130	190	1 643	500
Poland	69 772	73 266	77 830	82 164	71 774
Portugal					
Magnesite	1 888	909	885	969	1 012
Magnesia	18 635	6 078	5 855	4 808	5 998
Romania	31 707	35 478	23 255	26 209	27 243
Slovakia	36 609	32 571	31 606	27 698	23 379
Slovenia	8 406	9 377	9 732	9 560	9 899
Spain					
Magnesite	1 521	1 303	3 608	2 901	2 348
Magnesia	112 201	101 620	367 117	102 418	103 747
Sweden					
Magnesia	40 361	26 875	28 074	29 455	21 293
Switzerland					
Magnesite	394	228	225	294	168
Magnesia	4 600	4 521	5 744	6 538	6 708
Turkey					
Magnesia	23 373	50 238	56 000	38 084	52 432
United Kingdom					
Magnesite	7 122	9 252	20 287	11 187	13 896
Magnesia	108 988	98 075	82 100	83 539	78 843

Note(s) :-

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

Magnesite and magnesia – EU31 trade in 2005



## Manganese ore

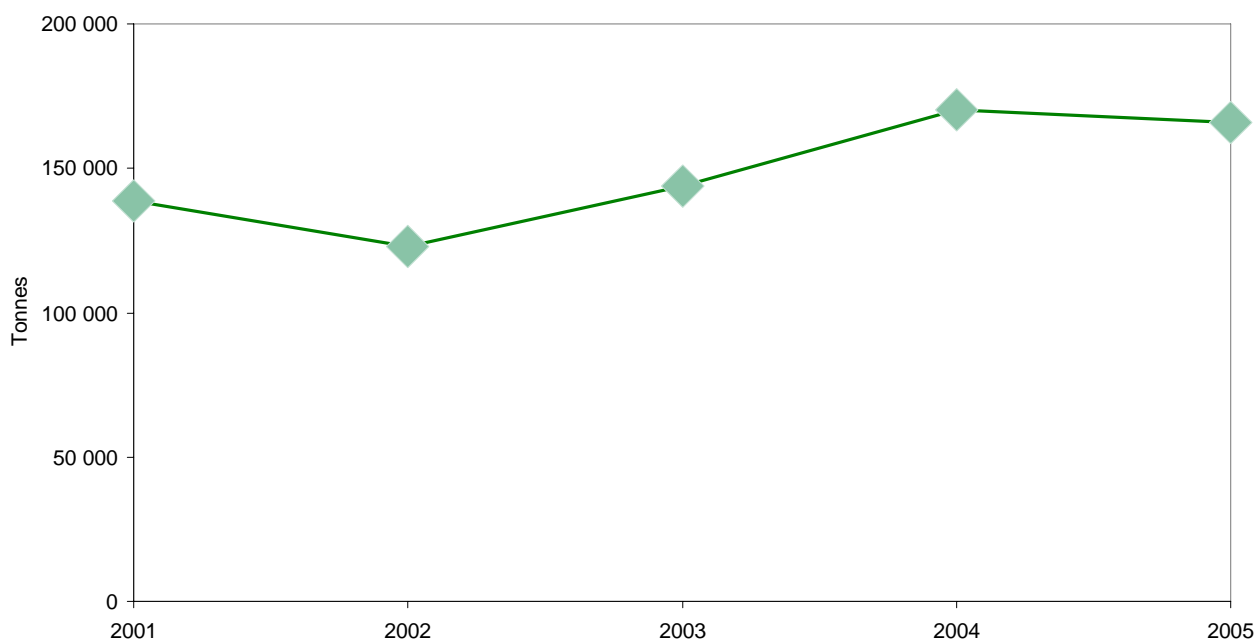
- Manganese is a hard, brittle metal. The chief ores are pyrolusite and other manganese dioxides. The principal use is in the steel industry as a desulphuriser and an alloying agent, where it imparts hardness and wear resistance. Manganese is also an important constituent of many aluminium alloys. Manganese dioxide is a component of dry-cell batteries; other compounds are used in the chemical industry.
- Economic concentrations of manganese are relatively rare and production is confined to 22 countries, although 56% of world production comes from China, South Africa, Australia and Brazil. Production of manganese in the EU31 is limited and Romania is the largest producer (approximately 43%).
- Manganese ore, ferro-manganese, electrolytic manganese dioxide and manganese metal are the chief forms in international trade. During 2005 prices for standard ferro-manganese (78% Mn, 7.5% C) decreased considerably from around \$1000/tonne to \$530/tonne towards the year-end. Manganese metal (electrolytic manganese flake) ranged in price from around \$1500/tonne–\$1745/tonne.

### Production of manganese ore

tonnes

Country	2001	2002	2003	2004	2005
Bulgaria	1 515	4	4 200	27 800	38 500
Hungary	43 000	43 000	48 000	49 000	50 000
Italy	803	867	763	714	...
Romania	73 276	59 148	72 931	79 130	72 000
Turkey	20 000	20 000	18 000	13 751	4 751
<b>EU31 Total</b>	<b>139 000</b>	<b>123 000</b>	<b>144 000</b>	<b>170 000</b>	<b>166 000</b>

EU31 Production of manganese ore 2001 - 05



**Exports of manganese**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	28 326	29 058	18 923	11 575	5 470
Belgium-Luxembourg					
Ores & Concentrates	47 237	16 949	13 476	11 300	10 648
Metal	4 129	3 216	3 091	1 377	1 826
Bulgaria					
Ores & Concentrates	832	...	6 402	42 122	53 559
Estonia					
Metal	490	923	1 320	...	...
France					
Ores & Concentrates (a)	382 914	413 461	332 067	272 815	139 723
Metal	261	168	424	745	324
Germany					
Metal	10 186	11 548	10 703	12 261	17 824
Italy					
Metal	62	120	37	113	241
Netherlands					
Ores & Concentrates	9 889	14 115	12 041	15 143	14 903
Metal	9 614	3 869	7 365	12 548	13 585
Slovenia					
Metal	3	104	185	143	2 584
Spain					
Ores & Concentrates	11 474	1 208	855	989	776
Metal	6 113	5 727	4 791	6 117	6 651
Sweden					
Metal	99	425	352	196	143
Turkey					
Ores & Concentrates	560	5 655	...	12 817	955
United Kingdom					
Metal (b)	*6 000	*4 300	*5 500	*3 100	*3 000

Note(s):-

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

(a) Including manganiferous iron ore

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

**Imports of manganese**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	19 889	18 223	10 024	6 497	8 707
Belgium-Luxembourg					
Ores & Concentrates	106 749	72 216	79 645	73 953	66 840
Metal	8 136	5 413	4 480	2 466	4 150
Bulgaria					
Ores & Concentrates	8 612	1 125	234 401	46 768	13 631
Croatia					
Metal	58	57	50	93	93
Czech Republic					
Ores & Concentrates	7 314	11 507	11 966	11 663	13 820
Metal	206	376	386	593	619
Denmark					
Metal	76	115	152	164	157
Estonia					
Metal	821	155	1 201	401	552
Finland					
Ores & Concentrates	10 538	36 014	9 983	20 381	28 335
Metal	259	997	717	547	753
France					
Ores & Concentrates (a)	1 390 507	968 498	892 176	626 061	615 884
Metal	11 081	8 693	7 613	8 851	11 039

Imports continued

tonnes

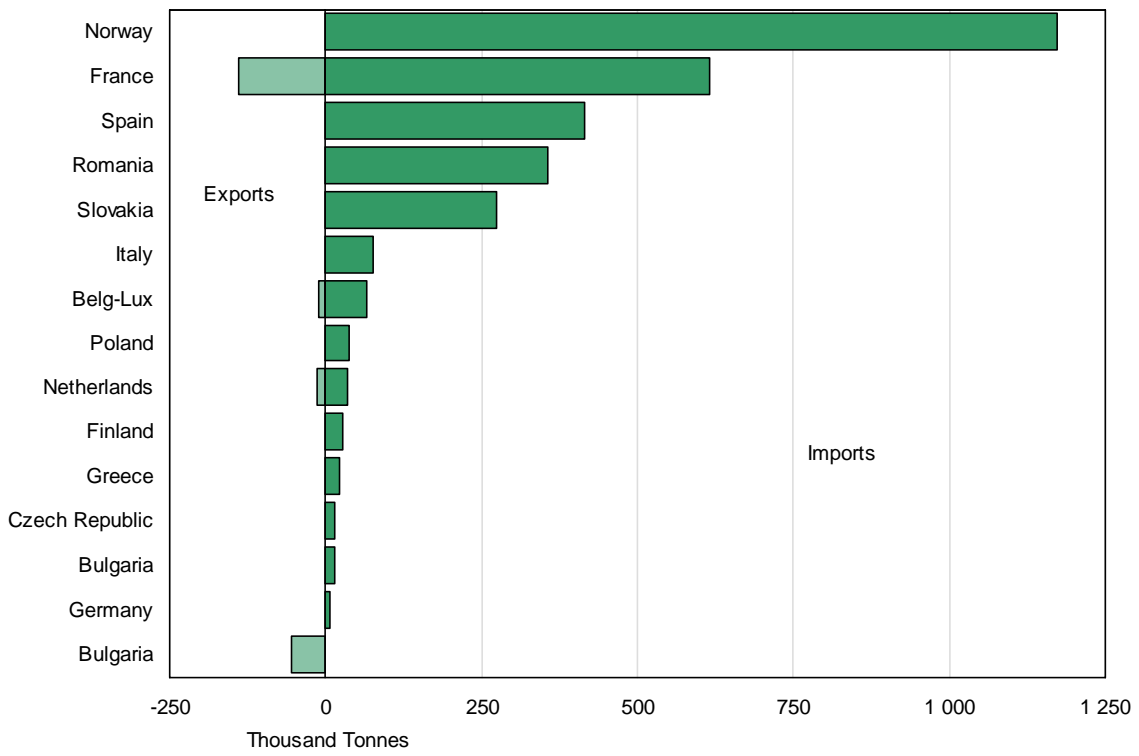
Country	2001	2002	2003	2004	2005
Germany					
Ores & Concentrates (a)	7 380	6 629	6 917	8 034	7 645
Metal	45 296	45 208	21 229	22 435	29 449
Greece					
Ores & Concentrates	22 329	2	24 985	1	22 001
Metal	681	1 289	389	1 510	905
Hungary					
Metal	476	677	568	111	889
Irish Republic					
Ores & Concentrates (a)	38 977	27 456	19 306	268	285
Metal	49	23	9	5	5
Italy					
Ores & Concentrates (a)	100 908	111 716	100 796	206 249	76 278
Metal	10 089	4 723	3 673	4 970	8 494
Netherlands					
Ores & Concentrates	10 209	7 086	11 136	14 558	35 936
Metal	9 661	4 533	9 112	14 347	61 240
Norway					
Ores & Concentrates	711 545	660 348	803 971	1 132 985	1 172 711
Metal	1 699	2 155	3 069	3 610	2 976
Poland					
Ores & Concentrates	43 603	14 597	10 037	205 290	38 845
Metal	1 834	821	432	652	499
Romania					
Ores & Concentrates	128 961	209 891	380 043	534 014	357 327
Metal	158	230	297	303	427
Slovakia					
Ores & Concentrates	...	186 061	176 511	257 331	273 270
Metal	185	121	147	...	146
Slovenia					
Metal	42	154	152	296	316
Spain					
Ores & Concentrates	352 275	431 720	437 088	575 518	415 959
Metal	12 475	8 174	10 569	9 786	10 537
Sweden					
Ores & Concentrates	1 871	98	91	62	119
Metal	8 072	6 660	3 618	2 641	2 632
Switzerland					
Metal	449	404	501	484	486
Turkey					
Metal	34	182	137	495	300
United Kingdom					
Ores & Concentrates (a)	2 701	1 218	2 102	2 585	698
Metal	9 636	7 600	8 250	9 189	8 223

Note(s) :-

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

(a) Including manganiferous iron ore

### Manganese ores and concentrates – EU31 trade in 2005

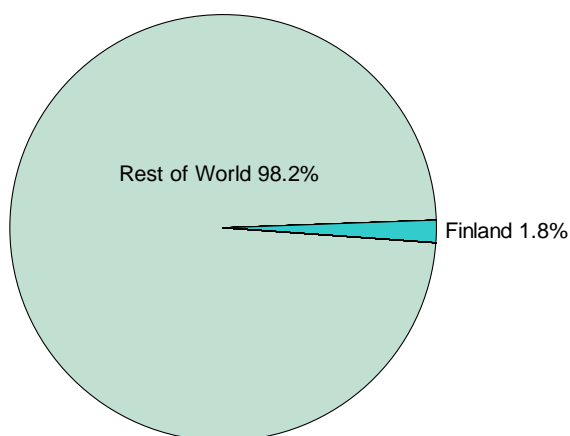




## Mercury

- Mercury is the only metallic element that is liquid at room temperature. The chief economic sources are deposits of the mineral cinnabar but mercury is also recovered from base metal refining. Mercury's main uses are in electrical switches and other control apparatus, and in dental amalgam. Large amounts remain in use in chlor-alkali plants and in batteries but these applications are being phased out.
- Only ten countries commercially extracted mercury in 2005. Spain was the largest mercury producer in the world up to 2003. However, with the closure of the Almaden mine and associated metallurgical works, China and Kyrgyzstan are now the world's two largest producers and are responsible for 87% of total world output.
- Mercury prices increased considerably during 2005 due to curtailment of production resulting from problems at key operations and environmental concerns and increased demand. Reported prices for mercury rose from the \$638–\$738/flask (1 flask is approximately 76 lb) range at the start of the year to over \$900/flask in April, before ending the year in the \$650–\$750/flask range.

**EU31 Production of mercury 2005**



## Production of mercury

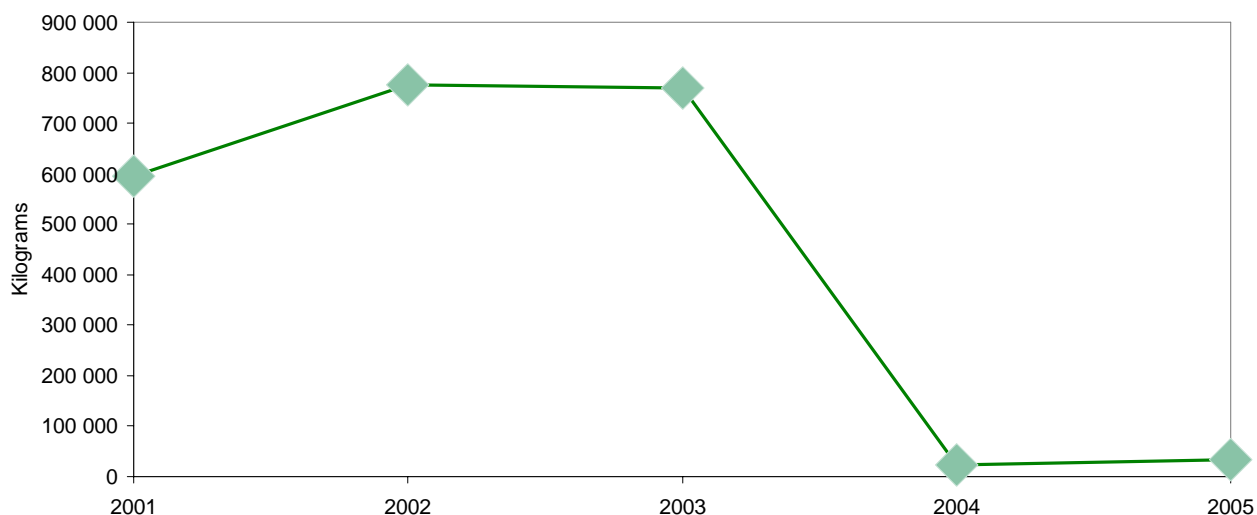
kilograms

Country	2001	2002	2003	2004	2005
Finland	71 200	50 600	25 000	23 500	34 200
Spain	524 000	726 139	745 260	—	—
<b>EU31 Total</b>	<b>595 200</b>	<b>776 700</b>	<b>770 300</b>	<b>23 500</b>	<b>34 200</b>

Note(s):-

- (1) Several countries are believed to have unrecorded production of mercury from copper electrowinning processes and by recovery from effluents

**EU31 Production of mercury 2001 - 05**



**Exports of mercury**

kilograms

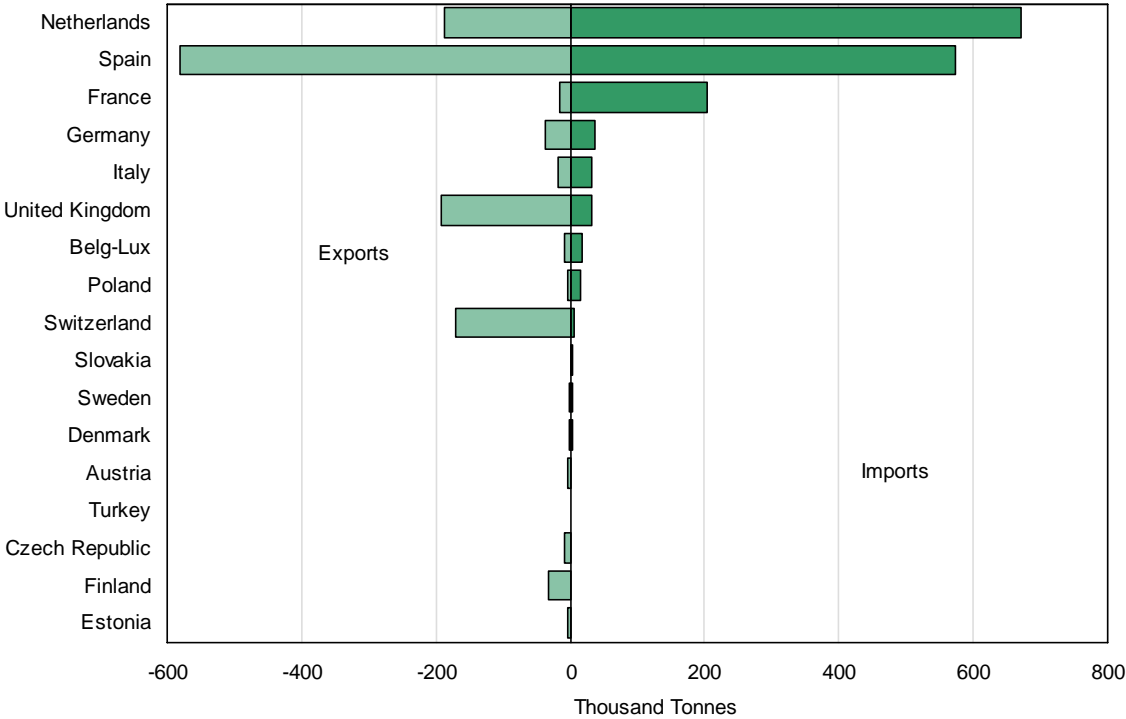
Country	2001	2002	2003	2004	2005
Austria	24 100	900	800	1 700	4 100
Belgium-Luxembourg	54 100	15 900	17 000	1 300	8 800
Czech Republic	12 000	16 542	9 970	22 172	8 200
Denmark	865	3 642	10 554	27 458	1 932
Estonia	...	2 476	2 500	...	3 400
Finland	77 627	54 859	25 530	23 462	32 090
France	12 500	7 100	6 800	93 800	15 400
Germany	412 000	59 500	48 900	55 500	36 200
Italy	21 968	274 624	20 153	6 952	18 244
Netherlands	298 000	344 400	105 100	183 998	188 220
Poland	82 000	24 000	...	2	3 000
Slovakia	34 000	1 188	2 437	0	6
Slovenia	1 446	1 312	15 826	7 327	1 395
Spain	569 833	820 527	836 784	596 739	581 653
Sweden	23 000	...	...	0	1 000
Switzerland	92 862	36 900	7 793	316 631	171 790
United Kingdom	17 299	6 226	851	2 054	191 193

**Imports of mercury**

kilograms

Country	2001	2002	2003	2004	2005
Austria	2 400	5 700	4 000	3 900	1 600
Belgium-Luxembourg	18 000	22 600	29 200	54 700	18 600
Czech Republic	1 000	1 875	2 531	7 300	1 100
Denmark	1 276	796	260	403	2 901
Finland	177	158	214	554	28
France	23 100	25 200	57 900	299 200	202 600
Germany	68 300	19 900	39 500	80 600	36 200
Greece	125 335	291	11 617	187	954
Irish Republic	2 401	1 008	11 604	61	72
Italy	32 672	15 389	27 140	135 119	32 471
Netherlands	908 200	517 600	143 200	616 057	670 022
Norway	347	99	38	42	65
Poland	7 000	21 976	3 875	4 456	15 700
Portugal	7 546	533	523	291	0
Slovakia	4 000	3 677	2 230	2 738	3 457
Spain	734 351	318 263	350 266	301 097	572 872
Sweden	2 096	4 004	3 022	4 000	3 000
Switzerland	24 309	18 901	9 354	9 704	5 846
Turkey	10 602	5 358	8 152	6 044	1 443
United Kingdom	5 042	23 302	29 673	27 875	32 306

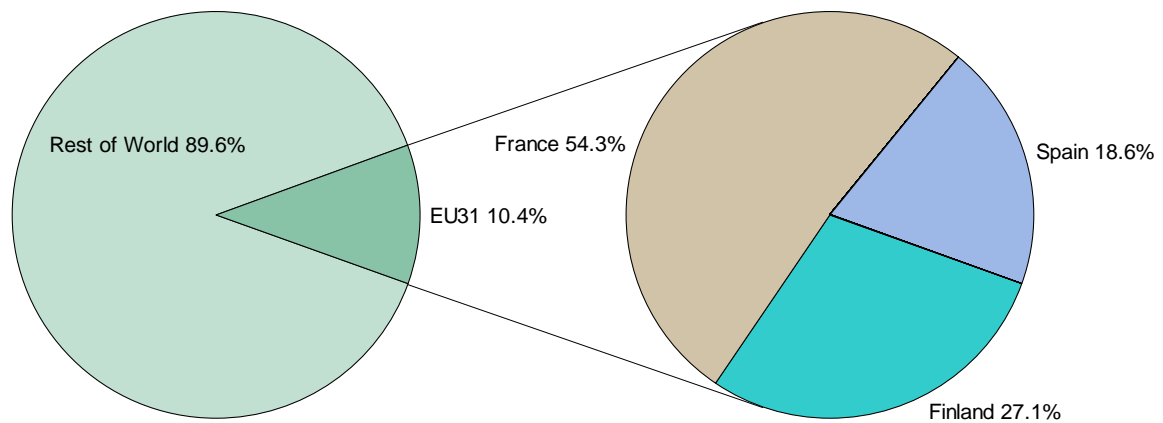
Mercury – EU31 trade in 2005



## Mica

- Micas are a group of chemically complex rock-forming minerals recognisable by a perfect cleavage (i.e. they are naturally flaky). Sheet mica is used predominantly in electrical insulation and ground mica has a very wide variety of uses including filler, dusting agent, absorbent, fire insulator, strength enhancer in plastics and decorative material.
- Although a very common mineral, commercial concentrations of mica are relatively rare. Production is limited to about 23 countries. Of these, China (30%) was the largest producer in 2005. Mica is produced in four EU31 countries, of which the largest producer is France (54%).
- Because of the wide variety of micas there are many trading categories that are very sensitive to quality. Prices ranged from \$210–\$1300/tonne in 2005.

**EU31 Production of mica 2005**



## Production of mica

tonnes

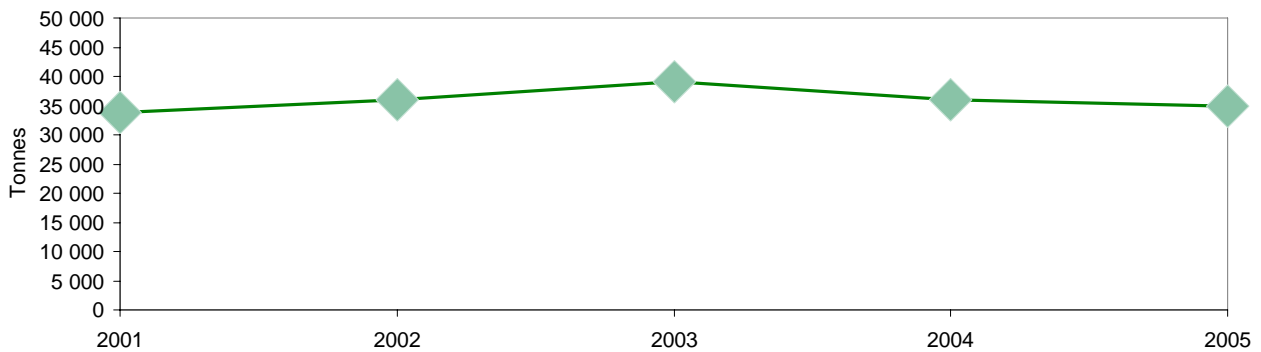
Country	2001	2002	2003	2004	2005
Finland	8 983	7 170	9 337	9 250	9 500
France (a)	15 000	17 000	18 000	19 000	...
Spain (a)	9 874	11 783	11 800	7 825	6 500
<b>EU31 Total</b>	<b>34 000</b>	<b>36 000</b>	<b>39 000</b>	<b>36 000</b>	<b>35 000</b>

Note(s):-

(1) In addition to the countries listed, Romania is believed to produce mica

(a) Including mica recovered from mica schists and/or kaolin beneficiation

**EU31 Production of mica 2001 - 05**



**Exports of mica**

tonnes

Country	2001	2002	2003	2004	2005
Austria	2 951	3 512	3 767	3 917	4 915
Belgium-Luxembourg	829	915	1 907	1 635	3 226
Finland	7 362	5 514	8 099	7 511	5 745
France	2 836	4 387	114 464	14 323	13 469
Germany	1 922	2 018	2 457	3 655	3 656
Greece	121	179	4 239	2 769	5 653
Italy	349	667	371	623	738
Netherlands	1 397	4 384	5 359	6 084	2 912
Norway	1 760	2 155	2 413	2 076	2 003
Spain	1 856	2 001	3 996	3 075	2 591
Sweden	102	89	51	58	83
Turkey	338	503	546	15 975	565
United Kingdom					
Unmanufactured	22	20	34	—	20
Ground	3 758	4 023	4 740	9 354	4 030
Waste	17	46	0	23	0

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'

**Imports of mica**

tonnes

Country	2001	2002	2003	2004	2005
Austria	570	599	899	645	512
Belgium-Luxembourg					
Unmanufactured	...	276	89	1 588	913
Ground	1 033	1 359	3 223	4 311	2 996
Czech Republic	890	926	764	879	819
Denmark	241	408	305	369	413
Finland	1 818	2 621	3 664	2 861	2 998
France					
Ground (a)	1 689	1 241	3 182	1 358	1 534
Waste	981	2 001	1 043	546	1 423
Germany					
Unmanufactured	387	227	205	237	89
Ground	21 498	23 488	24 993	28 784	30 820
Waste	468	345	840	1 212	1 101
Greece	48	114	203	94	131
Irish Republic	639	463	364	551	889
Italy					
Unmanufactured	62	52	106	65	118
Ground	2 594	2 586	2 759	3 473	3 405
Netherlands	3 383	6 320	8 540	10 005	7 524
Norway	2 426	1 174	1 759	1 559	1 001
Poland	820	557	486	878	547
Portugal	56	113	198	311	193
Romania					
Mica	72	...	590	828	886
Spain	1 185	5 447	1 810	1 641	1 917
Sweden	562	547	566	514	592
Switzerland	300	289	357	426	601
Turkey	136	33	169	215	248
United Kingdom					
Unmanufactured	344	240	424	1 769	296
Ground	7 258	9 349	8 327	6 286	6 684
Waste	4 016	4 224	5 050	4 374	4 485

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

## Molybdenum

- Molybdenum is a hard metal. It is an important component of high tensile steel where it imparts hardness, tolerance of high temperatures and resistance to corrosion. Molybdenum disulphide is used as a dry lubricant.
- Molybdenum is generally produced as a by-product of copper mining. Production in 2005 was confined to only 13 countries, of which the USA, Chile and China together produced 79%.
- Molybdenum is marketed mainly as concentrate, oxide and ferro-molybdenum. Rising demand since 2003 has resulted in demand outstripping supply and significant price increases. The average prices in 2005 for molybdenum oxide and ferro-molybdenum were \$70.7/kg and \$81.1/kg respectively, representing more than a 100% increase compared to 2004.

### Exports of molybdenum

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	2 023	2 123	(a) *2 200	(a) *2 300	(a) *4 800
Oxides	0	0	5	125	...
Belgium-Luxembourg					
Ores & concentrates	9 864	9 271	11 690	16 219	17 683
Metal	543	199	314	221	342
Oxides	242	1 621	820	571	687
Bulgaria					
Metal	...	37	49	546	105
Estonia					
Metal	76	1	47	1	1
France					
Metal	93	65	15	436	35
Oxides	11	20	27	31	9
Germany					
Ores & concentrates	157	240	905	2 309	2 770
Metal	1 220	1 274	1 465	2 014	2 241
Oxides	4 441	2 523	2 894	—	—
Italy					
Metal	98	57	250	171	132
Netherlands					
Ores & concentrates	16 092	52 237	17 141	30 424	47 395
Metal	829	81	161	120	59
Oxides	2 014	1 920	1 640	2 010	2 708
United Kingdom					
Ores & concentrates	297	418	84	180	179
Metal	1 046	326	230	312	807

Note(s):-

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

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

## Imports of molybdenum

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	197	356	382	865	599
Belgium-Luxembourg					
Ores & concentrates	19 527	24 746	36 903	45 922	54 452
Metal	1 196	277	179	277	383
Oxides	635	730	2 702	1 519	2 072
Czech Republic					
Ores & concentrates	...	...	...	...	189
Metal	45	29	42	66	89
Estonia					
Metal	102	0	43	4	...
Finland					
Ores & concentrates	3 296	3 581	4 868	5 603	4 127
France					
Ores & concentrates	2 126	1 604	1 591	1 492	1 783
Metal	635	686	727	762	993
Oxides	119	284	371	664	678
Germany					
Ores & concentrates	10 814	8 663	9 800	12 221	11 537
Metal	2 364	2 406	1 878	3 043	2 569
Oxides	318	397	545	703	725
Greece					
Metal	12	21	1	13	2
Hungary					
Metal	114	105	121	129	129
Italy					
Ores & concentrates	4 065	4 097	4 119	4 719	5 109
Metal	284	163	122	105	203
Oxides	74	141	172	247	117
Netherlands					
Ores & concentrates	25 896	21 723	29 337	39 710	31 781
Metal	192	285	459	141	287
Oxides	1 958	1 891	1 577	2 032	1 509
Poland					
Ores & concentrates	111	16	1	8	1
Metal	54	84	36	142	102
Portugal					
Metal	14	15	15	24	14
Slovenia					
Ores & concentrates	95	0	42	524	5 674
Spain					
Ores & concentrates	3 811	4 226	3 917	3 805	3 317
Metal	34	91	45	30	31
Sweden					
Ores & concentrates	5 409	6 132	5 235	5 826	5 690
Metal	249	219	252	458	280
Oxides	659	791	784	594	392
Switzerland					
Metal	25	21	26	25	31
Turkey					
Metal	2	4	4	10	4
Oxides	66	54	84	130	82
United Kingdom					
Ores & concentrates	16 373	21 437	18 884	18 371	18 600
Metal	1 165	1 220	1 169	1 854	2 877
Oxides	60	106	7	2	630

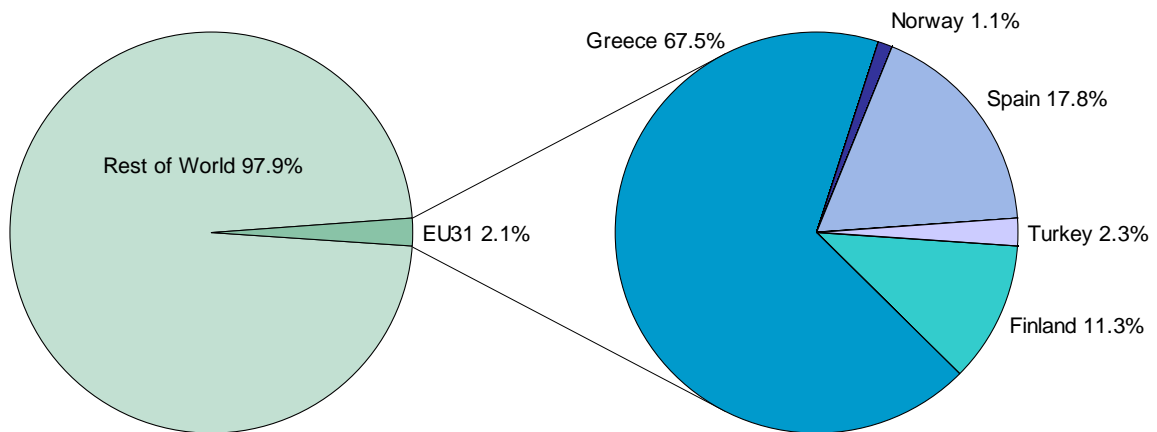
Note(s) :-

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

## Nickel

- Nickel is a hard, strong, corrosion-resistant malleable and ductile metal that is a good conductor of heat and electricity. Its most important use is in steel alloys where it imparts strength and toughness. It is also widely used in plating, both metals and plastics, and combined with copper in cupro-nickel alloys.
- Almost half of world nickel mine production in 2005 was supplied by Russia, Australia and Canada. Greece is the only significant mine producer in the EU31 but several countries refine nickel based on imported raw materials. Norway was the largest EU31 refined nickel producer in 2005.
- As a result of a relatively small production base, the refined nickel price can be quite volatile. The nickel market enjoyed strong growth in the first half of 2005 largely driven by increased use of stainless steel. Average LME nickel prices increased from US\$13830/tonne in 2004 to a high of US\$24750/tonne in June 2005 before dropping back to US\$13200/tonne in December.

**EU31 Mine production of nickel 2005**

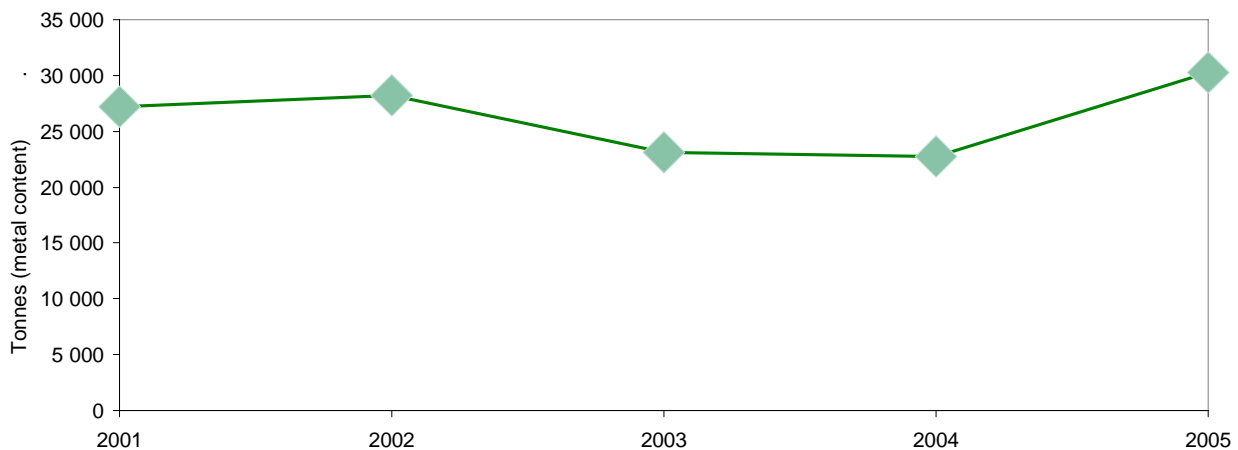


### Mine production of nickel

tonnes (metal content)

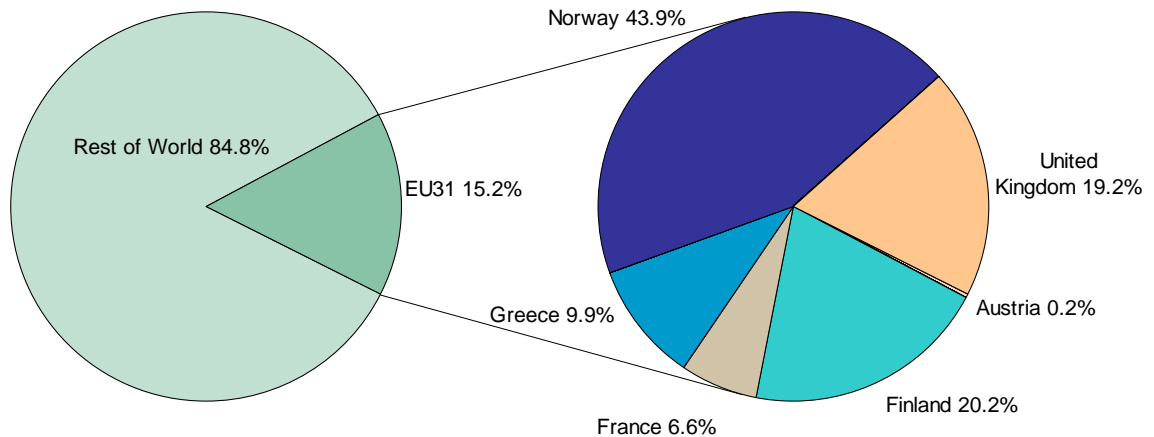
Country	2001	2002	2003	2004	2005
Finland	3 700	3 500	3 400	3 400	3 400
Greece	20 742	22 700	19 100	19 000	20 400
Norway	2 800	2 052	—	382	342
Spain	—	—	—	—	5 380
Turkey	—	—	640	—	700
<b>EU31 Total</b>	<b>27 200</b>	<b>28 300</b>	<b>23 100</b>	<b>22 800</b>	<b>30 200</b>

**EU31 Mine production of nickel 2001 - 05**





## EU31 Smelter/refinery production of nickel 2005



## Smelter/refinery production of nickel

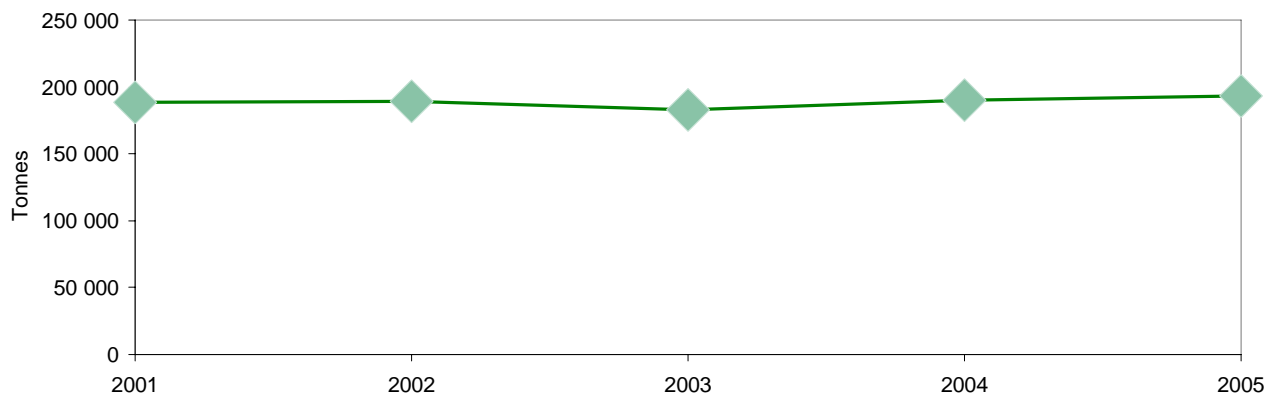
tonnes

Country	2001	2002	2003	2004	2005
Austria	1 300	*1 000	1 000	300	400
Finland	54 600	55 348	50 989	49 580	39 159
France	13 036	11 444	11 370	12 103	12 684
Greece	17 675	19 230	18 000	18 116	19 235
Norway	68 200	68 500	77 183	71 410	84 886
United Kingdom	33 800	33 800	24 200	38 600	37 100
<b>EU31 Total</b>	<b>188 600</b>	<b>189 300</b>	<b>182 700</b>	<b>190 100</b>	<b>193 500</b>

Note(s):-

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

## EU31 Smelter/refinery production of nickel 2001 - 05



## Exports of nickel

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Mattes, sinters etc.	153	288	47	9	...
Unwrought (a)	532	570	206	297	226
Scrap	495	377	440	1 520	1 927
Belgium-Luxembourg					
Unwrought	12 265	12 351	9 848	16 290	13 376
Unwrought alloys	2 531	1 752	1 947	2 843	2 510
Scrap	2 595	6 118	1 114	1 694	1 008
Oxides	380	712	268	772	702

## Nickel

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
Czech Republic					
Unwrought (a)	42	211	186	967	57
Scrap	237	219	417	525	843
Oxides	126	159	358	296	658
Denmark					
Scrap	280	190	593	777	676
Estonia					
Mattes, sinters etc.	938	0	86	...	...
Unwrought (a)	619	—	999	...	42
Scrap	1 587	195	108	296	34
Finland					
Ores & concentrates	30 711	11 939	1 459	—	—
Unwrought	36 815	39 367	37 416	36 458	30 628
Scrap	50	118	...	26	28
Oxides	...	(b) *2 000	(b) *600	(b) *500	(b) *400
France					
Unwrought	9 094	7 460	8 396	9 203	10 148
Unwrought alloys	434	294	542	1 455	1 762
Scrap	9 134	6 625	8 306	6 618	6 373
Oxides	551	24	359	1 140	63
Germany					
Ores & concentrates	8 083	12 229	10 884	10 717	7 822
Unwrought	8 418	5 582	5 225	5 549	8 988
Unwrought alloys	6 328	5 837	6 011	8 732	9 376
Scrap	10 826	8 277	8 091	8 096	9 342
Oxides	670	505	246	105	102
Irish Republic					
Scrap	674	701	664	797	641
Italy					
Unwrought (a)	2 102	2 701	2 923	1 637	1 720
Scrap	1 057	552	351	644	1 923
Latvia					
Scrap	2 293	1 004	853	170	538
Lithuania					
Scrap	739	759	996	770	411
Netherlands					
Mattes, sinters etc.	(b) *8 200	(b) *19 300	(b) *8 100	37 108	41 174
Unwrought (a)	54 127	25 214	33 096	24 467	21 895
Scrap	1 365	1 494	3 602	2 745	2 009
Oxides	...	2 528	0	28 549	6 017
Norway					
Ores & concentrates	30 142	25 902	6 268	9 575	7 581
Unwrought	65 829	67 718	78 389	71 982	84 012
Scrap	255	139	264	909	897
Poland					
Oxides	125	146	339	468	529
Slovenia					
Unwrought (a)	225	262	116	144	117
Spain					
Unwrought (a)	169	609	126	177	572
Scrap	385	208	420	363	528
Sweden					
Unwrought	613	1 887	384	126	112
Scrap	432	1 661	1 096	1 138	4 369
Oxides	125	142	181	317	291
Switzerland					
Unwrought (a)	179	105	125	49	73
Scrap	492	587	880	1 106	1 403
Turkey					
Ores & concentrates	...	...	43 600	3 511	51 703

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
United Kingdom					
Mattes, sinters etc.	136	128	200	964	196
Unwrought	21 670	19 775	19 200	38 249	38 524
Unwrought alloys	5 955	4 257	4 899	4 710	6 141
Scrap	7 736	7 912	7 861	10 465	14 119

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

**Imports of nickel**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Mattes, sinters etc.	552	737	401	369	460
Unwrought (a)	5 150	4 554	5 251	6 772	6 903
Scrap	540	641	520	632	447
Oxides	853	609	430	293	312
Belgium-Luxembourg					
Mattes, sinters etc.	33	216	61	162	214
Unwrought	33 851	32 016	41 648	42 387	41 364
Unwrought alloys	682	488	636	979	822
Scrap	2 577	2 611	828	1 644	1 221
Oxides	292	326	497	366	324
Czech Republic					
Unwrought (a)	2 231	1 825	2 158	2 574	2 520
Oxides	177	236	465	712	785
Denmark					
Unwrought (a)	202	114	96	112	97
Estonia					
Mattes, sinters etc.	1 779	1 075	1 696	46	73
Unwrought (a)	691	315	1 328	163	60
Scrap	1 641	211	100	331	108
Finland					
Ores & concentrates	250 973	178 968	146 122	169 170	104 983
Mattes, sinters etc.	30 946	57 571	51 225	42 944	50 194
Unwrought (a)	9 809	14 977	24 289	24 307	23 801
Unwrought alloys	...	...	...	...	875
Scrap	31	90	200	1 332	860
Oxides	48	6 093	0	11	...
France					
Mattes, sinters etc.	19 437	15 496	15 087	12 329	15 399
Unwrought	34 347	39 979	30 995	26 842	22 656
Unwrought alloys	7 372	2 269	3 192	5 350	6 104
Scrap	1 848	2 048	2 210	2 068	1 554
Oxides	219	140	200	166	228
Germany					
Mattes, sinters etc.	9 525	23 006	4 030	7 264	6 902
Unwrought	81 674	84 677	72 571	72 788	87 939
Unwrought alloys	1 660	1 625	1 933	1 646	2 182
Scrap	9 254	11 197	10 889	11 347	11 672
Oxides	590	668	563	517	502
Greece					
Ores & concentrates	31 111	...	10 480	6	29 153
Unwrought	126	67	60	61	56
Irish Republic					
Unwrought (a)	1 834	1 361	1 558	1 493	1 775
Italy					
Mattes, sinters etc.	225	515	306	353	32
Unwrought	50 142	49 803	51 276	41 944	37 708
Unwrought alloys	1 845	1 577	1 211	2 664	1 455
Scrap	2 141	559	2 248	3 075	5 119

Nickel

Imports continued

tonnes

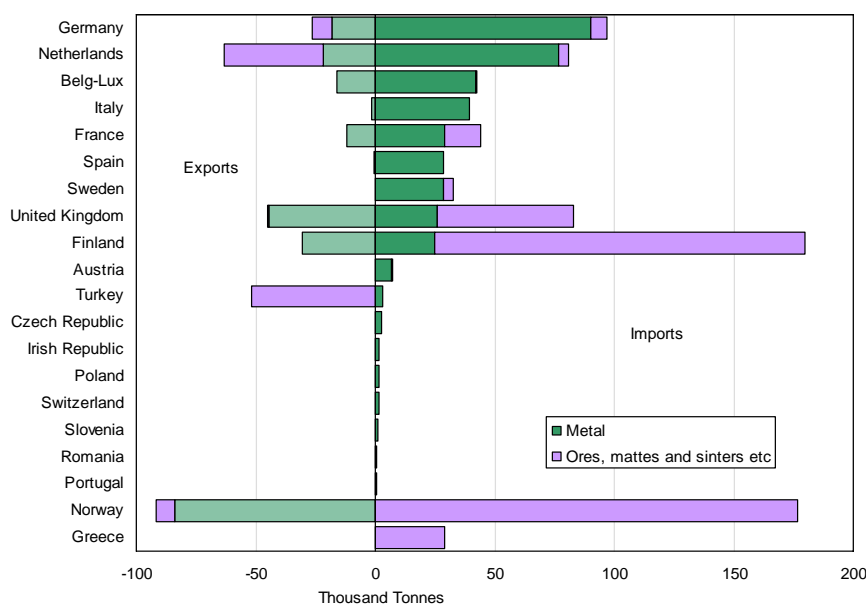
Country	2001	2002	2003	2004	2005
<b>Netherlands</b>					
Mattes, sinters etc.	...	10 394	8 566	9 144	3 832
Unwrought	59 920	61 898	65 504	61 516	76 469
Unwrought alloys	401	47	266	321	343
Scrap	3 083	4 398	5 585	6 582	6 738
Oxides	1 728	6 764	7 683	4 632	5 654
<b>Norway</b>					
Mattes, sinters etc.	131 096	145 072	158 897	136 200	176 657
Unwrought (a)	134	138	46	222	80
<b>Poland</b>					
Unwrought (a)	2 307	1 561	1 589	2 207	1 683
<b>Portugal</b>					
Unwrought (a)	315	293	184	310	602
<b>Romania</b>					
Unwrought (a)	671	457	280	563	745
<b>Slovenia</b>					
Unwrought (a)	2 954	1 595	992	959	931
<b>Spain</b>					
Unwrought (a)	31 752	32 795	27 346	28 234	28 635
Oxides	231	306	225	210	176
<b>Sweden</b>					
Mattes, sinters etc.	6 124	12 476	4 032	4 051	4 346
Unwrought	24 547	24 982	25 423	27 687	26 931
Unwrought alloys	942	863	857	1 076	1 324
Scrap	13 495	18 399	12 543	10 523	8 946
<b>Switzerland</b>					
Unwrought (a)	1 591	1 417	1 392	1 333	1 401
<b>Turkey</b>					
Unwrought (a)	1 584	1 919	2 415	3 353	3 321
Oxides	92	160	162	144	128
<b>United Kingdom</b>					
Mattes, sinters etc.	51 963	52 514	43 968	64 192	57 492
Unwrought	47 030	46 610	34 162	45 264	24 019
Unwrought alloys	2 788	1 868	31 491	2 238	1 629
Scrap	14 963	25 270	20 038	8 957	10 927
Oxides	145	130	47	103	277

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

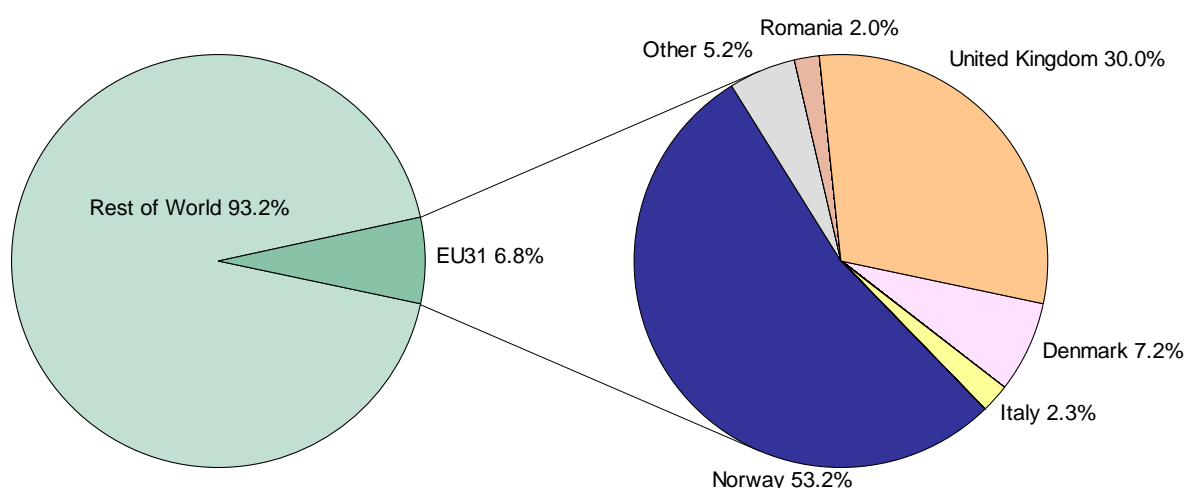
**Nickel – EU31 trade in 2005**



## Crude petroleum

- Petroleum ('oil') is a fundamental energy resource and raw material for lubricants, olefins, polymers (plastics) and other synthetic materials.
- In 2005 a total of 3866 million tonnes of crude petroleum was produced. The largest producing country was Saudi Arabia (14%). In Europe the largest producer was Norway (53% of EU31 production). Despite the volume of oil produced from European fields (7% of the world total), the EU31 is a net importer of oil by a substantial margin.
- Global supply of crude oil tightened during 2005 placing upward pressure on prices. In 2004 the price of Brent crude averaged \$54/barrel. Prices began to rise in January from \$44/barrel before accelerating through the summer and peaking in August at over \$70/barrel. At the end of the year the price was approximately \$57/barrel.

**EU31 Production of crude petroleum 2005**



## Production of crude petroleum

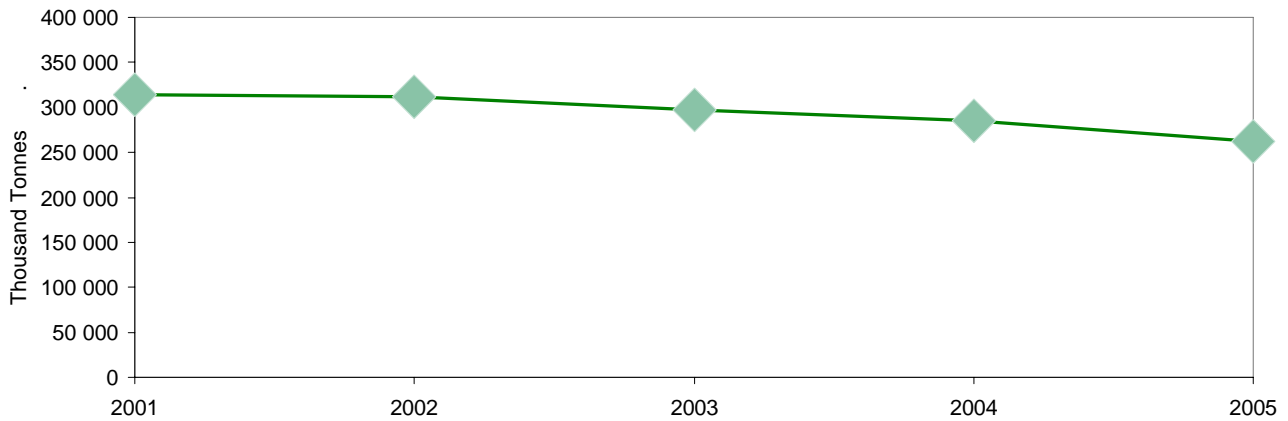
tonnes

Country	2001	2002	2003	2004	2005
Austria	1 050 355	1 032 204	1 014 716	981 588	933 040
Bulgaria	33 888	33 000	27 900	33 100	30 000
Croatia	1 120 797	1 108 434	1 052 121	1 037 787	980 486
Czech Republic	178 000	253 000	310 000	299 000	306 000
Denmark	17 378 000	18 494 000	18 341 000	19 446 000	18 822 000
France	1 382 646	1 316 890	1 219 000	1 138 000	1 079 000
Germany	3 569 290	3 768 054	3 799 864	3 515 537	3 572 764
Greece	293 000	207 000	162 000	132 890	100 678
Hungary	1 058 060	1 049 770	1 134 245	1 076 844	947 542
Italy	4 097 000	5 531 000	5 570 000	5 445 000	6 100 000
Lithuania	470 000	433 700	382 400	301 874	216 634
Netherlands	2 263 590	3 073 924	3 076 398	2 890 979	2 268 746
Norway	162 099 000	157 847 000	153 508 000	150 974 000	139 802 000
Poland	767 004	727 973	764 806	886 188	847 844
Romania	6 011 000	5 810 000	5 651 000	5 462 000	5 212 000
Slovakia	54 115	51 921	47 953	42 410	33 150
Spain	344 074	326 197	329 171	262 707	173 253
Turkey	2 551 647	2 440 202	2 375 082	2 275 529	2 280 764
United Kingdom	109 491 000	108 023 000	99 055 000	88 830 000	78 840 000
<b>EU31 Total</b>	<b>314 200 000</b>	<b>311 500 000</b>	<b>297 800 000</b>	<b>285 000 000</b>	<b>262 500 000</b>

Note(s):-

(1) The figures shown in this table include natural gas liquids

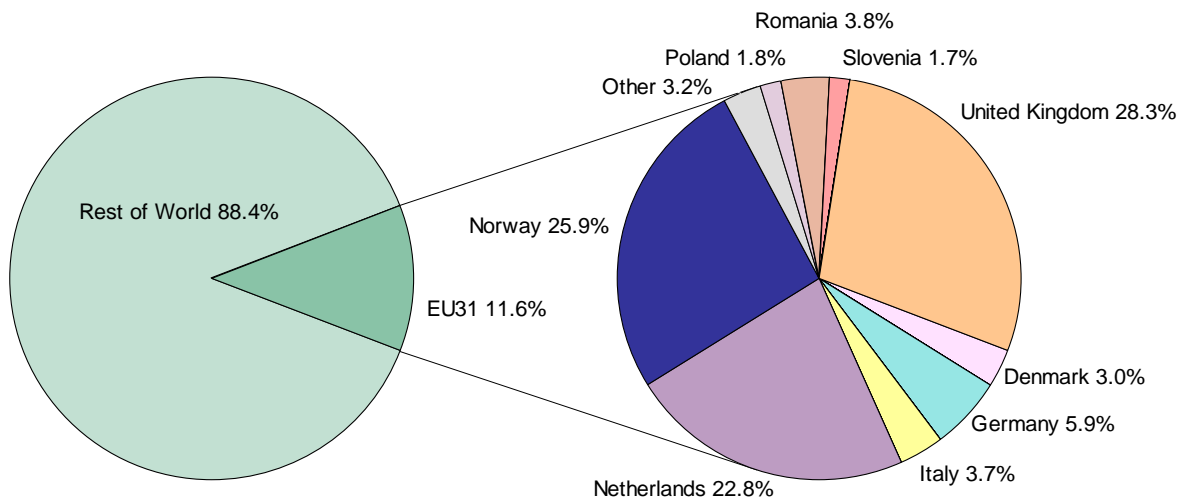
**EU31 Production of crude petroleum 2001 - 05**



## Natural gas

- Natural gas is an increasingly important fundamental energy resource. It is used chiefly as a fuel but also a basic feedstock for chemicals such as propane and butane, and in the manufacture of ammonia and fertilisers.
- It is transported either by pipeline, often over transcontinental distances, or by ships in the form of liquefied natural gas (LNG).
- Russia (22%) and the USA (18%) are the largest producers. The UK was the largest producer in the EU31 (28%) and the fourth-largest world producer (3%).
- Gas prices have increased significantly over the last three years and supply is becoming increasingly stretched as global energy demand rapidly grows.

**EU31 Production of natural gas 2005**



## Production of natural gas

million m<sup>3</sup>

Country	2001	2002	2003	2004	2005
Austria	1 954	2 015	2 029	2 011	1 654
Bulgaria	21	11	11	333	573
Croatia	2 009	2 122	2 190	2 198	2 283
Czech Republic	101	91	131	175	356
Denmark	7 930	7 947	7 555	8 946	9 908
France	1 809	1 751	1 523	1 325	1 013
Germany	21 698	21 556	22 228	20 411	19 171
Greece	32	36	27	23	16
Hungary	3 286	3 130	3 145	3 112	3 041
Irish Republic	816	839	673	848	570

Production continued

million m<sup>3</sup>

Country	2001	2002	2003	2004	2005
Italy	15 242	14 623	13 885	12 961	11 977
Netherlands	74 323	71 786	69 114	81 499	74 460
Norway	53 895	65 501	72 905	78 351	84 702
Poland	5 179	5 263	5 315	5 630	5 742
Romania	14 090	13 647	13 174	13 246	12 472
Slovakia	212	212	201	178	151
Slovenia	6 100	5 704	4 926	5 500	5 500
Spain	557	553	268	370	174
Turkey	266	242	276	344	484
United Kingdom	112 563	109 694	107 919	100 847	92 503
<b>EU31 Total</b>	<b>322 000</b>	<b>326 700</b>	<b>327 500</b>	<b>338 300</b>	<b>326 800</b>

Note(s):-

(1) So far as possible the figures in this table exclude flared or reinjected gas

EU31 Production of natural gas 2001 - 05



## Exports of crude petroleum

tonnes

Country	2001	2002	2003	2004	2005
Austria	60 151	...	—	—	—
Belgium-Luxembourg	328 893	2 319 755	2 263 897	2 967 608	2 616 977
Croatia	15 001	1	...	20 000	...
Czech Republic	118 714	129 275	155 258	64 315	57 522
Denmark	11 645 846	13 073 624	13 015 898	14 324 704	13 567 566
Estonia (a)	*1 031 000	*648 000	*283 000	*321 000	*339 000
France	55 631	90 903	91 091	39	20 374
Germany	907 924	656 861	1 741 465	1 253 391	1 257 658
Greece	596 613	4	—	—	—
Italy	250 353	871 391	802 524	824 206	986 121
Latvia	10 999	10 477	10 162	19 892	6 085
Lithuania	349 491	134 180	273 187	197 709	148 031
Netherlands	177 964	849	54 938	136 202	145 541
Norway	146 645 926	139 103 257	135 201 186	129 935 579	119 119 538
Poland	439 625	450 000	161 074	138 253	216 256
Slovakia	16 895	13 013	16 699	113 305	30 887
United Kingdom	82 057 946	79 943 787	69 617 507	60 743 679	50 619 044

Note(s):-

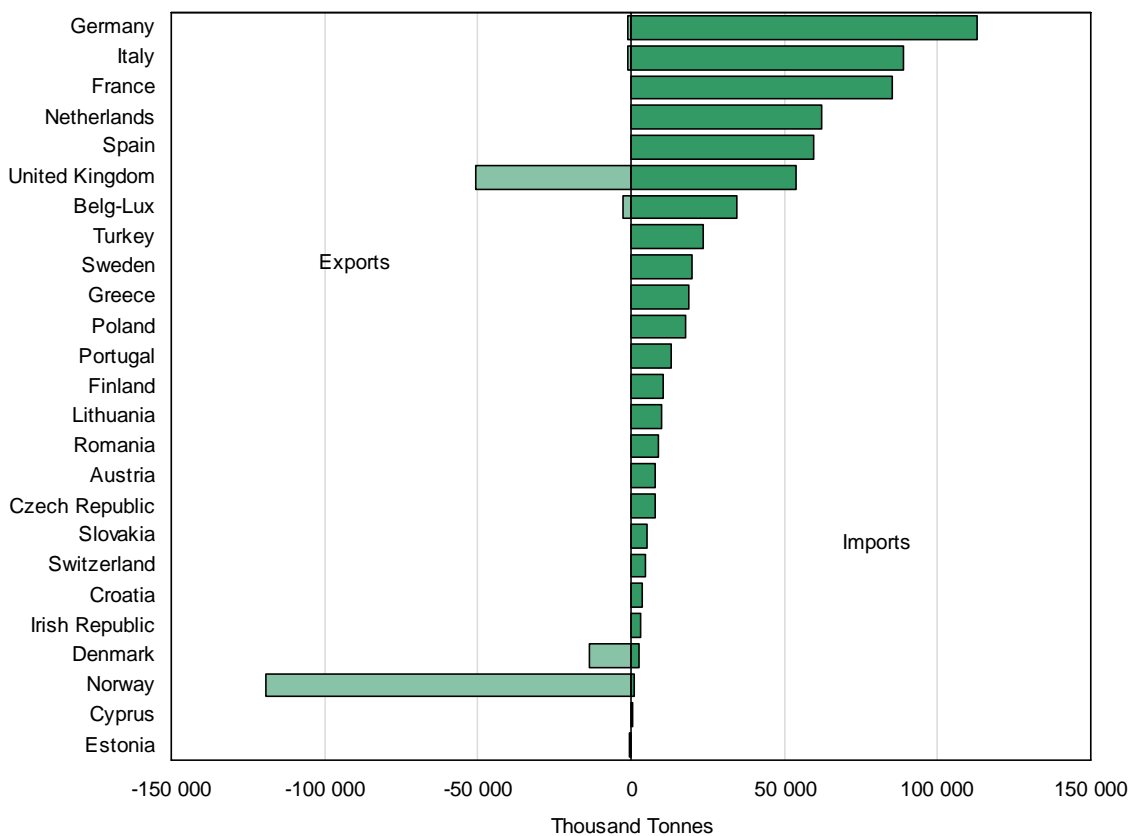
(a) BGS estimates, based on known imports into certain countries

### Imports of crude petroleum

tonnes

Country	2001	2002	2003	2004	2005
Austria	7 858 165	8 128 843	7 819 276	7 539 310	7 836 688
Belgium-Luxembourg	38 628 736	37 490 772	42 731 484	34 210 727	34 417 017
Croatia	4 012 709	4 009 452	3 776 305	4 197 554	3 855 070
Cyprus	1 048 256	1 143 649	838 280	417 475	...
Czech Republic	6 004 685	5 548 002	7 380 375	6 530 733	7 674 771
Denmark	2 853 538	3 193 530	3 517 270	3 725 978	2 666 384
Finland	10 951 956	11 745 754	12 019 477	12 249 366	10 603 534
France	85 259 764	80 589 846	84 181 898	86 416 072	84 951 337
Germany	104 631 624	104 331 841	107 268 878	112 096 299	113 067 864
Greece	20 112 238	18 653 052	18 976 807	18 390 500	18 926 138
Hungary	...	5 029 814	...	5 001 714	—
Irish Republic	2 475 545	1 112 511	1 378 494	2 128 991	3 226 383
Italy	83 971 514	81 043 087	84 724 010	87 208 954	89 007 151
Lithuania	6 117 000	6 219 137	7 075 694	837 578	9 746 806
Netherlands	60 427 836	54 968 223	56 463 347	61 377 494	62 152 486
Norway	956 019	590 064	562 851	440 346	983 848
Poland	17 558 327	16 400 000	17 448 290	17 316 135	17 639 489
Portugal	12 517 253	11 635 480	12 544 785	13 081 242	12 941 851
Romania	5 543 644	5 690 063	5 216 636	7 314 284	8 688 818
Slovakia	5 408 523	5 554 324	5 603 952	5 858 911	5 421 866
Spain	56 824 754	57 489 130	57 578 507	59 343 873	59 510 408
Sweden	18 262 971	18 665 040	20 436 192	20 873 087	19 770 639
Switzerland	4 773 040	4 869 479	4 551 511	5 086 184	4 744 965
Turkey	23 141 640	21 626 643	24 028 666	23 917 019	23 393 477
United Kingdom	38 542 685	40 838 161	44 511 352	56 128 686	54 067 943

Crude petroleum – EU31 trade in 2005





## Phosphate rock

- Phosphate rock is the term given to a range of phosphorus-bearing minerals that are commercially exploited. Over 90% of phosphate rock is used to produce fertilisers. The remainder is used in the manufacture of detergents, animal feedstock and many other minor applications.
- 63% of the total production of phosphate rock is from China, USA and Morocco. Morocco is the largest exporter. Finland is the only producer in the EU31, which is almost entirely dependent on imports.
- Phosphate rock (70–72% BPL, FAS Casablanca) traded at \$46/tonne in 2005.

### Production of phosphate rock

tonnes

Country	2001	2002	2003	2004	2005
Finland	767 020	799 814	799 339	838 000	823 000

### Exports of phosphate rock

tonnes

Country	2001	2002	2003	2004	2005
Austria	1 320	906	1 280	802	1
Belgium-Luxembourg	43 858	54 563	75 856	101 115	108 238
Finland	...	40	1 626	16 375	996
France	2 536	1 488	1 018	6 362	4 463
Germany	674	302	66	43	5 048
Italy	794	513	475	4 417	4 883
Netherlands	65 689	181 928	94 541	94 150	91 592
Poland	2 700	2 511	...	507	1
United Kingdom	317	386	111	34	1 548

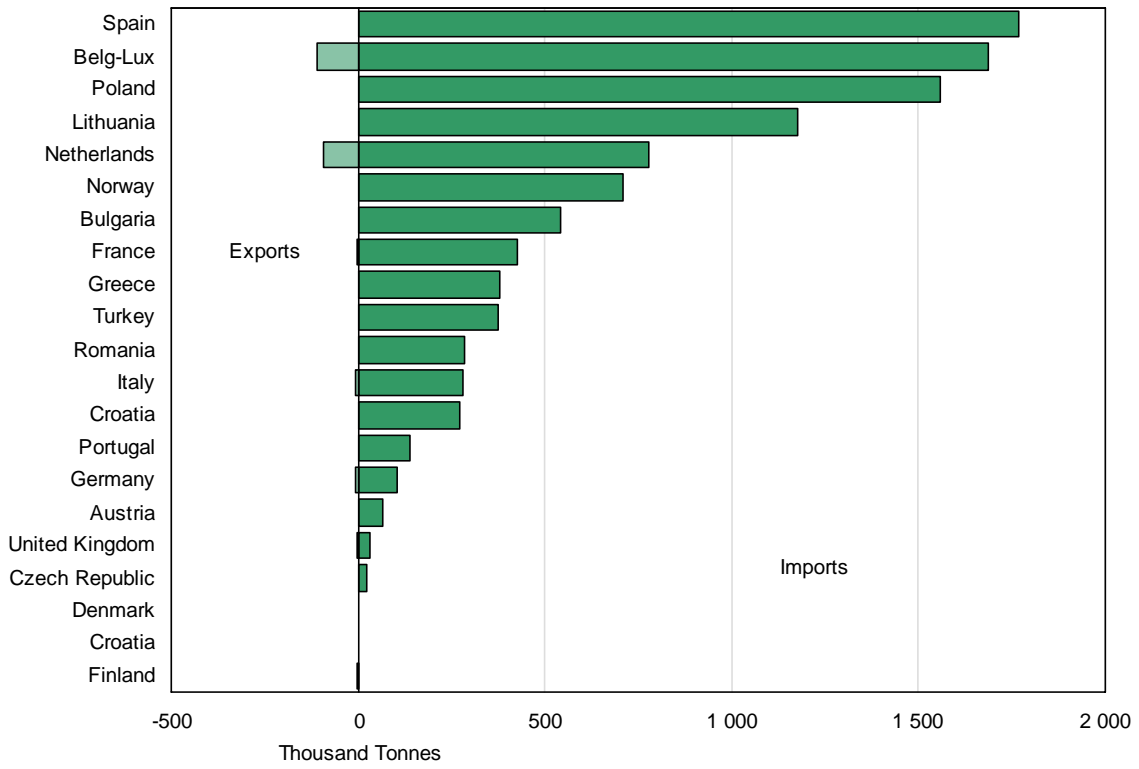
Phosphates

### Imports of phosphate rock

tonnes

Country	2001	2002	2003	2004	2005
Austria	...	...	237 605	210 010	67 853
Belgium-Luxembourg	1 395 630	1 668 206	1 664 247	1 545 478	1 688 029
Bulgaria	393 280	490 935	550 013	515 889	543 637
Croatia	173 144	177 728	181 534	245 224	272 005
Czech Republic	48 539	27 955	24 299	24 282	22 633
Denmark	44 643	57 813	80 114	30 425	1 311
Finland	46 352	55 716	55 555	57 184	488
France	923 926	919 097	773 860	593 253	427 194
Germany	155 278	167 297	120 231	148 082	104 335
Greece	328 110	338 443	336 893	364 398	378 931
Hungary	14 793	14 730	9 140	...	4
Irish Republic	2 144	9 717	440	1 159	219
Italy	263 295	278 389	296 497	359 090	279 693
Lithuania	485 429	899 042	1 079 502	1 082 901	1 178 816
Netherlands	822 583	964 035	922 349	724 960	776 661
Norway	638 449	664 834	666 188	646 319	710 528
Poland	1 636 053	1 407 541	1 452 726	1 885 350	1 558 007
Portugal	158 684	134 664	141 740	149 365	137 423
Romania	278 348	249 271	264 547	303 713	283 192
Spain	2 062 062	1 805 229	1 790 138	1 800 329	1 768 425
Sweden	81 983	66 930	18 346	129	156
Turkey	497 120	746 033	610 286	291 245	373 134
United Kingdom	9 223	10 275	1 242	11 586	30 177

Phosphate rock – EU31 trade in 2005



## Platinum group metals

- The platinum group metals (PGMs) are platinum, palladium, rhodium, ruthenium, osmium and iridium. Of these, platinum and palladium are the most commercially significant. Platinum and palladium have important applications as catalysts (catalytic converters), and in electronics and jewellery and are also investment commodities.
- Mine production is confined to a handful of countries. The largest producers in 2005 were South Africa (59% - chiefly platinum) and Russia (30% - chiefly palladium). There is no EU31 mine production but the UK is a major exporter of refined PGMs due to its processing industry based on imported materials and recycling.
- The average annual platinum price in 2005 reached \$899.51/troy ounce, an increase of more than 6% over 2004. Palladium averaged \$203/troy ounce in 2005, a 13% decrease compared with 2004. Palladium prices have been on a downward trend since 2000 when the price was \$692/troy ounce.

## Exports of platinum group metals

kilograms

Country	2001	2002	2003	2004	2005
Austria					
Platinum & platinum metals	£2 785 000	£2 827 000	£4 556 000	£8 114 000	£12 253 000
Waste & scrap	...	...	£362 000	£50 000	£397 000
Belgium-Luxembourg					
Platinum	3 000	3 200	2 000	1 000	700
Platinum metals	8 300	7 300	2 100	4 400	2 100
Waste & scrap	762 100	319 342	239 700	245 596	305 700
Bulgaria					
Waste & scrap (a)	*28 500	*35 800	*17 500	*24 000	*31 400
Czech Republic					
Platinum & platinum metals	...	79 408	(a) *22 000	(a) *4 600	(a) *20 600
Waste & scrap	(a) *86 900	2 818	5 316	4 158	4 500
Denmark					
Platinum & platinum metals	751	115	208	...	1 435
Estonia					
Waste & scrap	216 839	41 383	3 706	3 981	...
France					
Platinum	6 900	5 300	3 800	2 800	1 700
Platinum metals	7 000	4 600	3 400	5 200	2 600
Waste & scrap	91 300	107 500	35 400	44 182	184 400
Germany					
Platinum	28 500	21 400	26 300	31 900	43 300
Palladium	19 600	40 200	22 000	15 900	20 800
Other platinum metals	3 400	4 000	2 900	4 600	11 100
Waste & scrap	1 040 875	1 067 200	803 500	815 821	1 648 800
Irish Republic					
Waste & scrap	12 292	22 983	5 544	13 100	7 900
Italy					
Platinum	31 775	3 546	10 430	6 277	6 555
Platinum metals	6 133	13 337	8 310	4 207	6 458
Waste & scrap	23 155	61 441	96 968	105 220	206
Latvia					
Waste & scrap	2	407	567	716	1 002
Lithuania					
Waste & scrap	9 867	2 982	7 980	6 019	...
Netherlands					
Platinum	£21 776 000	£17 686 000	£19 007 000	£18 570 000	£9 061 000
Platinum metals	...	£634 000	£1 015 000	£1 377 000	£8 211 000
Waste & scrap	23 800	10 900	9 200	201 129	876
Norway					
Platinum & platinum metals	6 659	10 986	11 150	13 360	11 871
Waste & scrap	2 639	76 801	616	384	342
Poland					
Platinum & platinum metals	43	872	308	470	800
Waste & scrap	27 622	6 543	52 366	33 019	1 000
Slovakia					
Platinum & platinum metals	...	257	310	308	8
Slovenia					
Platinum & platinum metals	322	919	817	1 083	3

## Platinum Metals

Exports continued

kilograms

Country	2001	2002	2003	2004	2005
Spain					
Platinum & platinum metals	256	285	104	1 054	152
Waste & scrap	616	253	7 479	1 893	2 892
Sweden					
Platinum & platinum metals	£952 000	£610 000	£280 000	£1 037 000	£663 000
Waste & scrap	46 465	27 536	27 000	29 000	25 000
Switzerland					
Platinum	63 640	73 384	67 305	57 268	42 102
Palladium	44 317	73 072	47 110	61 960	75 105
Other platinum metals	324	829	203	1 703	2 047
Waste & scrap	49 289	122 380	85 301	118 241	235 630
United Kingdom					
Platinum	31 859	69 955	37 874	44 598	41 500
Palladium	22 845	19 176	27 669	61 198	51 807
Other platinum metals	5 604	6 002	9 631	12 610	17 852
Waste & scrap	1 124 414	914 126	1 862 845	2 681 379	2 881 226

Note(s):-

- (1) In this table the term 'Platinum' and/or 'Platinum metals' includes unwrought, partly worked and alloys
- (2) Kilograms have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
- (3) See explanatory notes at the front of the volume regarding currency conversion

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

## Imports of platinum group metals

kilograms

Country	2001	2002	2003	2004	2005
Austria					
Platinum & platinum metals	600	2 900	9 400	9 400	7 200
Belgium-Luxembourg					
Platinum	...	3 044	2 481	19 590	...
Platinum metals	...	7 545	11 324	235	1 978
Waste & scrap	£129 469 000	...	...	...	...
Croatia					
Platinum & platinum metals	2 989	604	...	839	12 320
Cyprus					
Platinum & platinum metals	110	40	35	78	97
Czech Republic					
Platinum & platinum metals	...	1 147	5 249	...	1 289
Denmark					
Platinum & platinum metals	381	530	...	1 324	2 076
Estonia					
Waste & scrap	8 171	8 790	7 250	...	...
Finland					
Platinum & platinum metals	248	296	773	231	495
France					
Platinum	12 600	8 500	5 100	6 200	5 396
Platinum metals	22 800	12 100	15 400	17 900	3 432
Waste & scrap	104 000	200 100	334 300	40 700	55 600
Germany					
Platinum	39 800	34 300	44 800	39 600	58 400
Palladium	25 200	45 000	31 600	20 700	56 000
Other platinum metals	4 600	5 600	6 100	6 400	9 100
Waste & scrap	5 274 800	4 500 100	3 837 500	3 713 700	6 574 600
Greece					
Platinum & platinum metals	1 001	449	156	179	181
Hungary					
Platinum & platinum metals	117	140	274	168	300
Irish Republic					
Platinum & platinum metals	3 694	2 342	1 829	2 620	3 865

Imports continued

kilograms

Country	2001	2002	2003	2004	2005
Italy					
Platinum	9 394	17 518	10 551	12 087	15 586
Platinum metals	30 150	26 602	20 085	21 430	19 183
Waste & scrap	988	5	39	278	20 085
Netherlands					
Platinum	£16 677 000	£13 377 000	£14 194 000	£11 484 000	£1 107 000
Platinum metals	£7 361 000	£8 134 000	£5 463 000	£6 930 000	£1 093 000
Norway					
Platinum & platinum metals	1 231	984	747	973	1 076
Waste & scrap	641	840	87	59	998
Poland					
Platinum & platinum metals	293	208	402	...	...
Slovenia					
Platinum & platinum metals	1 411	1 018	1 033	430	12 262
Spain					
Platinum & platinum metals	4 830	3 311	1 612	1 402	13 799
Waste & scrap	166	32	31	298	122
Sweden					
Platinum & platinum metals	£5 430 000	£6 134 000	£6 531 000	£4 985 000	£6 513 000
Waste & scrap	1 000	265	339 000	273 000	577 000
Switzerland					
Platinum	68 461	56 039	69 111	47 742	51 377
Palladium	94 074	106 412	54 805	96 530	46 565
Other platinum metals	538	1 063	816	3 725	780
Waste & scrap	19 435	49 569	129 698	161 433	156 229
Turkey					
Platinum & platinum metals	321	393	378	231	216
United Kingdom					
Platinum	17 825	12 030	13 827	47 735	51 553
Palladium	19 724	22 072	48 106	24 666	30 576
Other platinum metals	5 602	4 772	8 636	8 267	7 134
Waste & scrap	729 250	775 673	367 327	617 417	1 271 315

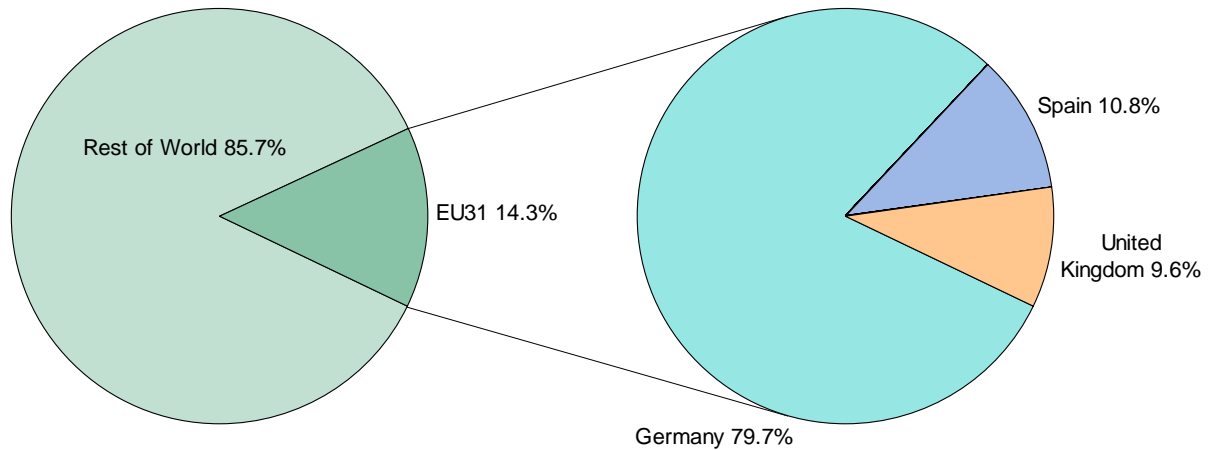
Note(s) :-

- (1) In this table the term 'Platinum' and/or 'Platinum metals' includes unwrought, partly worked and alloys
- (2) Kilograms have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
- (3) See explanatory notes at the front of the volume regarding currency conversion

## Potash

- Potash is the name for a range of potassium-bearing minerals and processed chemical products. Potassium is essential in fertilisers and is widely used in the chemicals industry and in explosives.
- Economic potash deposits are rare. Only fourteen countries produced potash in 2005, of which Canada, Russia, Belarus and Germany generated 79% of world production. The EU31 produced 4.6 million tonnes of potash in 2005 (14% of world production).
- World potash market prices have been relatively stable for the past decade. However they increased in 2004 and higher prices were maintained during 2005. At the beginning of 2005 spot prices for standard grade potash, fob Vancouver were in the range of \$145-160/t before surging upwards to \$160-190/t in the middle of the year and remaining at this level.

**EU31 Production of potash 2005**

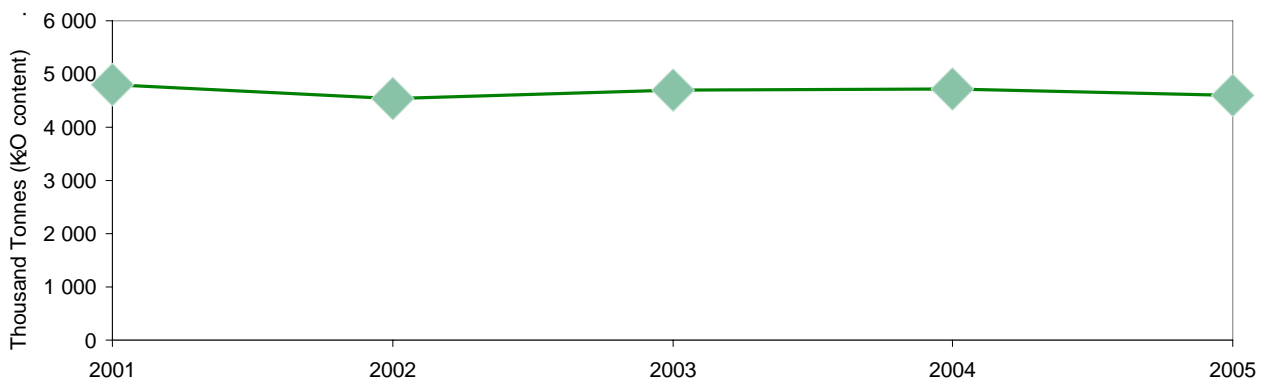


## Production of potash

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

Country	2001	2002	2003	2004	2005
France					
Potassic salts	244 000	128 000	—	—	—
Germany					
Potassic salts	3 548 665	3 471 763	3 563 332	3 626 510	3 663 829
Spain					
Chloride	470 933	406 571	505 527	553 210	494 592
United Kingdom					
Chloride	531 900	540 100	621 400	539 500	439 200
<b>EU31 Total</b>	<b>4 795 000</b>	<b>4 546 000</b>	<b>4 690 000</b>	<b>4 719 000</b>	<b>4 598 000</b>

**EU31 Production of potash 2001 - 05**



## Exports of potash

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg					
Fertiliser salts	3 172	5 313	1 193	441	127
Sulphate (b)	*399 600	*444 600	*490 000	*685 000	*598 000
Chloride	184 145	211 383	142 227	140 950	116 862
Other potassic fertilisers	4 561	5 803	4 756	7 993	9 773
Czech Republic					
Potassic fertilisers	253	541	808	2 416	3 463
Finland					
Sulphate	(b) *14 000	(b) *33 300	(b) *51 300	(b) *34 900	33 484
Other potassic fertilisers	4 368	3 075	710	1 094	38 993
France					
Sulphate	508	740	860	8 248	54 235
Chloride	134 868	95 248	41 600	19 459	6 376
Other potassic fertilisers	988	536	660	1 271	841
Germany					
Fertiliser salts (a) (c)	2 916 428	2 998 738	3 103 009	3 077 154	3 235 651
Greece					
Potassic fertilisers	451	2 119	2 107	4 083	2 894
Hungary					
Potassic fertilisers	6 617	221	61	2 512	1 253
Italy					
Potassic fertilisers	804	1 502	2 415	1 169	1 270
Lithuania					
Potassic fertilisers	9 243	7 705	7 128	8 037	10 463
Netherlands					
Chloride	74 347	243 242	219 413	197 731	163 072
Norway					
Potassic fertilisers	12 006	3 869	10 964	10 107	7 611
Spain					
Sulphate	57 091	15 635	11 628	3 958	2 832
Chloride	418 155	350 315	502 348	675 140	514 042
Sweden					
Sulphate	141 298	136 917	127 687	70 066	54 841
United Kingdom					
Chloride	*530 000	*440 000	*630 000	*512 000	*353 000
Other potassic fertilisers	1 141	740	609	662	705

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

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Fertiliser salts	17 357	19 531	20 424	23 040	23 685
Chloride	3 618	5 318	159 216	145 757	144 234
Other potassic fertilisers	5 874	4 685	17 997	22 629	15 713
Belgium-Luxembourg					
Fertiliser salts	22 677	23 295	24 355	26 328	17 331
Sulphate	183 131	203 971	213 779	212 176	260 839
Chloride	1 014 654	1 175 981	1 163 936	1 276 732	1 211 640
Other potassic fertilisers	18 801	19 044	21 700	22 357	17 698
Bulgaria					
Potassic fertilisers	25 284	11 724	3 453	4 725	7 794
Croatia					
Chloride	144 977	124 881	146 692	168 015	131 567
Czech Republic					
Potassic fertilisers	92 242	83 492	78 801	111 694	101 506
Denmark					
Sulphate	11 689	7 028	14 654	18 006	2 683
Chloride	135 815	146 234	166 236	119 153	38 706
Other potassic fertilisers	12 535	13 373	11 254	13 099	29 605

## Potash

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Estonia					
Potassic fertilisers	24 891	*18 000	19 986	23 469	15 248
Finland					
Chloride (a)	168 200	156 100	177 100	192 600	148 400
France					
Fertiliser salts	1 660	2 337	1 807	1 988	1 401
Sulphate	80 698	93 051	90 543	77 441	70 705
Chloride	1 444 445	1 463 860	1 755 346	1 866 149	1 492 129
Other potassic fertilisers	25 096	25 410	32 600	31 959	29 488
Germany					
Chloride	86 916	89 067	85 597	97 924	75 483
Other potassic fertilisers	5 724	6 206	5 810	4 996	10 029
Greece					
Sulphate	25 433	59 315	55 208	92 816	28 334
Chloride	27 415	32 834	36 469	29 191	46 667
Other potassic fertilisers	2 251	3 057	5 256	6 411	4 387
Hungary					
Potassic fertilisers	112 995	124 330	121 815	143 465	141 013
Irish Republic					
Chloride	36 186	17 160	3 790	30 456	113 476
Other potassic fertilisers	2 170	2 483	6 156	4 924	5 747
Italy					
Sulphate	87 150	84 724	102 855	96 904	96 415
Chloride	425 575	445 906	422 469	392 833	334 324
Other potassic fertilisers	17 701	21 604	16 491	29 902	13 203
Latvia					
Potassic fertilisers	20 692	17 241	22 764	26 368	21 343
Lithuania					
Fertiliser salts	6 264	...	...	...	...
Chloride	116 995	141 946	160 334	172 622	123 782
Other potassic fertilisers	450	6 767	7 384	12 978	12 086
Netherlands					
Sulphate	...	12 505	12 777	23 765	26 208
Chloride	(b) 215 193	180 033	467 219	387 637	445 767
Other potassic fertilisers	...	4 949	6 018	4 321	2 486
Norway					
Sulphate	211 169	200 407	249 307	267 653	247 379
Chloride	331 063	339 431	310 954	309 061	306 369
Poland					
Fertiliser salts	...	1 245	948	2 264	621
Sulphate	...	18 752	19 967	24 143	21 770
Chloride	(c) 742 114	754 473	821 469	1 098 679	1 041 798
Other potassic fertilisers	...	2 877	5 223	4 174	4 726
Portugal					
Sulphate	1 950	2 144	4 457	7 526	3 631
Chloride	55 972	73 748	55 775	79 232	65 682
Other potassic fertilisers	737	1 570	1 630	1 752	2 774
Romania					
Sulphate	71	2 174	41 698	8 070	757
Chloride	76 450	58 108	33 920	53 008	41 974
Slovakia					
Potassic fertilisers	821	39 452	30 582	36 256	28 913
Spain					
Sulphate	32 543	71 719	37 444	48 174	47 561
Chloride	268 306	245 620	249 881	269 278	243 017
Other potassic fertilisers	2 862	9 304	10 427	22 019	4 665
Sweden					
Sulphate	3 958	4 755	884	2 819	4 911
Chloride	54 531	44 086	33 748	68 457	43 106
Other potassic fertilisers	4 651	2 285	9 862	4 409	1 119
Switzerland					
Sulphate	1 815	2 496	2 621	2 170	3 325
Chloride	19 144	23 053	15 792	19 185	18 971
Other potassic fertilisers	1 922	3 983	3 721	3 039	3 411
Turkey					
Sulphate	26 753	31 362	51 467	59 381	39 198
Chloride	82 849	111 780	107 412	130 748	135 433



Imports continued

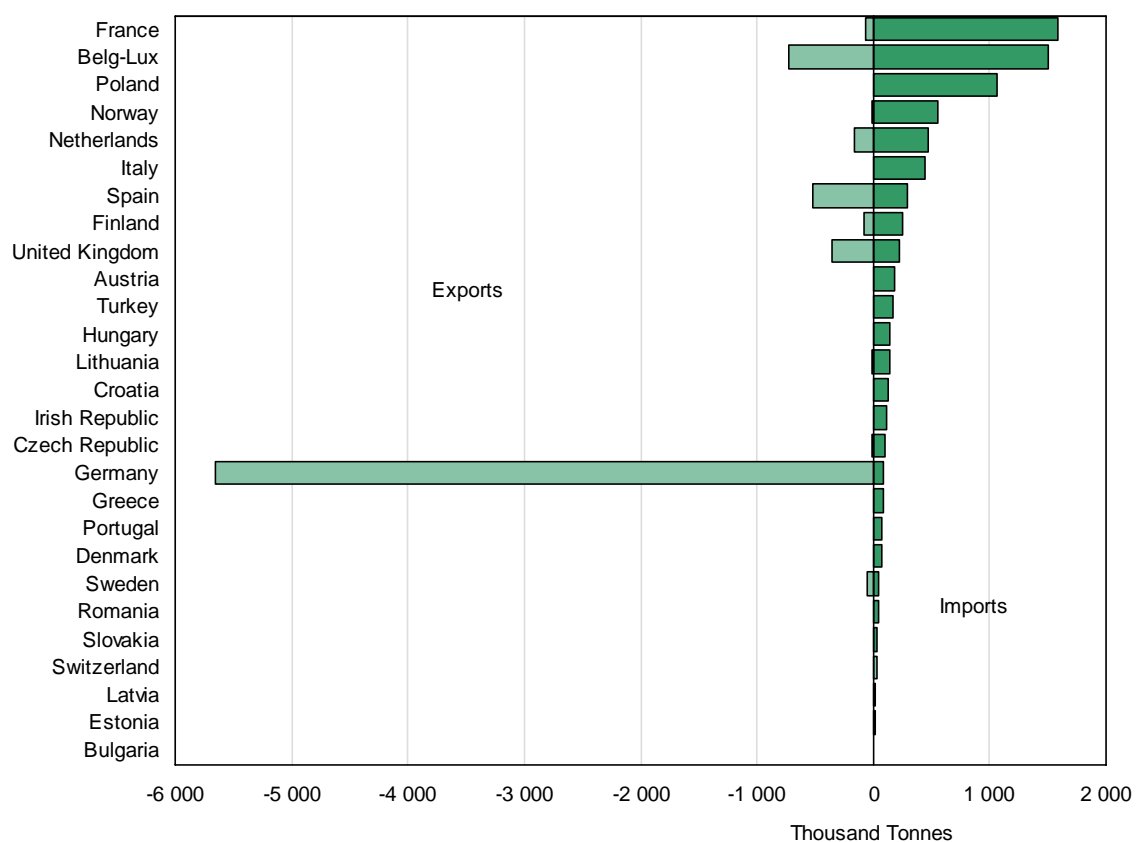
tonnes

Country	2001	2002	2003	2004	2005
United Kingdom					
Fertiliser salts	16 154	19 366	12 751	9 204	9 517
Chloride	335 398	372 031	246 164	207 056	198 893
Other potassic fertilisers	14 506	8 804	5 439	12 383	13 151

Note(s) :-

- (a) K<sub>2</sub>O content
- (b) Including sulphate
- (c) Including sulphate and fertiliser salts

## Potash – EU31 trade in 2005



## Rare earth minerals

- Rare earth elements (REE), which occur chiefly in the minerals bastnaesite and monazite, are a group of 15 metallic elements of which cerium, lanthanum and neodymium are the most commonly used. Rare earths are widely used in automotive catalysts, as metallurgical additives and in glass and ceramics.
- Production of rare earths is limited to only five countries of which China is the largest producer (>90%) and exporter. There is no EU31 production, thus Europe is entirely import dependent.
- Despite the limited production base, REE prices are remarkably stable. Through 2005, bastnaesite concentrate (70% leached) traded at \$2.25/lb rare earth oxides (REO). Yttria (99.99% Y<sub>2</sub>O<sub>3</sub>) traded between \$5–\$12/kg. The price for lanthanum oxide (99%) was \$1.9/kg, a decrease from 2004.

## Exports of rare earths

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Cerium compounds	...	(a) *2 500	1 750	1 564	1 980
Other rare earth compounds	...	(a) *7 000	6 144	6 415	6 449
Metals	...	...	417	456	421
Belgium-Luxembourg					
Rare earth compounds	1 060	452	743	721	413
Ferro-cerium & other pyrophoric alloys	9	7	2	0	...
Metals	265	160	158	237	187
Estonia					
Rare earth compounds	784	4 156	2 129	1 064	2 319
Metals	5	...	30	14	3
France					
Rare earth compounds	638	314	1 660	8 588	2 007
Ferro-cerium & other pyrophoric alloys	105	94	109	125	32
Metals	26	231	58	65	7
Germany					
Rare earth compounds	225	102	115	108	123
Metals	16	8	10	4	1
Irish Republic					
Rare earth compounds	182	64	107	85	14
Ferro-cerium & other pyrophoric alloys	142	...	362	...	...
Italy					
Metals	18	19	15	81	168
Netherlands					
Rare earth compounds	68	53	95	87	171
Ferro-cerium & other pyrophoric alloys	2	14	...	...	0
Metals	15	17	58	124	13
Spain					
Ferro-cerium & other pyrophoric alloys	56	85	...	...	...
United Kingdom					
Cerium compounds	415	88	118	47	121
Other rare earth compounds	329	1 128	1 105	1 157	1 189
Ferro-cerium & other pyrophoric alloys	9	19	768	197	2
Metals	51	148	16	10	26

Note(s):-

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

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

## Imports of rare earths

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Cerium compounds	2 287	2 025	2 810	2 034	3 055
Other rare earth compounds	5 534	3 128	3 062	3 973	2 685
Metals	409	324	457	463	374
Belgium-Luxembourg					
Cerium compounds	831	639	843	615	411
Other rare earth compounds	375	126	143	287	139
Ferro-cerium & other pyrophoric alloys	89	30	...	...	...
Metals	279	225	195	226	252
Czech Republic					
Rare earth compounds	...	212	177	92	198
Denmark					
Other rare earth compounds	...	...	...	...	16
Estonia					
Rare earth compounds	3	609	1 734	3 208	4 317
France					
Cerium compounds	15 049	9 914	10 315	11 710	7 105
Other rare earth compounds	1 407	382	1 480	1 037	585
Ferro-cerium & other pyrophoric alloys	14	29	2	1	5
Metals	230	169	279	251	322
Germany					
Cerium compounds	1 351	1 208	1 115	1 082	1 082
Other rare earth compounds	7 555	7 811	7 810	7 776	6 961
Ferro-cerium & other pyrophoric alloys	27	15	...	214	6
Metals	564	218	358	285	402
Greece					
Metals	...	...	...	...	138
Hungary					
Rare earth compounds	216	202	114	158	...
Irish Republic					
Rare earth compounds	46	44	245	74	32
Metals	66	63	64	4	14
Italy					
Rare earth compounds	669	637	656	932	987
Ferro-cerium & other pyrophoric alloys	3	23	1	1	17
Metals	17	4	102	108	38
Netherlands					
Cerium compounds	138	44	135	103	141
Other rare earth compounds	3 793	1 380	2 222	2 254	1 879
Ferro-cerium & other pyrophoric alloys	406	27	2	7	3
Metals	57	25	38	10	14
Norway					
Metals	775	558	713	702	544
Poland					
Rare earth compounds	70	77	245	61	118
Metals	1	1	...	3	6
Slovenia					
Metals	74	71	80	107	139
Spain					
Rare earth compounds	522	523	548	692	824
Ferro-cerium & other pyrophoric alloys	44	28	87	...	8
Metals	59	92	90	84	20
Sweden					
Rare earth compounds	...	...	75	58	26
Metals	28	39	48	56	41
Switzerland					
Rare earth compounds	...	...	...	...	34

Rare Earths

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Turkey					
Rare earth compounds	104	155	201	171	155
Ferro-cerium & other pyrophoric alloys	1	...	...	253	...
United Kingdom					
Cerium compounds	2 227	3 070	2 519	1 914	2 324
Other rare earth compounds	403	491	471	775	775
Ferro-cerium & other pyrophoric alloys	1	34	1	9	19
Metals	172	64	115	135	166

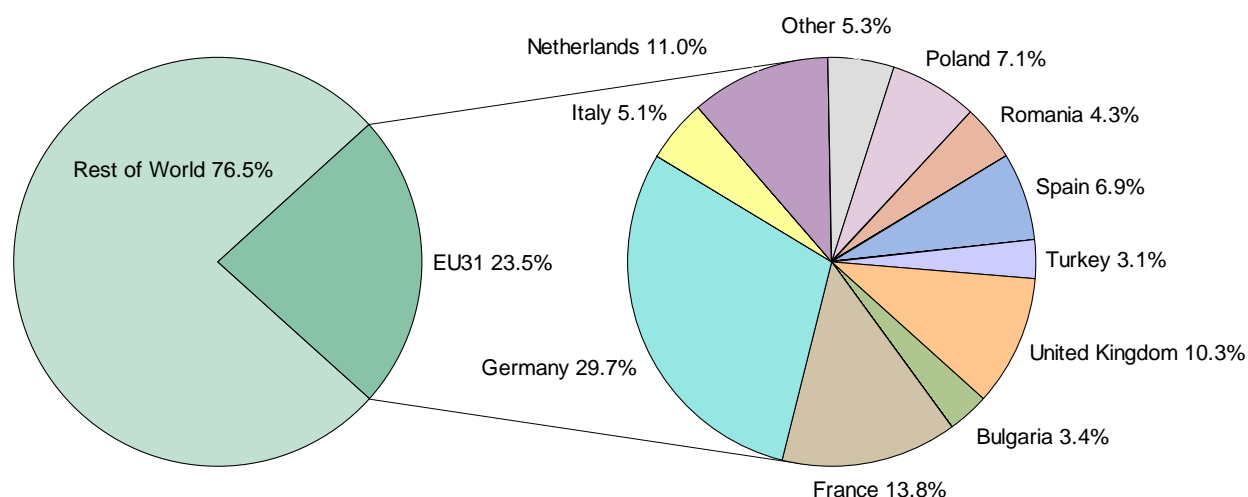
Note(s) :-

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

## Salt

- Salt (sodium chloride) is a fundamental chemical of life. However, human consumption accounts for a small fraction of salt usage. Industrial use is far higher, particularly in the chemical industry as a source of soda and chlorine. Salt is also used to 'grit' roads to prevent the formation of ice between 0°C and -6°C.
- Most countries in the world have some salt production from rock salt, brine or seawater. In 2005 the largest producer was USA (19%). In Europe the largest producer was Germany (30% of total EU31 production).
- Because of the wide availability of salt, markets tend to be very stable. Ground rock salt in 15–20 tonne lots, delivered to the UK, traded between £20–£30/tonne.

**EU31 Production of salt 2005**



## Production of salt

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Rock salt	1 384	1 491	1 610	1 228	1 497
Salt in brine	646 000	641 634	723 286	745 670	*745 000
Bulgaria	1 931 000	1 800 000	1 882 000	1 900 000	1 900 000
Croatia	32 585	30 483	32 533	32 723	36 970
Denmark	587 000	*590 000	*600 000	*600 000	*600 000
France					
Rock salt	596 000	434 000	320 000	406 000	494 000
Brine salt	1 452 000	1 456 000	1 409 000	1 433 000	1 468 000
Salt in brine	4 023 000	4 056 000	4 351 000	4 408 000	4 750 780
Sea salt	1 536 000	848 000	1 302 000	1 365 000	1 026 000
Germany					
Rock salt	5 326 000	6 134 000	6 178 000	7 268 000	8 258 000
Brine salt	1 211 000	1 249 000	1 123 000	974 000	1 006 000
Salt in brine	6 196 000	6 310 000	6 668 000	7 212 000	7 449 000
Greece	208 776	126 118	192 161	187 522	198 024
Italy					
Rock salt & brine salt	3 301 173	3 342 992	2 922 251	2 876 469	...
Netherlands	5 717 000	5 773 000	5 980 000	5 896 000	6 155 000
Poland					
Rock salt	786 609	838 858	847 880	1 099 072	1 123 219
Brine salt	2 688 929	2 719 131	2 790 996	2 940 169	2 889 941
Portugal					
Rock salt	625 785	604 969	602 035	661 704	...
Sea salt	76 653	40 139	86 603	75 400	92 495
Romania	2 225 052	2 257 886	2 416 970	2 399 956	2 442 640
Slovakia	123 000	97 400	133 100	121 600	105 047
Slovenia	2 000	5 200	3 632	2 852	803
Spain					
Rock salt	2 319 800	2 559 760	2 562 832	2 656 904	2 500 000
Sea salt	1 420 000	1 234 679	1 327 108	1 227 625	1 250 000
Other salt	100 000	97 945	97 730	108 733	100 000

## Salt

Production continued

tonnes

Country	2001	2002	2003	2004	2005
Switzerland	384 000	400 000	461 000	486 000	539 000
Turkey					
Rock salt	46 362	55 305	10 205	6 100	512
Sea salt	522 364	411 646	556 652	582 440	529 235
Other salt	1 202 025	1 729 686	1 675 915	1 569 178	1 196 486
United Kingdom					
Rock salt	*1 900 000	*1 500 000	*1 700 000	*2 000 000	*2 000 000
Brine salt	*1 100 000	*1 000 000	*1 000 000	*1 000 000	*1 000 000
Salt in brine (a)	*3 000 000	*3 200 000	*3 200 000	*2 800 000	*2 800 000
EU31 Total	51 300 000	51 500 000	53 200 000	55 000 000	56 200 000

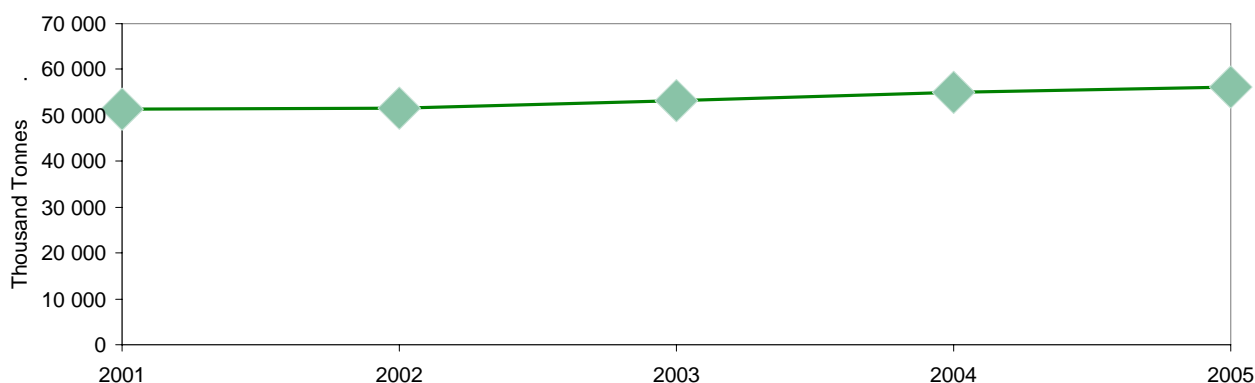
Note(s):-

(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.

(a) Used for purposes other than salt-making

EU31 Production of salt 2001 - 05



## Exports of salt

tonnes

Country	2001	2002	2003	2004	2005
Austria	...	...	253 791	183 850	199 133
Belgium-Luxembourg	68 728	129 726	117 806	105 680	121 103
Bulgaria	1 898	4 938	2 625	8 586	10 090
Croatia	1 609	4 242	5 530	9 226	5 688
Cyprus	236	1 729	508	559	635
Czech Republic	7 135	7 768	10 490	12 986	13 833
Denmark	327 344	340 177	376 794	350 587	355 887
France	423 727	437 847	497 458	506 431	407 255
Germany	3 023 135	3 340 569	3 695 084	3 201 549	3 372 522
Greece	34 429	36 450	42 976	44 664	50 390
Hungary	232	629	2 987	576	49 578
Italy	170 027	326 123	325 395	289 415	317 124
Latvia	730	668	411	5 169	10 205
Lithuania	1 822	2 887	3 377	5 457	5 895
Netherlands	2 689 600	3 641 444	3 679 323	3 212 606	3 749 442
Norway	1 994	3 687	4 657	4 948	6 679
Poland	375 944	339 140	419 201	493 259	495 481
Portugal	3 656	4 413	3 952	4 444	6 130
Romania	349 112	393 787	546 390	497 826	598 154
Slovakia	50 441	45 612	47 199	51 539	53 451
Slovenia	3 513	4 400	4 814	5 253	8 034
Spain	785 056	617 170	695 177	744 750	750 180
Sweden	1 849	20 208	156 140	10 354	8 783
Switzerland	10 146	28 394	52 482	41 044	30 461
Turkey	31 967	46 398	43 317	30 898	22 167
United Kingdom	299 607	326 760	537 497	691 895	538 796

## Imports of salt

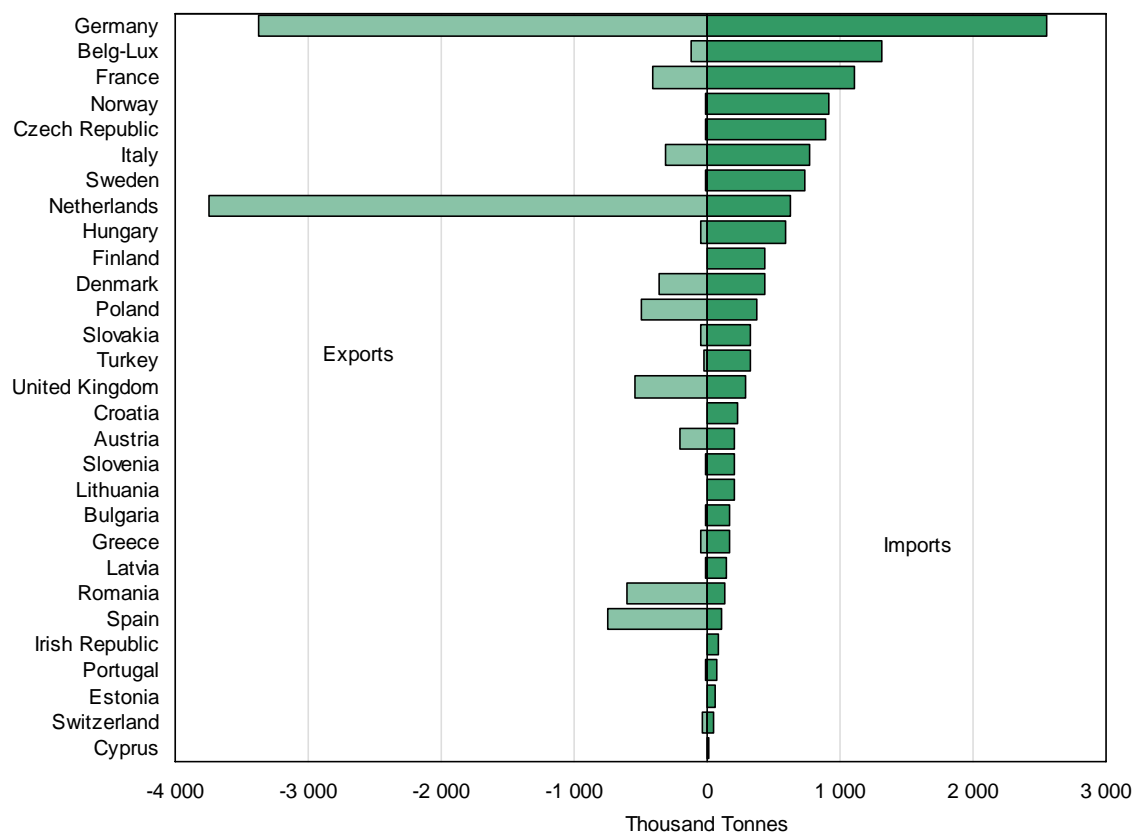
tonnes

Country	2001	2002	2003	2004	2005
Austria	59 742	92 209	206 355	350 903	210 736
Belgium-Luxembourg	3 285 692	3 411 148	1 895 987	1 236 192	1 315 385
Bulgaria	105 676	125 613	116 840	138 631	165 727
Croatia	84 219	139 989	164 046	165 277	226 931
Cyprus	11 616	10 530	14 053	8 650	13 795
Czech Republic	602 712	622 455	681 134	909 966	891 667
Denmark	255 671	317 692	376 122	440 020	436 794
Estonia	72 431	78 085	78 883	78 849	58 269
Finland	366 217	447 703	395 727	408 367	438 346
France	457 520	564 159	753 902	850 703	1 110 898
Germany	1 824 730	2 391 447	2 366 521	2 467 276	2 558 898
Greece	98 438	102 103	218 991	173 729	162 669
Hungary	395 106	468 704	557 050	486 695	592 522
Irish Republic	107 438	110 654	77 992	83 789	83 746
Italy	771 298	685 681	745 388	833 790	773 507
Latvia	91 525	100 542	100 459	122 251	139 662
Lithuania	157 181	166 252	187 050	204 839	198 994
Malta	1 722	...	...	...	5 423
Netherlands	224 608	432 437	489 369	535 581	630 738
Norway	718 394	725 887	702 713	741 959	910 846
Poland	95 520	156 461	156 406	294 590	376 829
Portugal	116 508	119 892	139 720	121 621	70 266
Romania	23 077	59 231	99 679	120 787	131 683
Slovakia	158 752	200 614	213 250	266 601	320 413
Slovenia	107 755	128 212	155 881	178 531	207 314
Spain	31 179	42 431	47 011	36 494	111 449
Sweden	908 355	1 030 471	828 845	929 193	738 931
Switzerland	7 216	7 692	13 984	9 299	48 114
Turkey	12 118	78 204	202 349	307 039	320 147
United Kingdom	(a) *235 000	306 488	217 009	219 581	287 623

Note(s) :-

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

## Salt – EU31 trade in 2005



## Sillimanite minerals

- Sillimanite minerals are a group of three anhydrous aluminium silicate minerals (andalusite, kyanite and sillimanite) that are chiefly used as refractories. Bricks and mortar used to line furnaces and kilns usually contain a proportion of these minerals.
- Despite being common minerals in high-grade metamorphic rocks, economic concentrations of these minerals are rare. In 2005, production was restricted to only nine countries, of which South Africa was the largest producer. China is also believed to be a significant producer of sillimanite minerals. The only major producer in the EU31 is France.
- The market for sillimanite minerals was very stable during 2005. Kyanite, ex-works, USA (54–60% Al<sub>2</sub>O<sub>3</sub>, 18-tonne lots) traded between \$225–\$268/tonne throughout the year and andalusite, FOB Transvaal (57–58% Al<sub>2</sub>O<sub>3</sub>, 2000 tonne bulk) ranged from €180–210/tonne.

### Production of sillimanite minerals

tonnes

Country	2001	2002	2003	2004	2005
France					
Andalusite	61 000	59 000	62 000	68 000	*65 000
Spain					
Andalusite	*250	*250	*200	*200	*200

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 and the United Kingdom

### Exports of sillimanite minerals

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg	6 368	5 783	22 825	49 319	77 463
France	56 510	46 454	49 958	51 653	55 052
Germany	8 092	10 565	12 413	14 382	12 191
Hungary					
Mullite	...	2 728	3 869	6 108	6 922
Netherlands	10 932	5 604	6 400	10 097	11 444
United Kingdom	6 895	4 554	3 238	2 016	2 417

Note(s):-

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



**Imports of sillimanite minerals**

tonnes

Country	2001	2002	2003	2004	2005
Austria	3 531	2 499	2 660	1 981	2 194
Belgium-Luxembourg	10 972	10 499	29 333	53 146	81 538
Czech Republic	3 785	2 673	3 480	3 779	3 733
Denmark	3 518	2 726	3 414	2 274	2 909
Finland	298	338	299	302	445
France	2 518	2 685	3 411	3 360	3 080
Germany	56 821	62 654	63 602	60 782	58 047
Hungary	...	1 370	2 045	2 396	4 519
Irish Republic	14 377	5 795	10	89	1
Italy	15 859	18 193	14 669	15 132	27 476
Netherlands	29 657	37 966	24 106	12 975	20 001
Norway	4 793	2 537	2 004	3 605	2 400
Poland					
Sillimanite minerals	11 872	16 182	17 682	14 928	9 975
Mullite	963	659	1 974	1 355	2 207
Portugal	566	405	330	337	160
Slovakia	1 770	2 385	2 690	2 459	4 312
Spain	12 885	13 581	15 782	15 262	27 308
Sweden	14 145	12 308	14 155	5 470	5 086
Switzerland	350	246	253	315	413
Turkey	3 920	3 386	3 486	5 110	5 504
United Kingdom					
Sillimanite minerals	28 470	18 588	22 649	24 348	39 650
Mullite	5 174	10 006	8 656	12 392	10 430

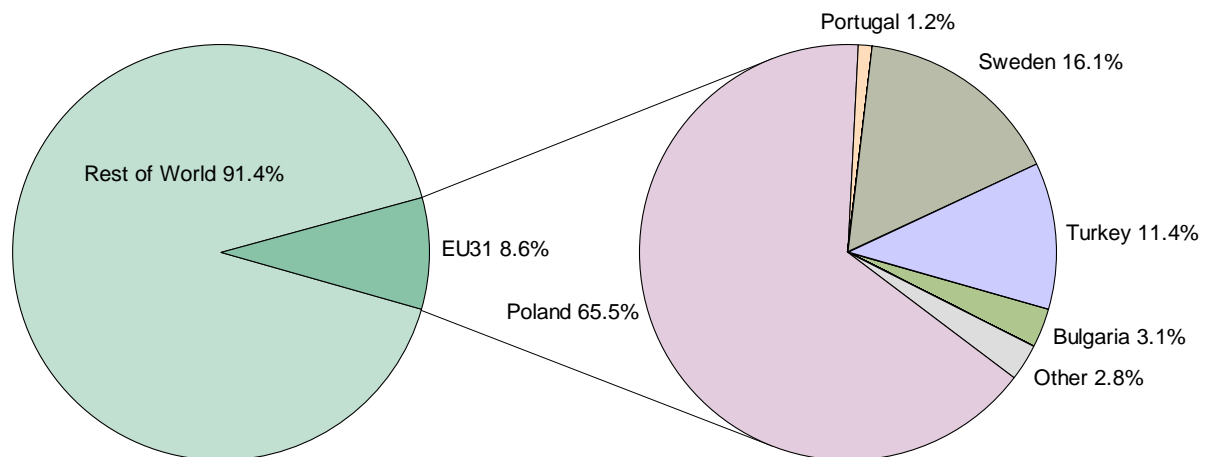
Note(s) :-

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

## Silver

- Silver is a ductile and malleable metallic element that has the highest electrical and thermal conductivity of all the metals. It is widely used in electronics although the most important uses are in photography (silver nitrate) and making mirrors.
- Silver is more common than the other precious metals, although still much rarer than base and ferrous metals. It is rarely mined in its own right, and is chiefly produced as a by-product of lead, tin or copper mining. In 2005 the world's largest producers were Peru, Mexico, China and Australia together accounting for 54% of world production. The largest EU31 producer was Poland (66% of EU31 production).
- During 2005 silver prices reached 9.23/troy oz, an 18 year high, with an annual average price of \$7.31/troy oz, 10% above the 2004 average price of \$6.69/troy oz. The significant increase in silver price during the last three years is largely attributed to increased investor interest and greater fabrication demand.

**EU31 Production of silver 2005**

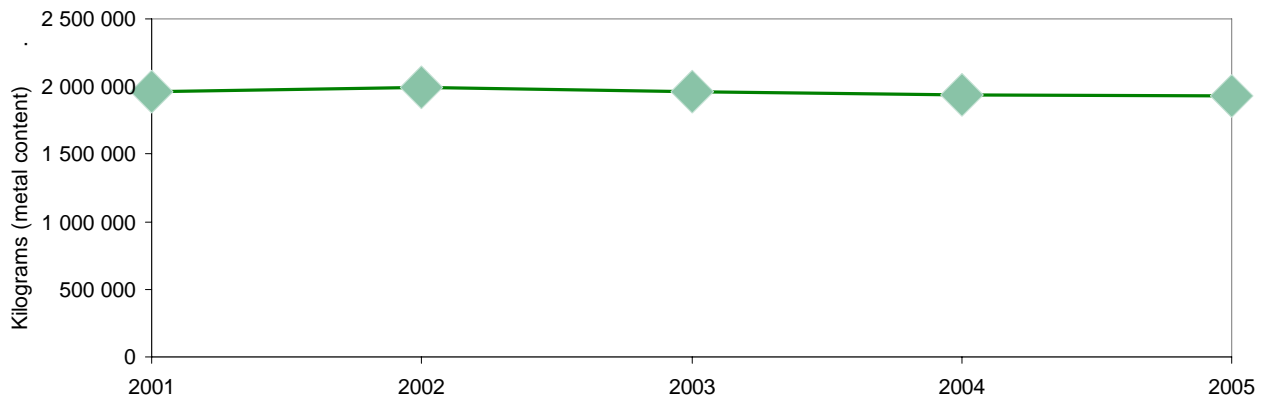


## Mine production of silver

kilograms (metal content)

Country	2001	2002	2003	2004	2005
Bulgaria	56 806	60 000	*60 000	*60 000	*60 000
Finland	*11 000	*12 000	*12 000	*13 000	*13 000
France	929	709	495	682	*700
Greece	62 400	74 800	7 000	—	6 000
Irish Republic	8 700	7 500	8 500	5 200	10 500
Italy	*1 000	*1 000	200	100	100
Poland	1 230 700	1 343 000	1 332 200	1 372 700	1 262 400
Portugal	23 100	19 500	21 100	24 400	23 700
Romania	*18 000	*18 000	*18 000	*18 000	*18 000
Spain	55 000	12 792	2 173	3 583	5 227
Sweden	306 029	320 823	340 701	319 563	309 933
Turkey	188 000	124 000	158 000	122 000	219 000
<b>EU31 Total</b>	<b>1 962 000</b>	<b>1 994 000</b>	<b>1 960 000</b>	<b>1 939 000</b>	<b>1 929 000</b>

## EU31 Mine production of silver 2001 - 05



## Exports of silver

kilograms

Country	2001	2002	2003	2004	2005
Austria					
Metal	116 900	101 000	87 800	77 400	62 600
Belgium-Luxembourg					
Ores & concentrates	...	1 128 700	56 900	29 800	7 200
Metal	27 300	67 500	47 600	24 100	12 600
Czech Republic					
Metal	...	140 057	171 398	291 519	28 900
Denmark					
Metal	17 229	13 532	...	...	...
Estonia					
Metal	83	364	...	13	93
Finland					
Ores & concentrates	220 037	530 720	357 250	507 350	416 650
Metal	20 207	6 886	6 882	9 804	6 764
France					
Metal	658 600	584 600	465 300	404 600	252 300
Germany					
Metal	2 446 100	2 638 400	3 032 700	2 814 700	2 631 200
Greece					
Metal	215	71	351	3 299	152
Hungary					
Metal	1 204	962	1 300	2 516	300
Italy					
Metal	399 772	442 900	677 683	616 861	564 308
Netherlands					
Metal	...	...	119 012	99 221	93 668
Norway					
Metal	74 774	64 962	62 669	69 207	66 139
Poland					
Metal	1 094 153	1 135 000	1 251 194	821 501	318 800
Slovakia					
Metal	...	8 498	7 985	6 465	1 872
Slovenia					
Metal	1 775	1 367	3 948	2 699	6 382
Spain					
Metal	14 145	51 246	115 059	43 448	11 665
Sweden					
Metal	291 000	408 000	433 000	473 000	421 000
Switzerland					
Metal	1 627 403	1 306 190	1 544 676	1 085 657	1 044 011
Turkey					
Metal	75	303	947	2 731	21 449
United Kingdom					
Metal	2 282 355	1 497 995	3 429 247	1 754 885	2 289 098

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

## Silver

**Imports of silver**

kilograms

Country	2001	2002	2003	2004	2005
Austria					
Metal	138 500	100 900	109 300	127 600	127 900
Belgium-Luxembourg					
Metal	875 300	652 200	735 100	476 800	175 200
Croatia					
Metal	4 573	4 000	*3 500	3 340	3 837
Cyprus					
Metal	9 624	8 614	8 461	5 135	5 675
Czech Republic					
Metal	...	173 805	238 756	422 971	102 100
Denmark					
Metal	19 137	13 512	*7 000	...	...
Estonia					
Metal	8 089	9 575	8 892	10 512	132 992
Finland					
Metal	89 015	87 543	56 470	75 350	70 623
France					
Metal	1 421 400	954 400	970 000	675 000	729 800
Germany					
Metal	1 894 000	1 844 300	2 185 300	1 434 200	1 861 800
Greece					
Metal	25 686	38 516	49 225	95 318	...
Hungary					
Metal	19 541	15 444	17 695	33 178	15 200
Irish Republic					
Metal	2 940	2 960	2 247	2 709	2 386
Italy					
Metal	2 030 362	1 705 431	1 724 000	1 776 385	1 635 765
Lithuania					
Metal	...	3 058	1 771	5 885	3 943
Netherlands					
Metal	...	131 021	140 415	139 218	139 625
Norway					
Metal	84 784	60 995	72 647	86 037	90 331
Poland					
Metal	22 372	18 297	36 266	34 563	40 100
Portugal					
Metal	599	64	2 520	2 237	200
Slovakia					
Metal	...	13 268	13 073	17 735	57 416
Slovenia					
Metal	32 378	35 827	36 253	307 045	45 584
Spain					
Ores & concentrates	43 638	75 862	59 205	54 295	59 653
Metal	175 430	307 864	133 844	158 529	106 596
Sweden					
Metal	153 000	116 000	111 000	161 000	151 000
Switzerland					
Metal	1 476 601	1 028 138	746 184	1 082 664	1 484 207
Turkey					
Metal	90 014	169 098	199 226	269 009	409 844
United Kingdom					
Metal	3 471 871	3 780 907	2 484 101	2 105 057	1 485 290

Note(s) :-

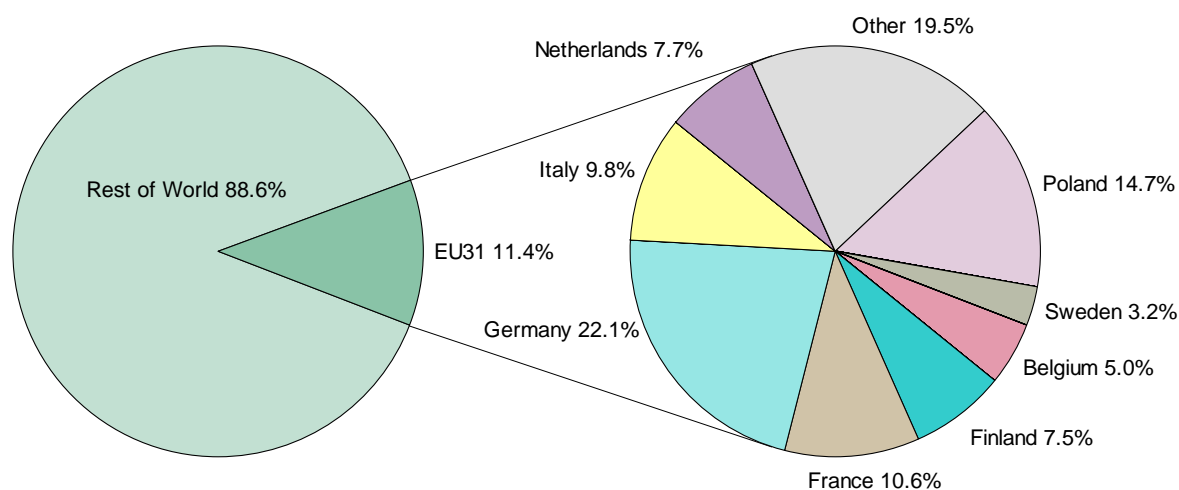
(1) This table excludes silver coin but includes silver shipped for minting

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

## Sulphur and pyrites

- Sulphur is one of the fundamental feedstocks to the chemical industry, usually as sulphuric acid. The chief sources of sulphur are petroleum refining, natural gas, base metal sulphide processing and pyrites (iron sulphide).
- Most industrialised countries in the world have some sulphur production. The largest producers in 2005 were USA (14%) and Canada (14%). In the EU31 the largest producer was Germany (22% of EU31 production).
- In 2005, sulphur prices remained relatively stable. The contract prices for elemental sulphur at terminals in Tampa, Florida, began the year trading at between \$61–\$64/tonne. In the summer prices increased to between \$66–\$69/tonne before ending the year at \$72–\$75/tonne.

**EU31 Production of sulphur and pyrites 2005**



## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2001	2002	2003	2004	2005
Austria					
Recovered (b)	50 135	54 925	50 568	55 322	54 377
Belgium					
Recovered (a) (b)	368 000	359 000	383 000	371 000	376 000
Bulgaria					
Recovered (a)	203 000	245 000	260 000	301 000	312 000
Recovered (b)	30 000	30 000	30 000	25 000	30 000
Croatia					
Recovered (b)	7 000	7 069	7 471	9 000	9 000
Czech Republic					
Recovered (b)	40 000	40 000	45 000	60 000	65 000
Denmark					
Recovered (b)	3 981	4 386	4 751	4 660	4 223
Finland					
Pyrites	260 000	235 000	276 200	283 700	189 000
Recovered (a)	329 555	328 441	328 779	325 523	305 013
Recovered (b)	46 000	55 000	61 000	65 000	70 000
France					
Recovered (b)	840 000	795 600	710 400	698 400	622 345
Recovered (c)	*260 000	229 000	196 000	196 000	180 000
Germany					
Recovered (a)	80 000	46 000	—	—	—
Recovered (b)	1 640 000	1 657 200	1 619 900	1 526 700	1 627 900
Recovered (c)	40 000	41 900	43 900	40 000	42 900
Greece					
Recovered (b)	153 000	157 000	162 000	160 000	162 000
Hungary					
Recovered (b)	43 000	52 000	51 000	35 000	65 000
Italy					
Recovered (a)	203 000	142 000	127 000	113 000	92 000
Recovered (b)	540 000	560 000	565 000	575 000	650 000

Sulphur and Pyrites

Production continued

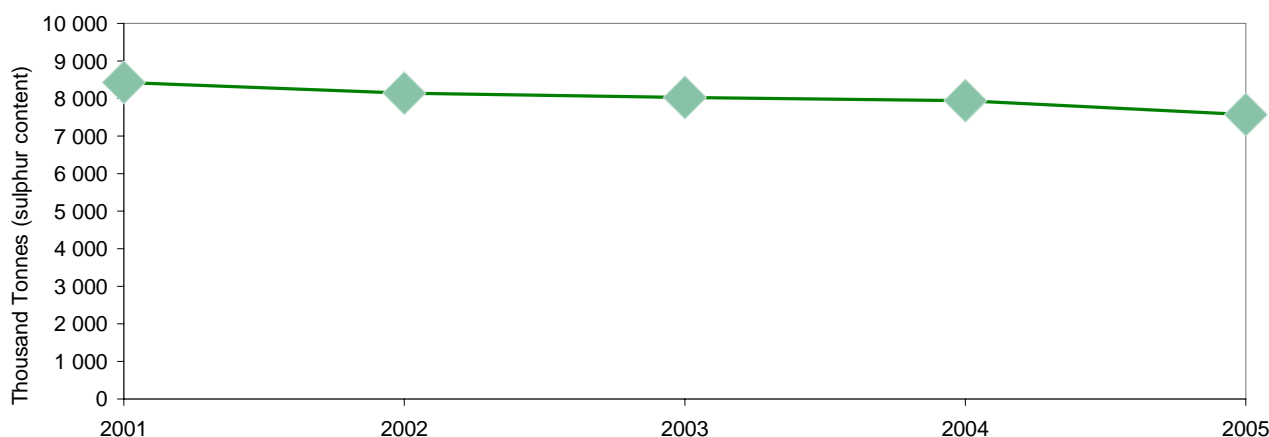
tonnes (sulphur content)

Country	2001	2002	2003	2004	2005
Lithuania					
Recovered (b)	47 000	49 824	48 515	67 094	74 268
Netherlands					
Recovered (a)	126 000	124 000	131 000	137 000	141 000
Recovered (b)	384 000	373 000	408 000	410 000	440 000
Norway					
Recovered (a)	*95 000	95 000	100 000	*100 000	*100 000
Recovered (b)	18 000	19 000	20 000	18 000	19 000
Poland					
Frasch	942 252	760 320	762 689	821 489	801 799
Recovered (a)	*280 000	*275 000	293 700	289 100	*290 000
Recovered (b)	27 602	22 777	23 384	23 767	22 193
Portugal					
Recovered	35 000	28 000	27 000	25 000	30 000
Romania					
Pyrites	1 835	—	—	—	—
Recovered	41 000	29 000	49 000	53 000	79 000
Slovakia					
Recovered (a)	5 000	5 000	5 000	5 000	5 000
Recovered (b)	57 000	61 000	60 000	65 000	65 000
Spain					
Pyrites	89 796	—	—	—	—
Recovered (a)	461 000	544 000	560 000	488 000	—
Recovered (b)	135 000	140 000	145 000	145 000	*150 000
Sweden					
Recovered (a)	160 100	177 600	180 200	185 800	180 000
Recovered (b)	54 530	51 065	62 454	62 238	59 839
Turkey					
Pyrites	26 000	34 000	28 000	20 000	55 000
Recovered (b) (c)	126 000	123 000	94 000	68 000	76 000
United Kingdom					
Recovered (a)	62 400	66 400	4 800	—	—
Recovered (b)	111 000	125 000	115 000	120 000	124 000
EU31 Total					
Pyrites	378 000	269 000	304 000	304 000	244 000
Frasch	942 252	760 320	762 689	821 489	801 799
Recovered	7 100 000	7 100 000	7 000 000	6 800 000	6 500 000

Note(s):-

- (a) From metal sulphide processing
- (b) From petroleum refining and/or natural gas
- (c) Other

EU31 Production of sulphur and pyrites 2001 - 05



## Exports of sulphur and pyrites

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Sulphur, sublimed & precipitated	6 707	14 596	9 265	8 435	9 245
Belgium-Luxembourg					
Sulphur	41 761	44 882	40 984	36 824	47 927
Sulphur, sublimed & precipitated	239	291	350	338	290
Bulgaria					
Sulphur	17 274	25 306	21 478	20 103	25 019
Croatia					
Sulphur	6 386	7 150	7 505	8 505	8 028
Czech Republic					
Sulphur	2 398	7 410	10 087	9 787	9 294
Sulphur, sublimed & precipitated	3 069	118	134	1 581	503
Denmark					
Sulphur	1 044	1 182	1 598	2 608	332
Finland					
Pyrites (a)	*250 700	*282 000	*266 000	*279 000	*100 000
France					
Sulphur, crude	559 527	385 326	382 273	481 226	347 690
Sulphur, refined	1 354	10 988	16 851	16 076	13 904
Sulphur, sublimed & precipitated	753	764	652	562	642
Germany					
Pyrites	511	483	389	339	240
Sulphur, crude	976 781	943 122	856 707	854 548	862 753
Sulphur, refined	36 859	35 614	41 163	40 135	36 067
Sulphur, sublimed & precipitated	14 862	5 184	4 021	276	163
Hungary					
Sulphur	...	28 389	...	22 607	36 472
Italy					
Pyrites	9 455	9 547	8 185	7 384	4 763
Sulphur, crude	179 324	155 173	14 358	8 785	41 534
Sulphur, refined	(b) ...	(b) ...	136 717	156 833	183 869
Sulphur, sublimed & precipitated	352	251	5 693	930	2 159
Lithuania					
Sulphur	5 660	14 094	16 724	13 960	3 851
Netherlands					
Pyrites	93 095	16 401	...	76 812	82 502
Sulphur, crude	186 059	118 053	223 880	133 553	55 758
Sulphur, refined	105 723	143 272	98 196	170 473	192 922
Sulphur, sublimed & precipitated	26	38	105	2	10
Norway					
Sulphur, sublimed & precipitated	11 504	11 630	12 194	2 671	—
Poland					
Sulphur	773 373	597 905	530 180	560 340	575 796
Portugal					
Sulphur	14 009	20 172	9 847	10 838	28 122
Sulphur, sublimed & precipitated	1	509	408	121	80
Romania					
Sulphur	79	5 505	12 974	20 682	54 917
Spain					
Sulphur, crude	49 385	39 389	29 959	45 034	32 557
Sulphur, refined	19 318	13 476	12 746	8 704	13 133
Sulphur, sublimed & precipitated	52	69	575	79	124
Sweden					
Sulphur	1 453	493	9 572	4 542	16 883
Sulphur, sublimed & precipitated	2	2	0	139	239
Turkey					
Sulphur	2 722	2 530	1 251	534	638
Sulphur, sublimed & precipitated	880	1 641	141	75	127
United Kingdom					
Sulphur	1 563	580	476	700	431
Sulphur, sublimed & precipitated	386	657	836	1 387	1 458

Note(s):-

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

(b) Included with crude

**Imports of sulphur and pyrites**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Pyrites	1 040	1 064	2 107	3 126	3 251
Sulphur	22 055	44 365	64 198	58 218	60 054
Sulphur, sublimed & precipitated	314	237	388	6 339	9 589
Belgium-Luxembourg					
Sulphur, crude	162 134	155 665	152 598	152 830	167 624
Sulphur, refined	277 195	218 830	241 917	305 518	322 649
Sulphur, sublimed & precipitated	178	25	103	28	127
Croatia					
Sulphur	53 025	39 190	46 017	63 606	70 897
Sulphur, sublimed & precipitated	299	1 738	3 611	4 817	1 923
Cyprus					
Sulphur	1 222	939	1 370	1 226	1 356
Czech Republic					
Sulphur	56 621	51 922	52 784	34 787	16 983
Sulphur, sublimed & precipitated	45 665	39 772	49 164	70 159	89 595
Denmark					
Sulphur	9 358	8 616	8 210	7 883	7 066
Finland					
Sulphur	35 387	26 123	19 575	8 238	310
France					
Pyrites	4 229	7 314	3 359	5 643	4 521
Sulphur, crude	55 620	42 855	50 147	43 846	39 973
Sulphur, refined	68 001	74 225	56 388	27 041	42 353
Sulphur, sublimed & precipitated	8 194	2 622	2 488	12 555	5 809
Germany					
Pyrites	77 260	51 479	42 170	53 264	62 686
Sulphur	31 498	31 481	45 962	56 272	46 127
Sulphur, sublimed & precipitated	1 837	1 121	1 448	12 782	4 389
Greece					
Sulphur, crude	90 126	90 577	106 897	83 711	68 761
Hungary					
Sulphur	4 339	1 853	1 426	1 088	1 079
Sulphur, sublimed & precipitated	287	134	67	296	362
Irish Republic					
Sulphur, sublimed & precipitated	1 281	194	898	1 371	2 327
Italy					
Pyrites	9 174	15 021	12 067	8 929	15 548
Sulphur, crude	43 335	53 623	11 975	8 646	3 150
Sulphur, refined	8 086	8 330	8 478	10 279	10 497
Sulphur, sublimed & precipitated	3 939	820	483	281	328
Lithuania					
Sulphur	66 675	269 602	316 359	255 917	306 635
Netherlands					
Sulphur	30 101	58 270	29 631	40 439	37 083
Sulphur, sublimed & precipitated	34 161	55 027	210 984	104 982	37 484
Norway					
Pyrites	151 438	225 139	225 492	225 513	26 940
Sulphur	1 542	1 567	628	4 559	16 413
Sulphur, sublimed & precipitated	...	...	...	...	240
Poland					
Pyrites	402	504	1 933	1 061	1 013
Sulphur	70 246	98 279	88 544	78 292	78 274
Sulphur, sublimed & precipitated	239	120	97	11	3
Portugal					
Sulphur	3 306	5 981	6 333	3 532	5 878
Sulphur, sublimed & precipitated	103	5	5	431	28
Romania					
Sulphur	22 311	357	5 660	2 075	964
Sulphur, sublimed & precipitated	146	13	30	9	113
Slovakia					
Sulphur	21 142	18 738	7 439	3 582	3 669
Slovenia					
Pyrites	379	426	399	375	400
Sulphur	51 734	49 560	46 289	49 649	58 669



Imports continued

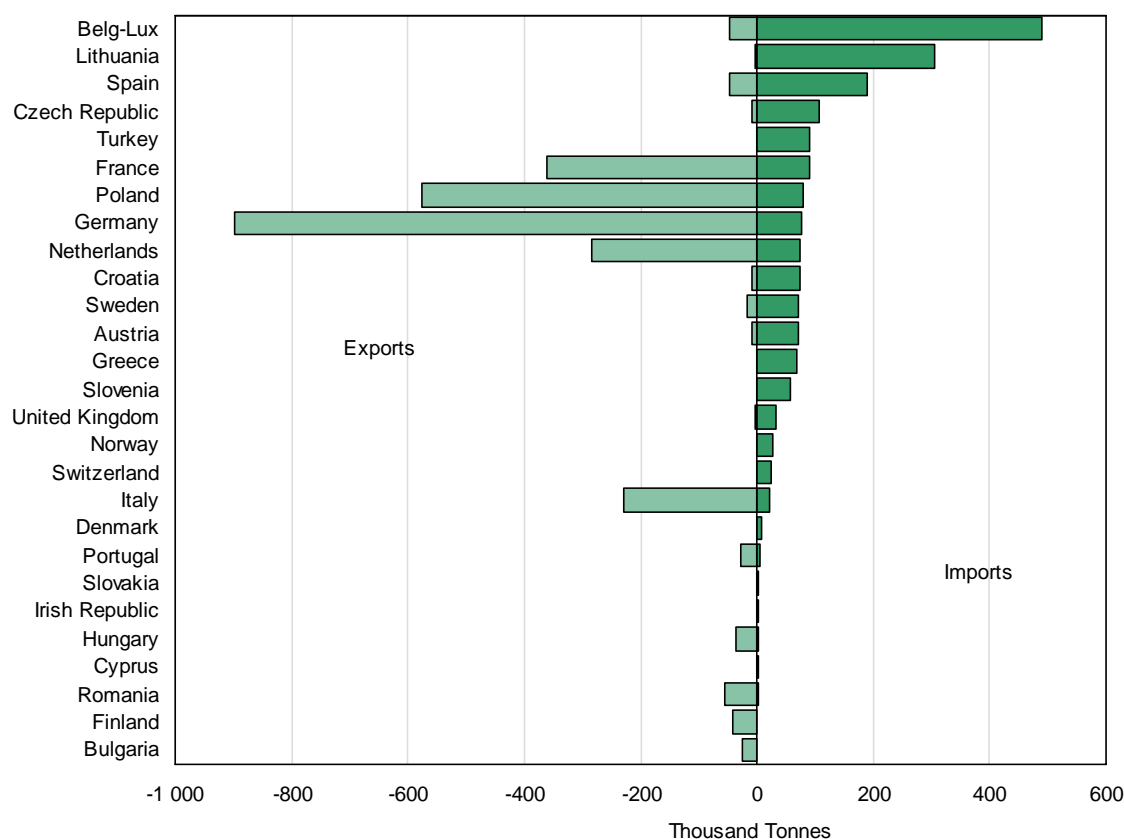
tonnes

Country	2001	2002	2003	2004	2005
Spain					
Sulphur, crude	221 786	205 049	210 794	220 662	182 318
Sulphur, refined	5 869	8 219	5 936	13 582	5 778
Sulphur, sublimed & precipitated	220	238	753	533	243
Sweden					
Pyrites	482	386	291	699	319
Sulphur	69 293	63 948	89 505	61 305	71 337
Sulphur, sublimed & precipitated	7 141	5 010	5 632	2 693	16
Switzerland					
Pyrites	217	239	207	117	76
Sulphur	40 754	30 140	25 968	24 940	24 977
Sulphur, sublimed & precipitated	24	93	193	120	61
Turkey					
Sulphur	67 396	127 779	124 243	90 502	91 763
Sulphur, sublimed & precipitated	73	2 008	4 899	138	110
United Kingdom					
Sulphur, crude	(a) 170 055	(a) 87 260	23 469	44 963	24 222
Sulphur, refined	...	...	5 560	3 984	7 263
Sulphur, sublimed & precipitated	390	355	544	675	577

Note(s) :-

(a) Including refined

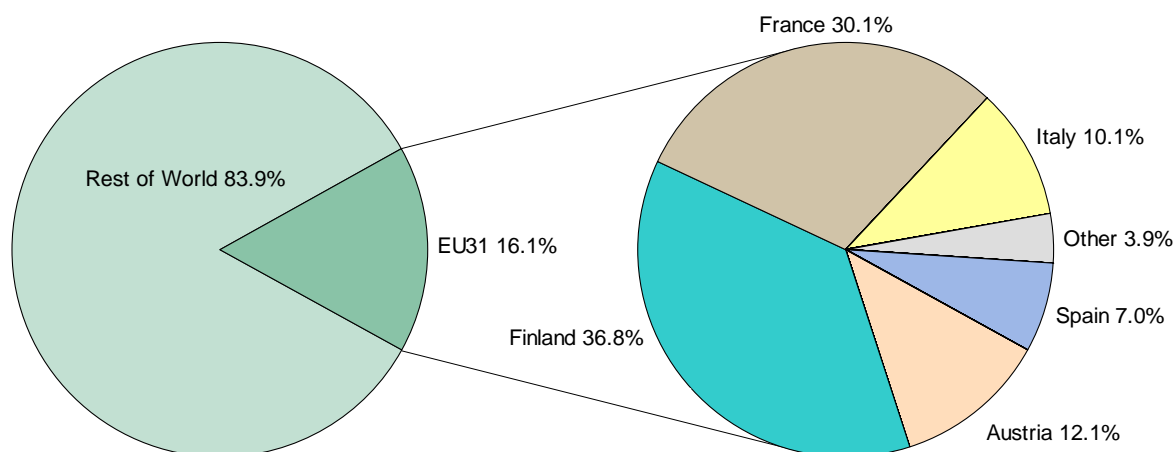
## Sulphur and pyrites – EU31 trade in 2005



## Talc

- Talc is a soft hydrous magnesium silicate mineral. It is frequently coloured by the presence of iron-bearing minerals and trace elements but usually turns white upon fine grinding. The familiar use of talc as a cosmetic powder is minor compared to industrial usage. Talc is chiefly used as a filler in paint, plastics, pharmaceuticals, adhesives and rubber. It is also extensively used in ceramics manufacture and as a filler and coater in the paper industry.
- During 2005 the largest world producer was China (estimated 31% of world production). Within Europe the largest producer is Finland, which accounted for 37% of EU31 production.
- Talc is traded in a variety of forms and, as a result of widespread production, markets are very stable. During 2005 Norwegian, ex-store UK talc traded at between £142–£294/tonne depending on grade.

**EU31 Production of talc 2005**

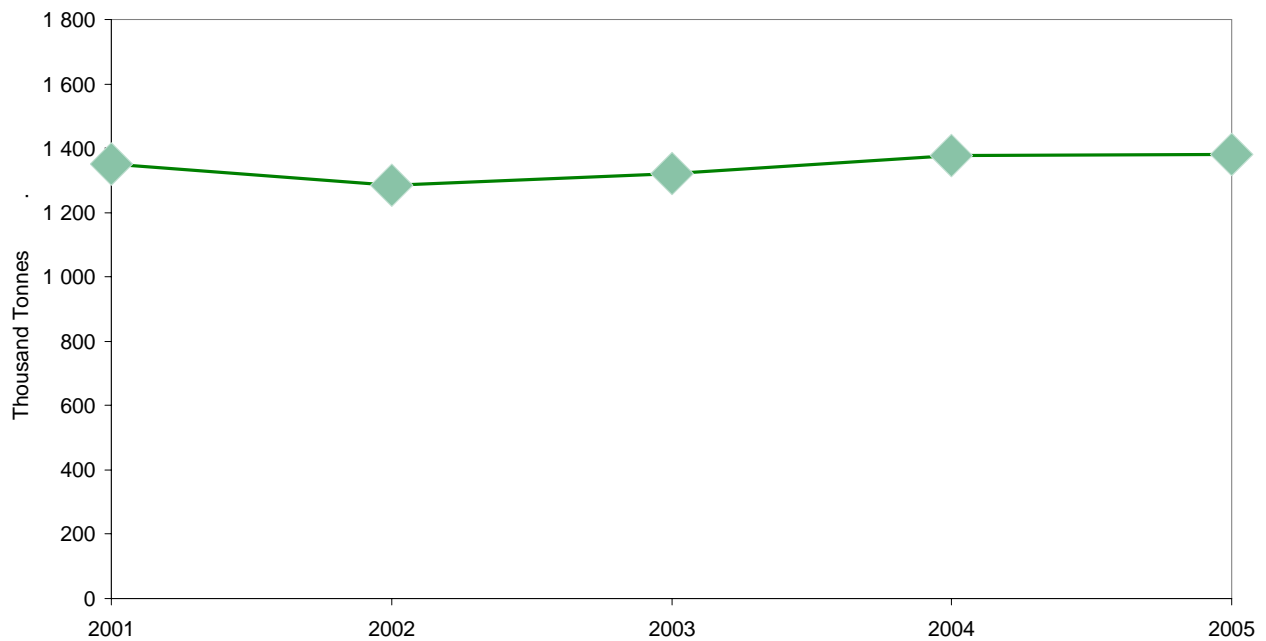


## Production of talc

tonnes

Country	2001	2002	2003	2004	2005
Austria	137 776	138 195	137 596	136 305	166 569
Finland	476 620	477 229	501 658	528 943	508 169
France	417 000	359 000	394 000	402 000	416 000
Germany	*9 000	*8 000	3 859	...	...
Greece	2 073	670	500	200	250
Italy	126 868	125 040	122 849	138 367	*140 000
Norway	24 626	23 564	*24 000	23 725	*24 000
Portugal	8 362	8 279	5 460	6 231	...
Romania	7 270	7 310	10 082	9 725	6 760
Slovakia	2 600	2 290	4 200	7 100	200
Spain					
Talc	119 000	108 312	101 739	107 829	97 000
Pyrophyllite	...	...	900	700	—
Sweden	14 000	20 000	7 000	8 000	7 000
United Kingdom	4 947	6 194	6 494	3 881	6 000
<b>EU31 Total</b>	<b>1 351 000</b>	<b>1 285 000</b>	<b>1 320 000</b>	<b>1 377 000</b>	<b>1 382 000</b>

## EU31 Production of talc 2001 - 05



## Exports of talc

tonnes

Country	2001	2002	2003	2004	2005
Austria	162 302	142 879	174 590	151 022	158 799
Belgium-Luxembourg	81 767	86 924	92 350	128 120	168 900
Finland (a)	*135 000	*120 000	*227 000	*276 000	*278 000
France	191 750	222 699	226 550	262 147	279 659
Germany	6 048	7 088	5 285	3 862	3 906
Greece	31 989	1 853	990	2 566	3 479
Hungary	...	15	314	1 533	—
Italy	89 839	108 467	116 739	118 131	120 920
Netherlands	145 951	164 515	177 554	225 528	183 270
Norway	30 480	32 894	32 520	30 279	28 448
Portugal	93	150	204	1 117	1 614
Slovakia	1 549	1 322	1 205	...	1 051
Spain	63 657	67 921	67 748	60 832	56 493
Sweden	5 138	14 370	8 061	9 388	10 080
Switzerland	1 070	847	1 777	72	105
Turkey	120	249	436	1 963	2 768
United Kingdom	4 034	3 833	3 325	3 317	5 244

Note(s):-

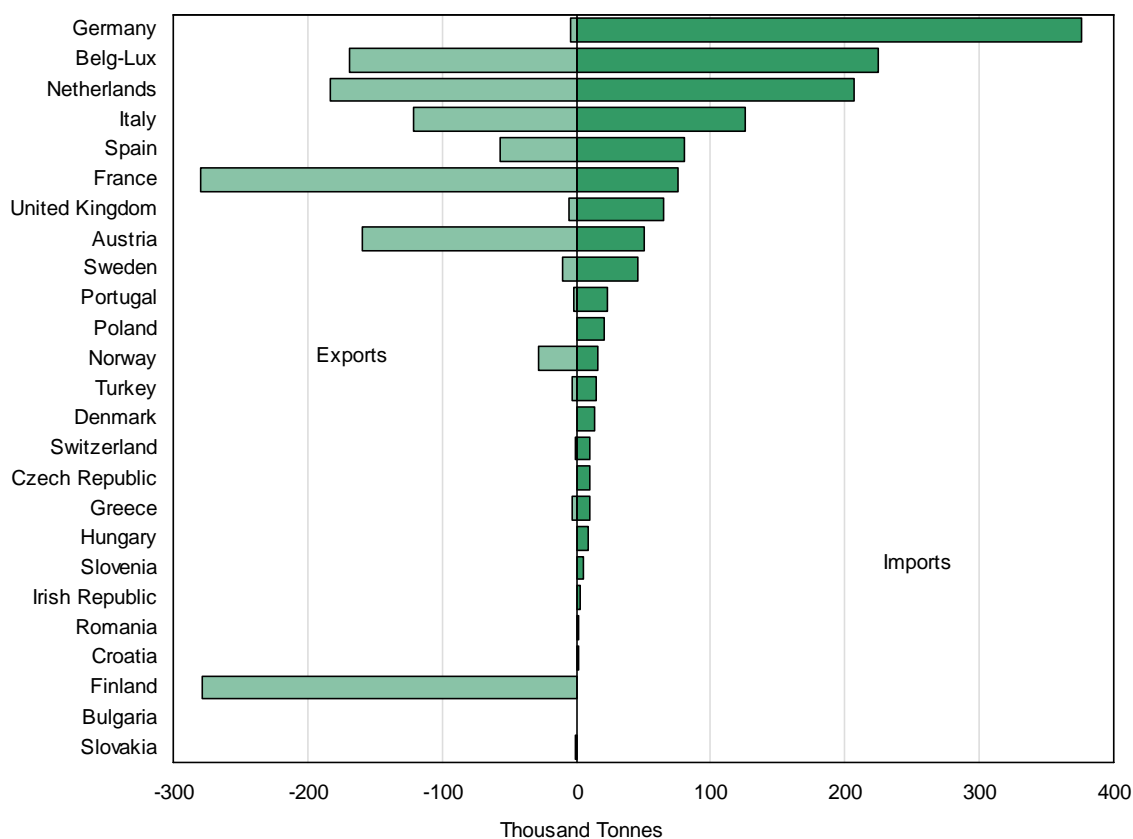
(a) BGS estimates, based on known imports into certain countries

## Imports of talc

tonnes

Country	2001	2002	2003	2004	2005
Austria	50 199	46 833	30 831	49 930	50 768
Belgium-Luxembourg	105 971	115 112	124 455	135 046	224 624
Bulgaria	455	404	465	487	599
Croatia	1 397	1 587	1 531	1 726	1 378
Cyprus	181	202	255	242	386
Czech Republic	9 082	9 299	10 278	9 426	9 986
Denmark	13 156	16 577	14 407	14 085	14 103
Estonia	...	...	...	...	300
Finland	4 027	3 251	3 971	1 827	866
France	41 095	43 342	40 650	77 240	76 021
Germany	244 678	263 988	307 374	352 177	376 618
Greece	6 528	4 206	5 316	10 061	9 937
Hungary	9 698	9 576	10 070	9 178	...
Irish Republic	1 848	2 224	2 008	2 508	2 632
Italy	133 646	117 688	127 855	126 745	125 913
Netherlands	89 378	95 121	220 448	226 602	206 485
Norway	8 762	11 557	14 737	14 522	16 488
Poland	14 274	17 989	18 342	16 155	20 536
Portugal	14 354	16 685	17 721	20 203	23 583
Romania	1 038	1 200	1 187	1 609	1 962
Slovakia	711	382	369	192	211
Slovenia	3 990	4 706	5 251	5 628	5 383
Spain	63 627	65 691	68 760	80 626	80 726
Sweden	34 297	42 307	45 509	43 288	45 376
Switzerland	15 385	12 916	11 490	9 579	10 254
Turkey	7 026	10 937	11 227	16 810	15 312
United Kingdom	66 737	66 119	59 172	66 722	65 496

Talc – EU31 trade in 2005



## Tantalum and niobium

- Tantalum and niobium are produced from their ores, sometimes combined in one mineral. Tantalum is also produced from tin refinery slags. Tantalum is a heavy, very hard, ductile metallic element that has a very high melting point (2996°C) and is strongly resistant to chemical attack. It is used chiefly in electronic applications, especially in miniature capacitors. Niobium is a soft and ductile metallic element that is used mainly in special steels and superalloys.
- World production of tantalum in 2005 was dominated by Australia (approximately 69%) and the largest producer of niobium ores was Brazil (approximately 93%). There was no production in the EU31, which is entirely import dependent.
- Tantalum is normally traded in oxide form (tantalite). During 2005 the average price for tantalite was stable (Greenbushes 40% basis), trading at \$40/lb Ta<sub>2</sub>O<sub>5</sub> throughout the year.

### Exports of tantalum and niobium

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Tantalum	98	43	...	—	—
Czech Republic					
Tantalum	106	40	55	84	68
Estonia					
Tantalum	1	...	25	39	65
France					
Tantalum	32	207	3	20	101
Germany					
Niobium & tantalum ores	379	545	174	93	...
Tantalum	258	719	323	337	190
Italy					
Tantalum	3	50	1	2	1
Netherlands					
Tantalum	31	21	23	24	3
Portugal					
Tantalum	24	...	18	42	15
United Kingdom					
Tantalum	395	280	278	77	131

Note(s):-

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

### Imports of tantalum and niobium

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Tantalum	12	3	54	64	0
Belgium-Luxembourg					
Tantalum	1	7	41	20	1
Czech Republic					
Tantalum	147	128	168	261	141
France					
Tantalum	20	42	41	67	23
Germany					
Tantalum	259	274	239	281	164
Irish Republic					
Tantalum	7	2	2	2	8
Netherlands					
Tantalum	63	15	4	35	12
Poland					
Tantalum	14	0	...	1	1
Portugal					
Tantalum	99	171	69	68	115
Spain					
Tantalum	...	...	30	4	62
United Kingdom					
Tantalum	1 610	3 480	842	243	97

Note(s) :-

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

## Tin

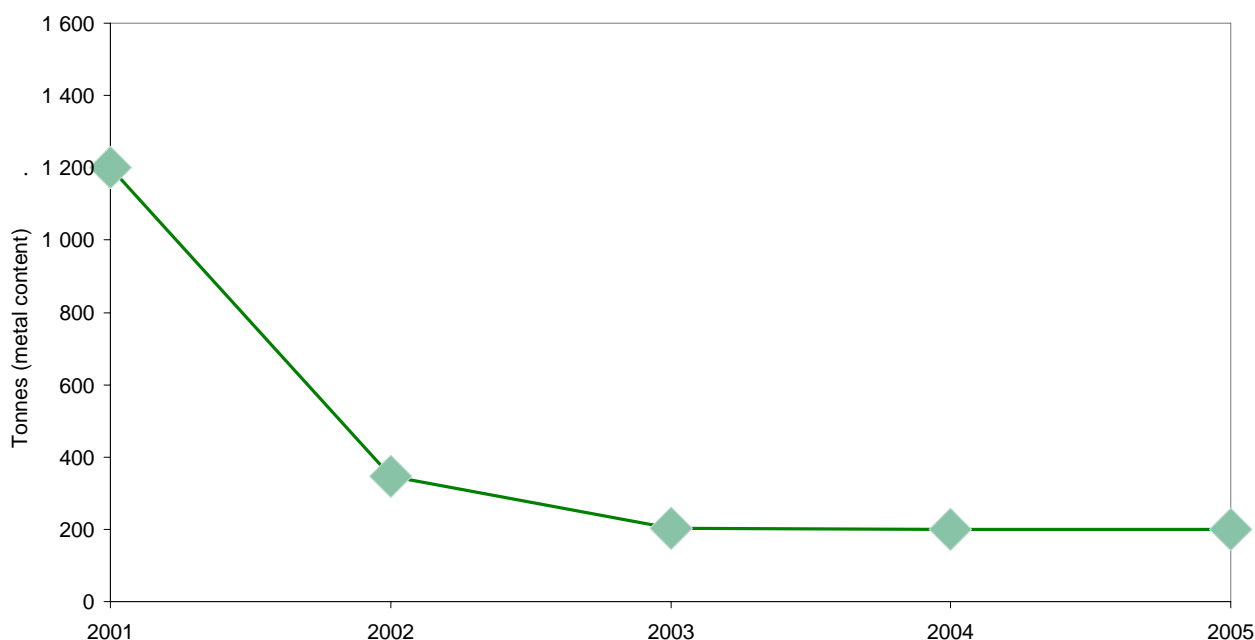
- Tin is a malleable and ductile metal that is resistant to corrosion. The chief use of tin is to coat metals that are more susceptible to corrosion, especially steel. It is also widely used as an alloying agent (i.e. with lead to make pewter) and its use in solders is rapidly growing as it replaces lead. Tin chemicals are used as fungicides and other biocides.
- World mine production is restricted to eighteen countries, of which China and Indonesia were jointly the largest producers during 2005, each with 36% of the world total. There is minor EU31 production from Portugal.
- Following a 15-year high of more than \$9000/tonne in 2004, the tin price started 2005 around \$7680/tonne, reaching more than \$8000/tonne in May before dropping back to a 23-month low in November of around \$6150/tonne.

### Mine production of tin

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Portugal	1 201	345	203	200	200

EU31 Mine production of tin 2001 - 05



### Exports of tin

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Unwrought (a)	80	115	151	153	116
Scrap	206	363	153	278	62
Belgium-Luxembourg					
Unwrought	7 897	8 883	7 538	8 803	6 814
Unwrought alloys	338	138	171	184	388
Scrap	116	28	601	607	362
Czech Republic					
Unwrought (a)	38	20	66	191	381
Denmark					
Scrap	94	90	110	178	68
Estonia					
Scrap	54	18	8	7	125
Finland					
Unwrought alloys	91	33	9	46	60
Scrap	83	104	126	86	58

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
France					
Unwrought	350	354	577	430	324
Unwrought alloys	627	659	612	527	1 020
Scrap	1 484	618	279	457	478
Germany					
Unwrought	1 089	1 137	909	978	1 343
Unwrought alloys	1 178	1 077	481	408	329
Scrap	507	719	849	994	701
Irish Republic					
Unwrought (a)	281	77	29	103	67
Scrap	304	109	21	140	...
Italy					
Unwrought (a)	268	497	458	406	503
Scrap	222	191	201	180	17
Netherlands					
Unwrought	1 845	4 138	4 278	3 921	5 330
Unwrought alloys	102	205	240	1 430	1 790
Scrap	511	643	344	685	297
Portugal					
Concentrates	2 395	537	266	147	—
Spain					
Unwrought (a)	218	738	179	205	139
Scrap	111	1 169	198	221	435
Sweden					
Unwrought (a)	329	313	238	261	217
Scrap	125	178	88	161	45
Switzerland					
Unwrought (a)	84	25	112	72	29
Scrap	105	60	73	107	157
United Kingdom					
Concentrates	59	24	29	0	2
Unwrought	426	381	283	524	1 608
Unwrought alloys	2 485	2 165	2 152	885	442
Scrap	2 256	2 821	4 499	7 353	20 603

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

## Imports of tin

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Unwrought (a)	838	906	702	765	1 926
Scrap	186	208	174	170	79
Belgium-Luxembourg					
Unwrought	1 050	1 223	490	1 686	1 210
Unwrought alloys	2 208	2 464	2 737	3 421	1 284
Scrap	3 312	4 756	4 816	5 726	1 382
Croatia					
Unwrought (a)	114	89	95	67	62
Czech Republic					
Unwrought (a)	592	531	635	550	634
Estonia					
Unwrought	301	...	12	16	6
Finland					
Unwrought (a)	199	149	151	126	178
France					
Unwrought	8 637	9 044	9 693	9 167	7 307
Unwrought alloys	409	169	701	638	1 080
Scrap	1 555	541	148	24	217

## Tin

Imports continued

tonnes

Country	2001	2002	2003	2004	2005
Germany					
Unwrought	23 984	20 524	20 904	21 258	20 438
Unwrought alloys	847	744	381	453	554
Scrap	681	400	505	408	506
Greece					
Unwrought (a)	503	382	598	671	615
Hungary					
Unwrought (a)	292	219	91	155	192
Irish Republic					
Unwrought (a)	655	271	171	462	307
Italy					
Unwrought	6 171	6 507	6 201	5 610	5 899
Unwrought alloys	204	190	105	95	135
Netherlands					
Unwrought	4 346	7 008	7 368	6 801	8 730
Unwrought alloys	1 007	1 162	1 330	1 832	1 983
Scrap	609	388	202	155	201
Norway					
Unwrought	560	458	382	47	21
Unwrought alloys	111	176	71	79	57
Poland					
Unwrought (a)	1 010	1 344	1 077	1 367	1 437
Scrap	...	...	...	697	705
Portugal					
Unwrought	780	1 223	781	434	971
Unwrought alloys	210	29	63	71	100
Romania					
Unwrought (a)	333	245	291	188	216
Slovakia					
Unwrought (a)	624	800	1 091	2 034	2 610
Spain					
Concentrates	399	225	101	160	137
Unwrought	6 313	6 967	8 072	7 860	7 109
Unwrought alloys	175	58	90	292	170
Scrap	2 830	4 842	2 400	2 111	1 919
Sweden					
Unwrought	608	596	421	468	551
Unwrought alloys	364	400	379	256	210
Scrap	130	57	71	39	60
Switzerland					
Unwrought (a)	1 017	893	803	726	909
Turkey					
Unwrought (a)	1 275	1 801	1 966	2 314	2 731
United Kingdom					
Unwrought	6 857	7 151	7 488	5 861	4 812
Unwrought alloys	2 442	1 437	2 378	1 145	2 067
Scrap	179	188	168	215	468

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.

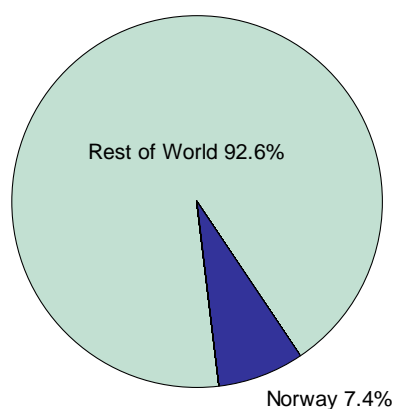
(a) Including alloys



## Titanium minerals

- The titanium minerals ilmenite and rutile are the main sources of titanium, a low density, strong and corrosion resistant metal that is important in the aerospace industry. However, the chief use (94%) of titanium minerals is in the form of titanium dioxide, a white pigment used in paint, plastics, rubber and paper.
- In 2005 Canada was the world's largest producer of titanium minerals; Australia and South Africa were also major producers. EU31 production is restricted to Norway, which produced about 7% of the world total in 2005.
- At the close of 2005, ilmenite (Australian, min 54% TiO<sub>2</sub>, FOB, bulk concentrates) traded at \$75/tonne–\$85/tonne. Rutile, which has a higher TiO<sub>2</sub> content (Australian concentrate, min. 95% TiO<sub>2</sub> FOB, bulk pigment grade), traded between \$430–\$480/tonne. Prices for titanium sponge escalated from US\$5.30/kg at the start of the year to \$30/kg by mid-year, before settling in the \$25-30/kg price range.

**EU31 Production of titanium minerals 2005**



## Production of titanium minerals

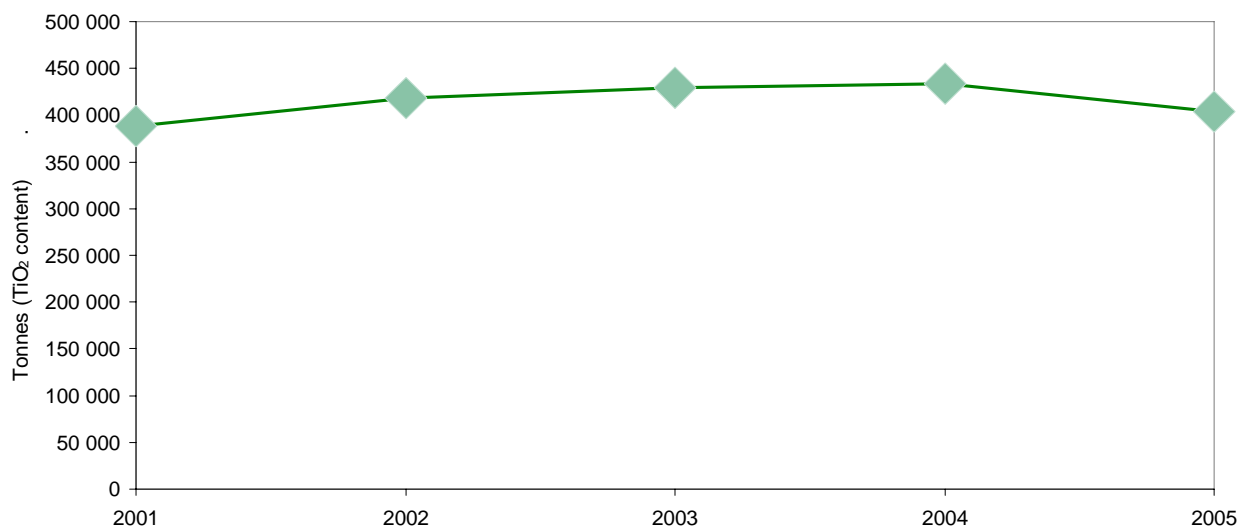
tonnes

Country	2001	2002	2003	2004	2005
Norway					
Ilmenite	777 000	837 000	859 000	866 700	806 800
EU31 Total (TiO <sub>2</sub> content)	389 000	419 000	430 000	433 000	403 000

Note(s):-

(1) The figures in this table refer to gross tonnage of titanium concentrates

**EU31 Production of titanium minerals 2001 - 05**



## Exports of titanium

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	298	300	340	397	317
Oxides	2 876	3 000	2 404	2 640	3 457
Belgium-Luxembourg					
Titanium minerals	2 718	113 342	123 823	139 393	131 597
Metal	1 348	1 296	1 214	1 031	1 093
Oxides	286 659	314 469	348 005	397 481	366 632
Czech Republic					
Metal	59	82	239	191	358
Oxides	26 626	34 258	33 354	37 673	40 707
Denmark					
Metal	170	120	185	166	184
Oxides	1 128	1 000	578	1 304	1 136
Estonia					
Metal	145	316	336	188	31
Finland					
Metal	109	26	30	22	44
Oxides (a)	*128 700	*127 000	*84 000	*98 000	*105 000
France					
Metal	5 636	4 180	3 722	4 086	5 891
Oxides	180 271	199 744	180 080	172 796	157 543
Germany					
Titanium minerals	475	541	778	319	607
Metal	6 257	6 581	6 705	8 048	8 911
Oxides	290 191	323 059	331 806	356 007	359 946
Greece					
Oxides	1 380	1 412	1 624	1 835	2 373
Italy					
Metal	5 102	3 727	3 159	4 439	4 130
Oxides	24 393	28 434	28 323	28 476	25 433
Latvia					
Metal	180	16	45	61	6
Netherlands					
Titanium minerals	1 935	1 093	3 611	4 050	1 390
Metal	1 532	2 344	2 015	1 846	2 181
Oxides	(a) *68 100	80 663	(a) *65 100	92 050	84 310
Norway					
Titanium minerals	429 000	443 833	500 000	(a) *416 000	(a) *382 000
Metal	117	103	214	182	159
Oxides (a)	*231 000	*240 000	*229 000	*193 000	*177 000
Poland					
Oxides	24 215	30 457	23 977	20 818	24 394
Romania					
Metal	23	80	94	277	255
Slovenia					
Oxides	32 782	38 484	35 655	38 497	44 123
Spain					
Metal	434	376	697	483	903
Oxides	79 643	73 320	70 052	85 867	83 905
Sweden					
Metal	1 494	1 256	1 004	1 737	1 955
Oxides	13 653	11 058	11 713	13 912	14 306
Switzerland					
Metal	465	400	398	562	560
Oxides	525	666	499	740	1 020
Turkey					
Metal	92	2	7	20	30
United Kingdom					
Metal	13 597	11 511	10 084	11 913	17 212
Oxides	207 483	238 884	242 541	234 591	215 741

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

## Imports of titanium

Country	2001	2002	2003	2004	2005
Austria					
Metal	1 594	1 062	441	943	1 691
Oxides	19 343	19 478	18 528	18 612	25 640
Belgium-Luxembourg					
Ilmenite	71	9 889	11 632	...	—
Other titanium minerals	56 785	132 921	164 624	165 288	165 711
Titanium slag	44 909	41 594	...	...	...
Metal	1 791	1 516	1 712	1 868	2 289
Oxides	224 507	271 627	272 441	339 444	291 670
Bulgaria					
Titanium minerals	535	653	2 979	407	1 287
Oxides	2 646	2 448	3 156	3 332	3 959
Croatia					
Oxides	2 142	2 081	2 327	2 401	2 561
Cyprus					
Oxides	859	1 032	1 172	1 172	1 286
Czech Republic					
Titanium minerals	78 515	60 976	74 709	53 570	80 407
Metal	111	372	620	800	1 143
Oxides	4 394	4 307	5 462	6 773	8 008
Denmark					
Metal	891	737	745	778	770
Oxides	20 799	23 967	21 022	22 269	23 156
Estonia					
Metal	57	302	234	113	216
Oxides	1 273	1 090	1 082	235	1 344
Finland					
Metal	112	84	107	258	121
Oxides	9 007	10 335	11 390	13 163	14 380
France					
Ilmenite	112 466	151 799	127 083	48 930	60 205
Other titanium minerals	41 040	12 291	34 984	81 141	86 552
Titanium slag	256 420	123 144	...	61 456	111 137
Metal	8 459	6 461	5 689	8 259	9 403
Oxides	127 843	138 316	151 809	140 068	119 699
Germany					
Ilmenite	272 849	307 791	349 819	315 214	333 603
Other titanium minerals	132 952	131 844	175 660	225 849	224 675
Titanium slag	137 542	52 787	41 319	—	—
Metal	9 774	10 532	10 044	14 756	15 978
Oxides	189 674	192 414	211 539	237 464	240 554
Greece					
Titanium minerals	529	816	313	563	528
Oxides	18 389	17 646	22 801	27 241	25 592
Hungary					
Metal	49	215	367	387	107
Oxides	6 976	7 941	8 247	8 677	7 523
Irish Republic					
Oxides	3 931	5 070	5 095	5 685	5 059
Italy					
Titanium minerals	112 828	99 830	123 862	88 361	85 607
Metal	6 126	5 052	4 738	6 580	5 186
Oxides	149 841	157 476	149 238	158 592	154 950
Latvia					
Oxides	998	1 132	2 032	1 232	726
Netherlands					
Ilmenite	33 524	40 286	46 568	...	...
Other titanium minerals	70 438	64 024	76 539	(a) 154 460	(a) 127 941
Titanium slag	9 848	...	...	...	...
Metal	3 099	2 806	2 676	2 835	1 857
Oxides	47 008	44 525	33 290	47 957	92 334
Norway					
Titanium minerals	...	...	...	...	33 000
Metal	623	386	557	505	636
Oxides	9 617	7 931	8 729	10 026	11 924

## Titanium

Imports continued

tonnes

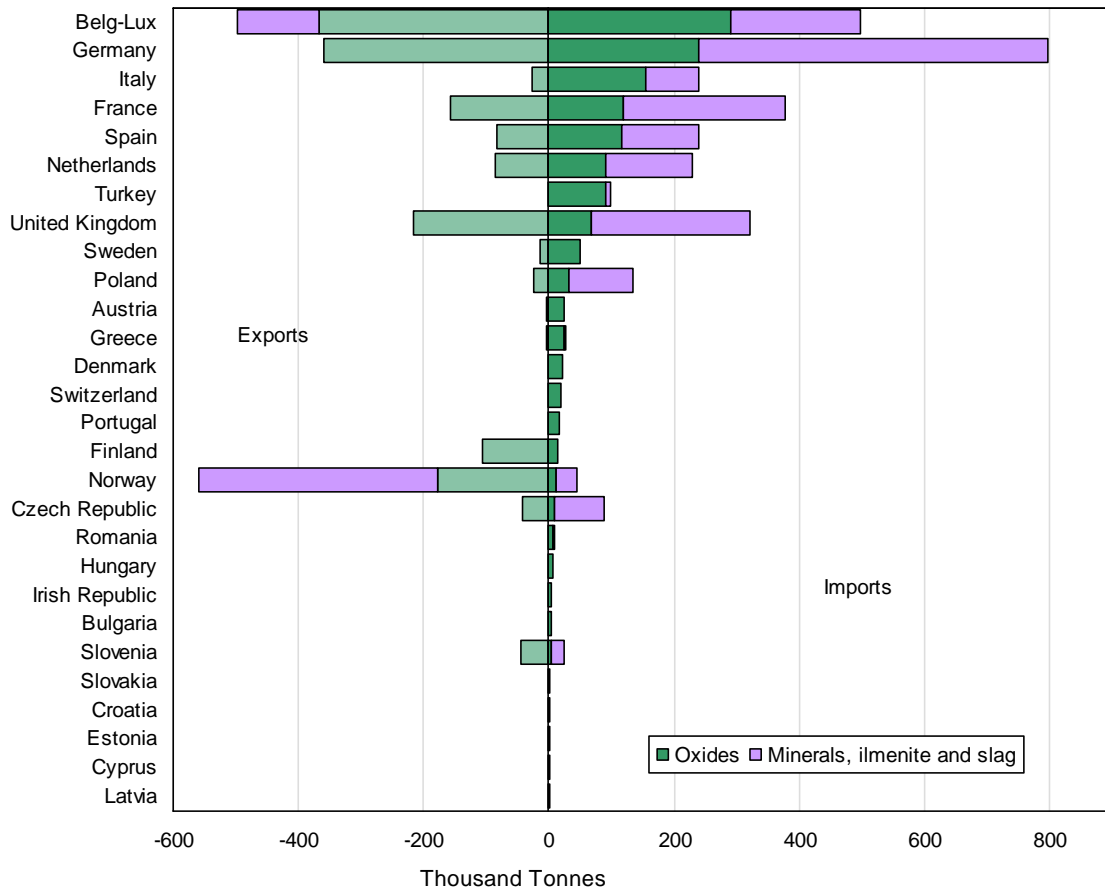
Country	2001	2002	2003	2004	2005
Poland					
Titanium minerals	95 674	73 655	101 284	98 214	100 539
Metal	182	163	151	271	328
Oxides	24 027	30 029	30 546	29 710	33 417
Portugal					
Oxides	17 341	20 230	18 922	20 120	17 458
Romania					
Titanium minerals	2 544	1 993	2 192	2 334	2 111
Oxides	4 621	4 742	5 454	6 378	7 600
Slovakia					
Metal	142	103	111	101	980
Oxides	530	429	2 701	2 173	2 804
Slovenia					
Titanium minerals	18 676	7 805	24 652	11 610	21 054
Metal	68	127	118	300	614
Oxides	2 282	2 936	3 219	3 033	3 157
Spain					
Ilmenite	130 991	153 688	128 692	172 431	121 204
Other titanium minerals	1 844	2 315	2 296	2 316	1 746
Metal	3 407	3 241	2 974	3 722	3 862
Oxides	99 887	107 418	100 814	116 397	117 203
Sweden					
Metal	1 929	2 000	1 707	1 856	1 382
Oxides	45 034	43 260	44 721	44 812	50 099
Switzerland					
Metal	641	621	535	735	1 273
Oxides	17 678	18 265	18 689	19 349	19 055
Turkey					
Titanium minerals	2 953	5 876	5 591	10 435	6 755
Oxides	38 734	61 927	68 613	85 832	91 083
United Kingdom					
Ilmenite	112 447	106 177	113 852	110 596	80 435
Other titanium minerals	110 526	82 303	111 754	113 852	109 238
Titanium slag	110 697	157 020	44 890	151	64 849
Metal	30 752	25 319	25 126	27 401	27 938
Oxides	82 852	95 583	74 138	74 787	67 102

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) Including ilmenite

Titanium – EU31 trade in 2005



## Tungsten

- Tungsten is a corrosion-resistant metallic element with an extremely high melting point. Its largest use is as cemented carbides in cutting tools; it is also used as an alloying agent with steel to make high-speed tool steel, and in superalloys. Its most familiar use is in light bulb filaments.
- China's tungsten production in 2005 was 84% of the world total. There was minor production from Austria and Portugal but overall the EU31 is import dependent. Tungsten is traded in several forms but the bulk of exports were from China, and thus the largest component of international trade was of ammonium paratungstate (APT).
- Strong demand for tungsten during 2005 resulted in steep price increases for tungsten concentrates, ammonium paratungstate and ferrotungsten. The average monthly price for tungsten concentrate in 2005 varied from \$61/metric tonne unit (mtu) to \$231/mtu. Annual average prices for ammonium paratungstate were considerably higher than in 2004, trading in the range of \$104/mtu–\$226/mtu (1mtu = 10kg of tungsten trioxide, or 7.93kg of tungsten content).

### Mine production of tungsten

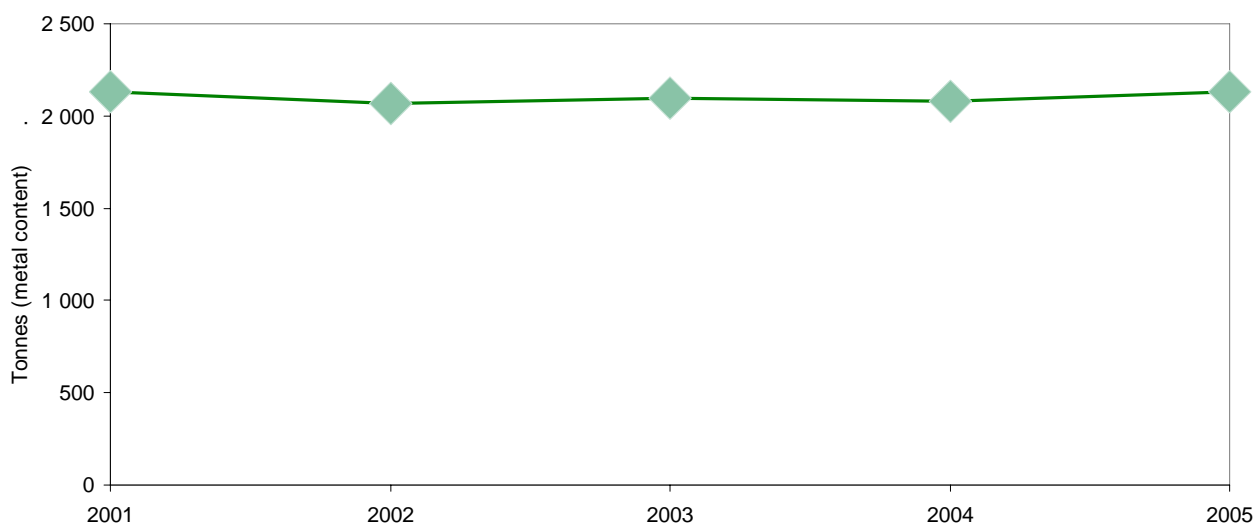
tonnes (metal content)

Country	2001	2002	2003	2004	2005
Austria	1 429	1 377	1 381	1 335	1 280
Portugal (a)	700	693	715	746	850
<b>EU31 Total</b>	<b>2 129</b>	<b>2 070</b>	<b>2 096</b>	<b>2 081</b>	<b>2 130</b>

Note(s):-

(a) Wolframite and scheelite

**EU31 Mine production of tungsten 2001 - 05**



## Exports of tungsten

Country	2001	2002	2003	2004	2005
Austria					
Metal	967	813	(a) *1 300	(a) *2 400	(a) *2 100
Belgium-Luxembourg					
Metal	448	259	374	404	452
Carbide	26	21	35	39	25
Czech Republic					
Metal	413	251	108	133	185
Denmark					
Metal	10	37	13	26	5
Estonia					
Ores & concentrates	71	2	127	...	...
Metal	307	4	196	1	3
Finland					
Metal	28	49	67	91	77
France					
Metal	911	624	538	571	574
Carbide	366	348	241	251	265
Germany					
Metal	2 418	1 735	2 209	2 816	4 020
Hungary					
Metal	53	74	56	64	24
Irish Republic					
Metal	96	38	41	72	963
Italy					
Metal	245	129	191	357	233
Latvia					
Metal	...	42	84	32	4
Netherlands					
Ores & concentrates	55	16	1	16	—
Metal	380	469	237	777	502
Poland					
Metal	113	1	34	89	84
Portugal					
Ores & concentrates	914	588	...	900	1 425
Metal	415	693	143	217	12
Spain					
Metal	56	109	158	141	77
Sweden					
Metal	32	364	334	102	414
Carbide	561	385	68	114	37
Switzerland					
Metal	121	185	244	268	316
United Kingdom					
Metal	1 874	1 667	2 053	1 267	1 732
Carbide	20	5	70	92	83

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) BGS estimates, based on known imports into certain countries

## Imports of tungsten

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Metal	399	235	271	400	825
Carbide	703	399	...	...	...
Belgium-Luxembourg					
Metal	405	279	404	372	340
Carbide	39	70	51	42	42
Czech Republic					
Metal	136	65	73	116	173
Denmark					
Metal	5	15	5	103	307
Estonia					
Ores & concentrates	68	—	121	...	...
Metal	408	2	130	3	1
Finland					
Metal	119	113	169	119	121
France					
Metal	889	422	448	568	784
Carbide	628	604	695	692	592
Germany					
Ores & concentrates	378	129	195	389	493
Metal	4 914	3 024	4 874	4 976	5 515
Carbide	1 664	1 103	1 419	1 520	1 802
Irish Republic					
Metal	45	152	331	177	292
Italy					
Metal	301	236	258	321	257
Carbide	363	324	318	299	337
Netherlands					
Ores & concentrates	144	195	342	222	110
Metal	584	80	217	210	204
Carbide	77	44	18	56	99
Poland					
Metal	276	68	42	46	108
Portugal					
Metal	...	28	103	153	179
Carbide	82	79	96	109	105
Spain					
Metal	68	83	179	259	134
Carbide	77	64	48	59	38
Sweden					
Metal	990	136	470	559	502
Carbide	1 239	688	665	747	925
Switzerland					
Metal	220	152	139	170	235
United Kingdom					
Metal	2 538	2 121	1 932	1 903	3 204
Carbide	1 381	759	1 232	838	974

## 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



## Vanadium

- Vanadium is a soft, ductile, metallic element that is very corrosion resistant. The chief use is as an additive in alloy steels where it imparts strength and corrosion resistance. Other uses are in titanium alloys and as a catalyst.
- Mine production is confined to five countries of which Russia (estimated 38%) and South Africa (35%) are the largest producers. There is no EU31 mine production. In the USA vanadium is a significant by-product from the refining of heavy crude oils.
- Vanadium is traded chiefly as vanadiferous slags and other residues, vanadium pentoxide and ferro-vanadium. In 2005 the European price for ferro-vanadium increased considerably, ranging from \$34–\$128/kg. US prices for domestic V<sub>2</sub>O<sub>5</sub> ranged between \$7.50–\$27/lb in 2005, compared with \$2.75–\$9.80/lb in 2004.

## Exports of vanadium

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg					
Vanadiferous residues	4 408	3 414	3 129	...	...
Ores & concentrates	...	218	748	1 456	2 600
Pentoxide	26	46	22	9	2
Denmark					
Vanadium-titanium pig iron	134	193	...	...	...
France					
Pentoxide	10	8	183	138	13
Metal	0	0	0	26	25
Germany					
Vanadiferous residues	630	...	...	...	...
Ores & concentrates	...	...	127	1 060	4 680
Pentoxide	83	81	102	296	...
Metal	359	351	483	522	1 469
Italy					
Ores & concentrates	3 964	2 401	1 691	1 267	1 092
Netherlands					
Vanadiferous residues	207	...	...	...	...
Pentoxide	253	87	219	1 167	381
Metal	179	71	379	5	11
Turkey					
Pentoxide	...	...	680	900	940
United Kingdom					
Metal	1 405	1 425	1 137	1 075	433

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

**Imports of vanadium**

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Vanadiferous residues	*26 000	*25 000	*25 000	*27 000	*29 000
Ores & concentrates	527	488	459	467	1 565
Pentoxide	1 477	1 042	(a) *400	(a) *1 000	...
Metal	0	7	2	9	—
Belgium-Luxembourg					
Vanadiferous residues	1 286	...	...	...	...
Ores & concentrates	...	483	1 379	1 116	894
Pentoxide	2 142	2 981	57	3	267
Metal	32	501	238	32	60
Czech Republic					
Pentoxide	5 172	4 162	4 898	5 429	3 831
France					
Ores & concentrates	...	126	1	...	21
Pentoxide	328	382	496	441	556
Metal	54	54	34	72	88
Germany					
Pentoxide	657	538	802	648	741
Metal	60	88	106	159	193
Italy					
Pentoxide	199	153	129	134	156
Netherlands					
Vanadiferous residues	251	...	...	...	...
Pentoxide	653	815	865	1 718	714
Norway					
Metal	51	41	55	32	10
Slovenia					
Metal	18	27	22	21	89
Sweden					
Metal	77	49	49	46	20
United Kingdom					
Pentoxide	319	962	363	306	339
Metal	381	171	256	338	812

Note(s) :-

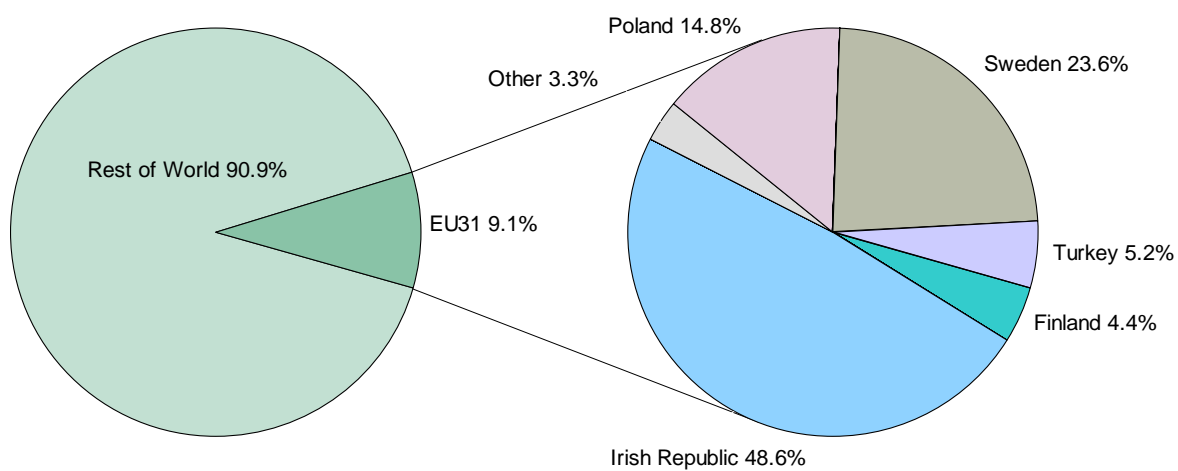
- (1) In this table the term 'pentoxide' also includes vanadium oxides and hydroxides, if any  
(2) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-Alloys

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

## Zinc

- Zinc is a metal that is brittle at ordinary temperatures but malleable at temperatures above 100°C. It is corrosion resistant and this property is exploited in its chief use as a steel coating (galvanising). Its other main uses are as zinc die-castings and alloyed with copper to make brass, which is widely used in the electrical, engineering and construction industries.
- Zinc is produced by many countries from mines, or in refineries that process imported zinc concentrates. China (25%) was the world's largest mine producer during 2005. The Irish Republic was the largest mine producer in the EU31 (49%). A number of EU31 countries have major zinc refineries.
- The average zinc price for 2005 reached US\$1382/tonne, an increase of 32% from \$1047/tonne in 2004. At the beginning of 2005 zinc on the LME was trading around \$1250/tonne. Prices increased steadily throughout the rest of the year reaching a five-year high in December of \$1915/tonne.

**EU31 Mine production of zinc 2005**

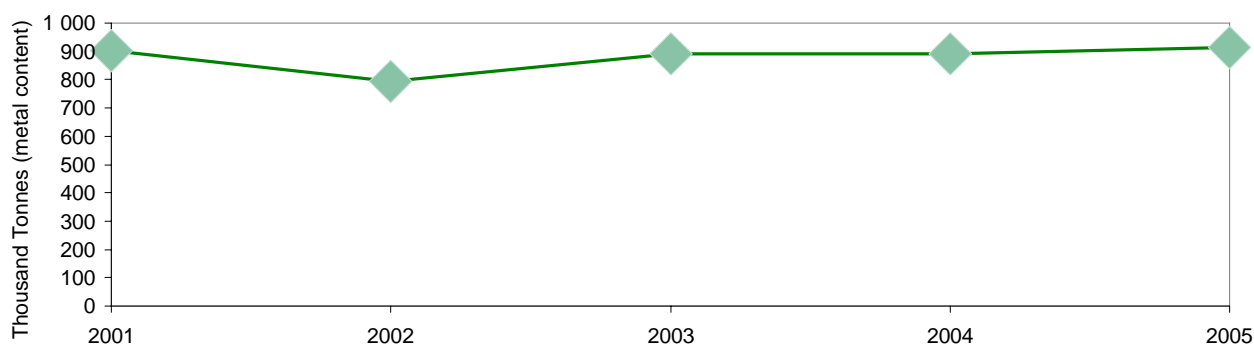


## Mine production of zinc

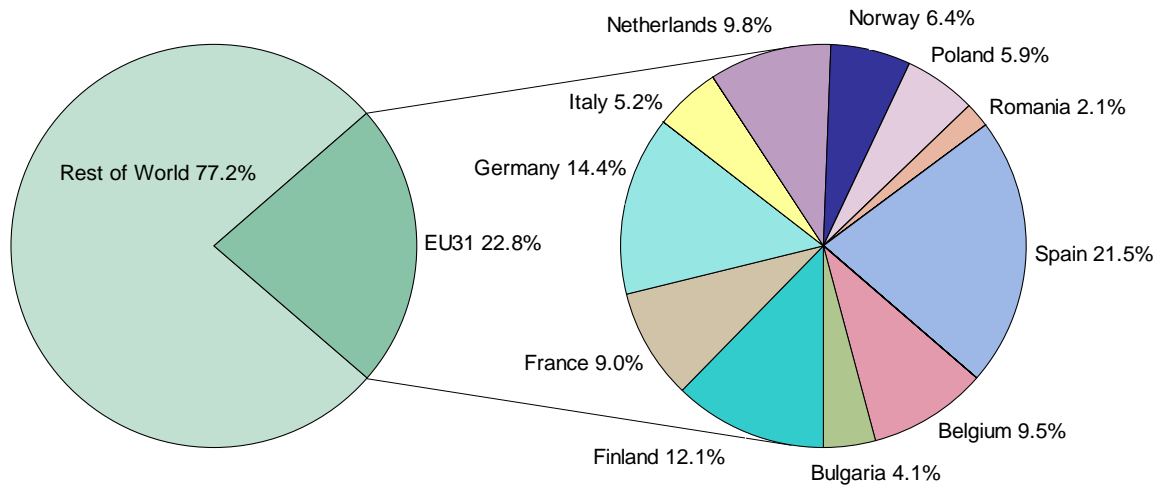
tonnes (metal content)

Country	2001	2002	2003	2004	2005
Bulgaria	10 600	12 900	13 000	15 548	12 700
Finland	20 100	34 100	38 800	37 200	40 500
Greece	31 737	35 000	3 000	—	4 000
Irish Republic	298 100	276 700	419 000	438 300	445 400
Poland	152 700	152 100	154 277	140 381	135 600
Romania	29 786	21 512	22 081	23 599	13 784
Spain	165 568	69 926	15 140	—	—
Sweden	156 334	148 620	185 884	197 034	215 691
Turkey	36 000	43 000	40 000	39 000	48 000
<b>EU31 Total</b>	<b>901 000</b>	<b>794 000</b>	<b>891 000</b>	<b>891 000</b>	<b>916 000</b>

**EU31 Mine production of zinc 2001 - 05**



**EU31 Production of slab zinc 2005**

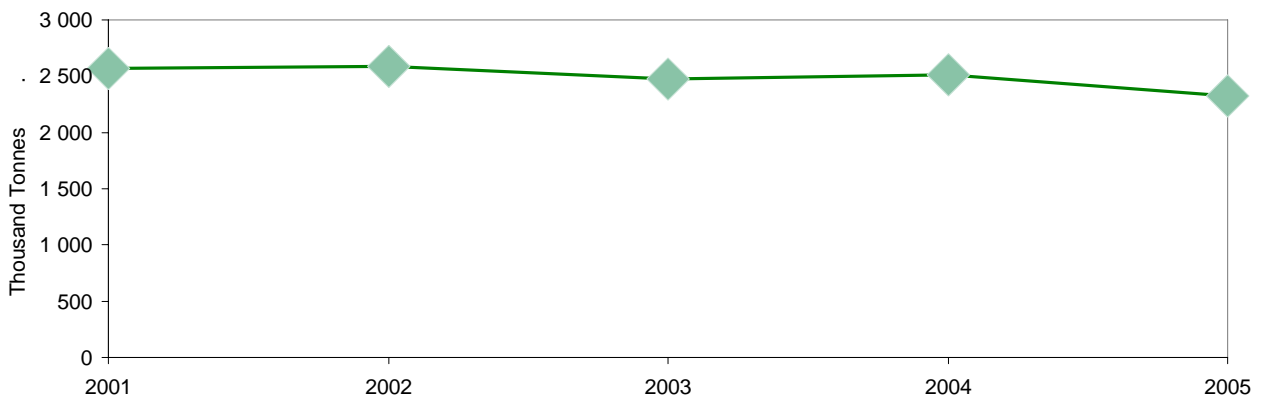


**Production of slab zinc**

tonnes

Country	2001	2002	2003	2004	2005
Belgium	256 400	238 700	244 400	272 500	222 000
Bulgaria	88 000	83 000	86 800	101 500	95 100
Finland	248 800	235 300	265 900	284 525	281 904
France	328 900	333 300	257 000	260 000	209 000
Germany	361 348	378 561	388 131	382 020	334 900
Italy	178 600	175 800	123 100	118 400	121 200
Netherlands	204 794	203 460	224 000	224 000	227 500
Norway	144 694	144 538	143 627	140 901	148 000
Poland	174 700	158 900	154 200	155 500	137 300
Romania	48 000	38 000	51 000	52 746	49 447
Spain	437 000	503 000	519 000	525 000	501 400
United Kingdom	99 600	99 600	16 600	—	—
<b>EU31 Total</b>	<b>2 571 000</b>	<b>2 592 000</b>	<b>2 474 000</b>	<b>2 517 000</b>	<b>2 328 000</b>

**EU31 Production of slab zinc 2001 - 05**



## Exports of zinc

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Unwrought (a)	15 461	34 705	36 012	37 304	13 469
Scrap	2 089	3 763	2 984	2 000	3 559
Belgium-Luxembourg					
Ores & concentrates	332 101	101 157	232 845	384 652	511 730
Unwrought	89 817	114 430	130 356	136 768	10 058
Scrap	22 938	28 597	19 485	26 546	37 754
Bulgaria					
Unwrought (a)	73 362	70 967	74 801	89 287	82 902
Czech Republic					
Unwrought (a)	1 619	1 253	1 670	5 659	7 865
Scrap	2 267	2 325	2 247	2 976	2 498
Denmark					
Scrap	7 178	9 263	5 543	2 336	3 538
Estonia					
Scrap	1 429	1 408	1 612	1 146	539
Finland					
Unwrought	175 402	186 916	212 125	235 735	235 320
Unwrought alloys	206	105	97	436	83
Scrap	8 159	7 324	5 195	2 281	2 116
France					
Ores & concentrates	18 305	17 775	37 167	38 779	39 463
Unwrought	127 252	143 307	109 839	115 352	80 472
Unwrought alloys	30 971	31 535	31 625	35 879	33 940
Scrap	42 470	33 611	38 294	56 440	63 571
Germany					
Ores & concentrates	62 741	43 050	4 741	695	7 257
Unwrought	71 859	95 493	104 982	91 123	81 664
Unwrought alloys	38 250	40 259	38 710	37 762	30 115
Scrap	47 388	40 684	47 414	52 545	55 913
Greece					
Ores & concentrates	57 166	65 084	0	0	3 276
Unwrought (a)	82 848	671	1 076	709	334
Scrap	120	172	683	709	517
Hungary					
Unwrought	1 032	997	921	3 798	415
Scrap	2 837	2 202	2 794	3 571	3 938
Irish Republic					
Ores & concentrates	381 072	161 452	439 247	564 018	522 312
Scrap	296	235	298	450	684
Italy					
Ores & concentrates	37 107	21 429	61 273	93 317	96 439
Unwrought	6 624	2 250	2 761	2 331	9 230
Unwrought alloys	5 002	6 520	6 914	3 523	2 854
Scrap	9 793	12 762	17 313	15 157	13 652
Netherlands					
Unwrought	252 993	187 416	277 262	265 840	273 832
Unwrought alloys	90	4 234	7 571	19 867	9 364
Scrap	21 496	16 093	24 856	32 684	41 593
Norway					
Unwrought	113 170	133 006	125 896	127 410	134 690
Unwrought alloys	13 990	6 704	6 245	6 710	5 600
Poland					
Ores & concentrates	29 223	61 378	64 486	44 257	63 913
Unwrought	86 067	78 497	65 661	72 820	74 938
Unwrought alloys	2 391	1 844	1 330	850	857
Scrap	2 497	1 463	136	269	797
Portugal					
Scrap	682	1 001	1 198	1 855	2 050
Romania					
Ores & concentrates	60 681	59 456	99 978	31 665	26 611
Unwrought	44 984	34 261	49 234	42 968	42 013
Scrap	...	...	...	...	1 073

## Zinc

Exports continued

tonnes

Country	2001	2002	2003	2004	2005
Sweden					
Ores & concentrates	261 909	283 701	305 058	379 155	372 925
Unwrought (a)	494	629	496	280	165
Scrap	13 546	23 833	42 715	21 598	16 134
Switzerland					
Scrap	2 405	2 358	2 415	2 582	2 480
Turkey					
Ores & concentrates	85 661	100 445	97 605	110 692	138 288
Unwrought (a)	2 367	2 579	315	302	227
Scrap	...	...	4 293	2 318	53
United Kingdom					
Unwrought	15 455	15 686	3 106	1 581	1 661
Unwrought alloys	21 971	22 366	21 770	26 260	38 267
Scrap	19 157	15 248	15 436	9 710	9 881

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

## Imports of zinc

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Unwrought	54 380	51 331	58 968	47 866	58 838
Unwrought alloys	22 617	23 414	24 621	31 444	28 955
Scrap	1 233	1 774	1 643	2 035	609
Belgium-Luxembourg					
Ores & concentrates	824 825	864 008	1 189 103	1 410 560	1 182 083
Unwrought	233 322	236 971	244 081	261 216	46 505
Unwrought alloys	910	4 767	2 649	13 872	35 653
Scrap	50 156	60 893	42 424	42 534	44 890
Bulgaria					
Ores & concentrates	124 895	120 409	149 957	167 098	149 735
Unwrought (a)	2 299	3 049	4 146	4 285	1 450
Croatia					
Unwrought (a)	2 816	3 006	5 324	3 516	3 329
Czech Republic					
Unwrought	(a) 27 142	(a) 26 929	(a) 28 748	(a) 34 205	28 263
Unwrought alloys	...	...	...	...	8 039
Denmark					
Unwrought	10 537	11 031	10 761	10 813	9 855
Unwrought alloys	5 070	3 030	1 647	1 548	1 457
Estonia					
Unwrought (a)	498	...	10 578	17 468	9 105
Scrap	6 568	5 245	4 473	191	18
Finland					
Ores & concentrates	422 274	433 196	436 345	479 603	499 024
Unwrought alloys	...	...	...	...	1 218
Scrap	1 882	2 030	2 511	395	711
France					
Ores & concentrates	574 312	558 771	482 493	458 760	423 664
Unwrought	126 795	98 355	115 491	103 037	143 476
Unwrought alloys	39 967	32 740	34 874	56 492	45 566
Scrap	13 265	11 144	8 203	6 046	6 996
Germany					
Ores & concentrates	316 009	319 996	340 244	480 355	401 829
Unwrought	261 517	231 495	253 892	248 654	245 794
Unwrought alloys	79 743	77 600	100 172	83 556	76 981
Scrap	21 487	34 083	26 647	23 997	22 480
Greece					
Unwrought (a)	31 737	26 052	24 982	29 255	20 110

Imports continued

tonnes

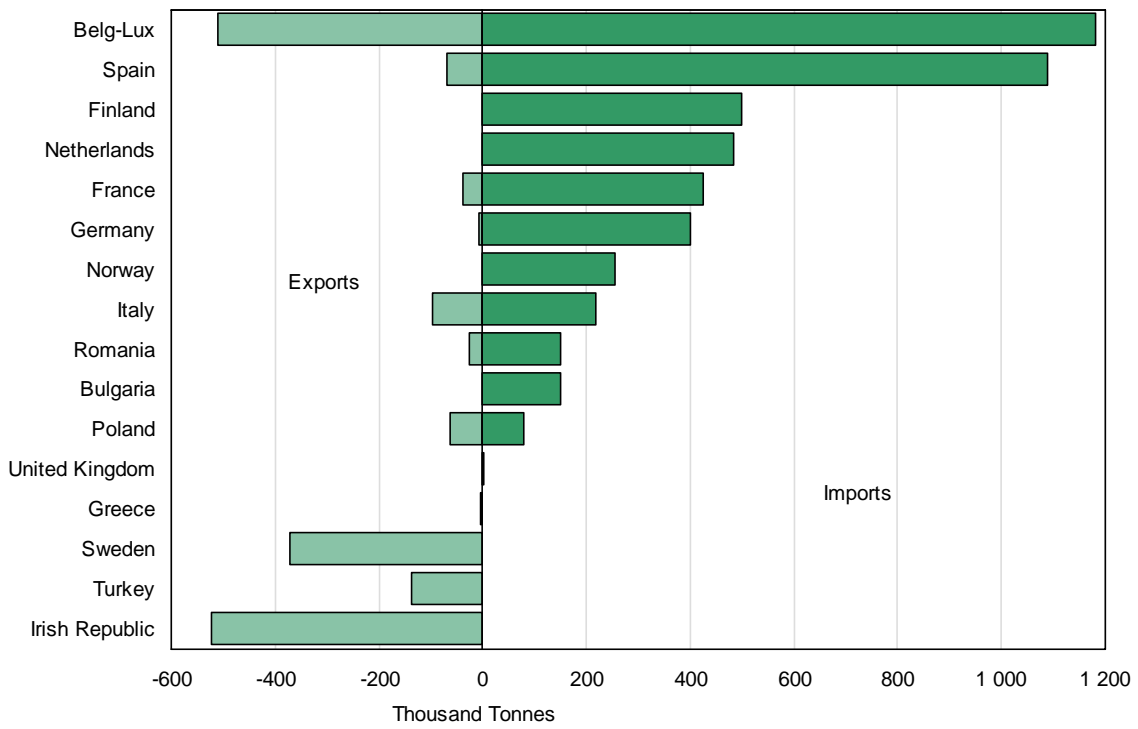
Country	2001	2002	2003	2004	2005
Hungary					
Unwrought (a)	23 615	23 295	16 900	15 779	14 529
Unwrought alloys	...	...	...	...	4 326
Irish Republic					
Unwrought (a)	3 668	5 699	4 241	2 956	3 629
Italy					
Ores & concentrates	311 767	283 804	191 369	249 978	219 491
Unwrought	175 658	201 905	226 245	273 146	261 192
Unwrought alloys	42 197	31 361	28 659	35 835	34 929
Scrap	21 985	15 509	14 095	15 991	14 172
Latvia					
Unwrought (a)	747	753	895	1 172	654
Netherlands					
Ores & concentrates	299 374	375 646	430 349	408 032	484 472
Unwrought	152 500	126 816	160 793	143 218	144 592
Unwrought alloys	1 536	7 633	853	2 318	2 387
Scrap	11 413	10 368	14 213	20 288	15 257
Norway					
Ores & concentrates	233 797	220 879	221 754	231 563	255 158
Poland					
Ores & concentrates	118 106	112 193	113 990	114 800	78 746
Unwrought (a)	10 113	14 789	22 182	31 603	26 670
Scrap	261	251	656	4 636	3 899
Portugal					
Unwrought	12 701	13 649	18 113	13 450	11 862
Unwrought alloys	6 907	10 678	10 616	14 675	11 573
Romania					
Ores & concentrates	87 597	55 758	113 683	109 019	150 282
Unwrought (a)	11 747	15 482	16 030	19 555	14 640
Slovakia					
Unwrought (a)	...	31 953	33 557	42 324	43 500
Slovenia					
Unwrought (a)	20 516	18 031	19 925	21 146	21 740
Spain					
Ores & concentrates	687 733	901 359	1 096 292	917 968	1 090 022
Unwrought	4 529	4 939	7 448	3 862	8 203
Unwrought alloys	9 499	10 398	12 477	16 601	17 858
Scrap	2 850	2 506	4 103	4 062	3 927
Sweden					
Unwrought	27 156	25 562	22 320	29 682	29 847
Unwrought alloys	11 170	12 145	13 496	18 009	16 812
Switzerland					
Unwrought	20 567	21 073	11 730	14 577	13 045
Unwrought alloys	3 735	3 796	3 798	3 194	2 601
Turkey					
Unwrought	(a) 84 091	(a) 110 773	(a) 126 315	(a) 148 897	139 156
Unwrought alloys	...	...	...	...	6 121
United Kingdom					
Ores & concentrates	215 342	229 042	16 611	260	903
Unwrought	110 157	108 357	171 219	139 477	135 840
Unwrought alloys	6 363	5 738	13 796	15 960	16 128
Scrap	3 219	261	172	228	188

Note(s) :-

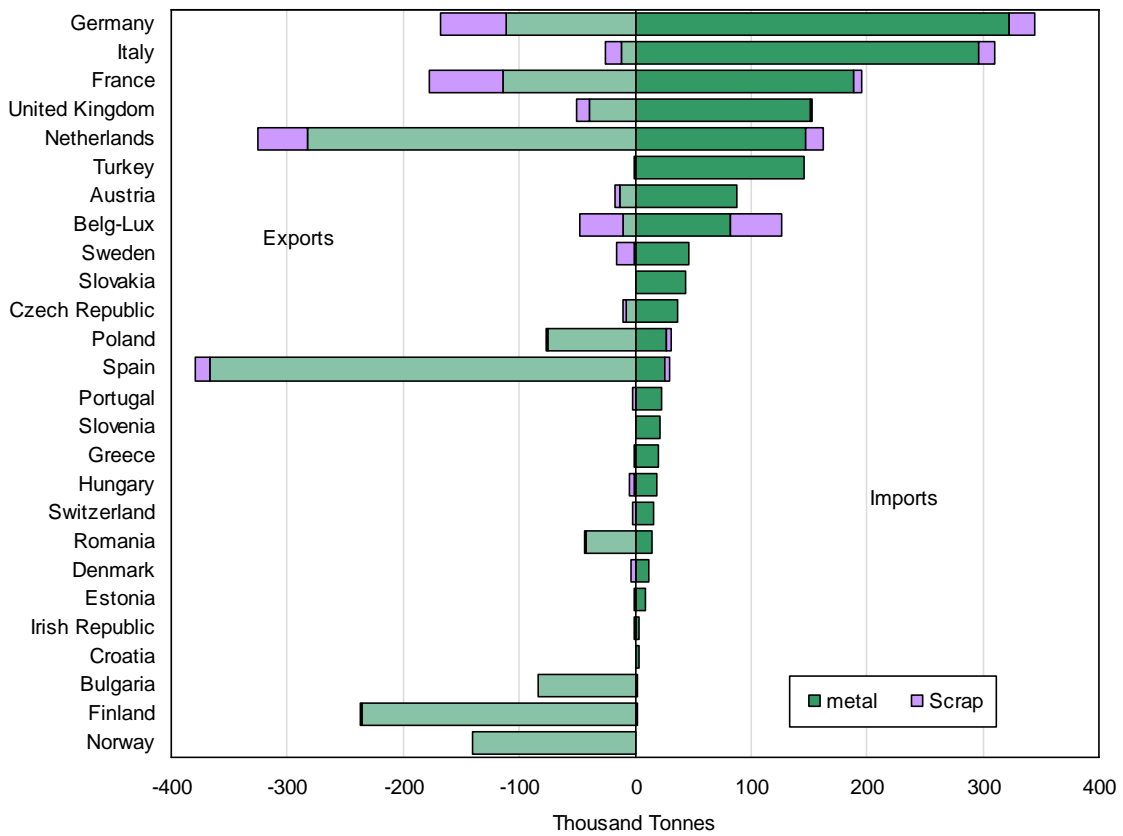
(1) In this table the term 'unwrought' zinc corresponds to item 7901 of the Harmonised System and comprises blocks, pigs, slabs etc.

(a) Including alloys

Zinc ore – EU31 trade in 2005



Zinc – EU31 trade in 2005





## Zirconium minerals

- The mineral zircon (zirconium silicate) is the principal zirconium commodity. Due to its very high melting temperature and chemical stability, it is used as a refractory in furnace and ladle linings, foundry sands and ceramic manufacture. Zirconium metal manufacture is a very small part of total output.
- Zircon is recovered from heavy mineral sands, typically as a co-product with titanium minerals, and the relative rarity of large deposits restricts production to only a few countries. The largest producers in 2005 were Australia (36%) and South Africa (33%).
- Zircon is traded in three forms — foundry, ceramic and refractory. In 2005, greater demand for zircon resulted in increased prices. The average value of ore and concentrates imported to the US increased to \$674/tonne in 2005 compared to \$477/tonne in 2004. Ceramic grade Australian zircon prices increased to between \$620–\$700/tonne at the end of 2005.

## Exports of zirconium

tonnes

Country	2001	2002	2003	2004	2005
Belgium-Luxembourg					
Concentrates	14 979	18 253	10 047	11 105	22 965
Metal	193	233	163	170	222
Estonia					
Metal	...	—	0	0	...
France					
Concentrates	657	1 126	653	1 129	1 058
Germany					
Concentrates	4 161	2 539	2 111	2 450	5 211
Metal	265	343	300	275	286
Italy					
Concentrates	15 906	20 510	22 050	25 633	21 760
Metal	1 604	775	424	441	455
Netherlands					
Concentrates	1 430	5 361	7 011	8 548	8 178
Spain					
Concentrates	7 449	7 852	13 669	10 844	9 805
Metal	5	122	602	989	820
United Kingdom					
Concentrates	1 776	5 033	418	505	699
Metal	380	263	244	183	127

Note(s):-

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

## Imports of zirconium

tonnes

Country	2001	2002	2003	2004	2005
Austria					
Concentrates	1 127	1 526	1 206	1 486	1 200
Belgium-Luxembourg					
Concentrates	5 657	13 267	5 178	3 991	14 504
Metal	670	483	533	534	605
Bulgaria					
Concentrates	1 490	1 413	1 375	1 149	1 589
Czech Republic					
Concentrates	3 480	2 911	2 105	1 605	655
Metal	486	580	348	32	60
France					
Concentrates	59 386	43 841	58 457	48 004	53 701
Metal	2 323	251	288	276	207
Germany					
Concentrates (a)	82 728	76 921	85 178	80 328	79 729
Metal	409	456	632	516	503
Italy					
Concentrates	137 649	136 504	130 207	149 787	147 435
Metal	936	85	823	122	120

Zirconium

Imports continued

tonnes

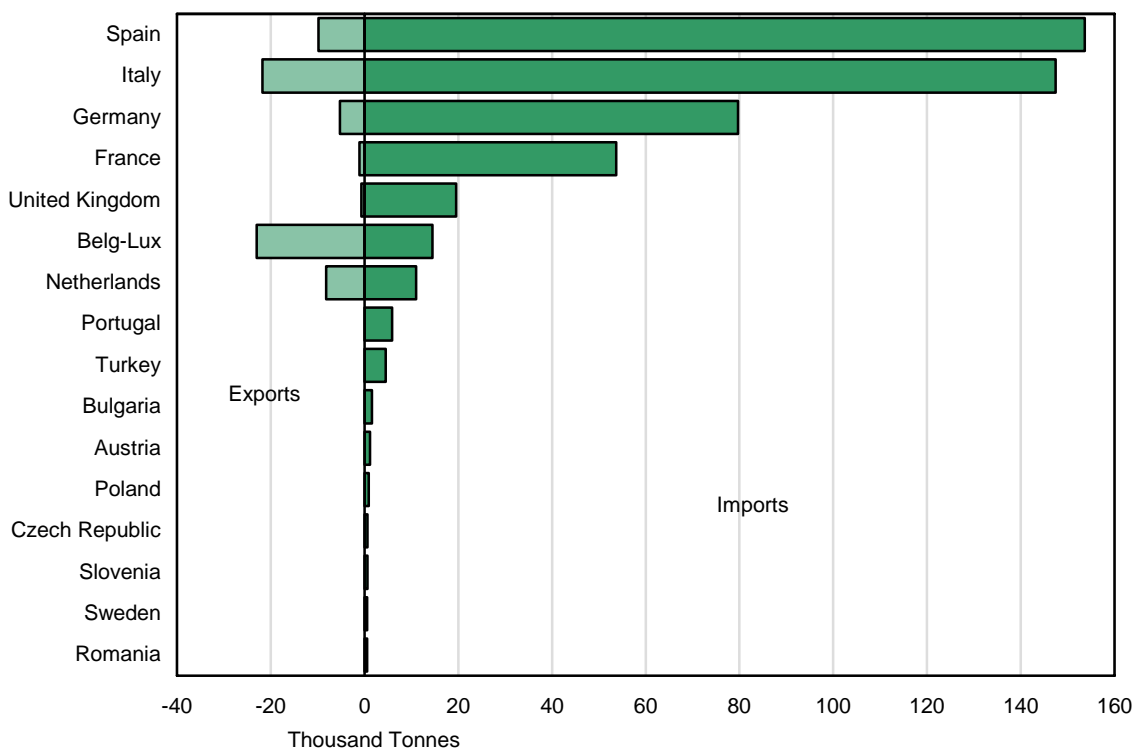
Country	2001	2002	2003	2004	2005
Netherlands					
Concentrates	27 300	21 401	11 607	13 613	10 975
Metal	53	42	52	105	88
Poland					
Concentrates	2 002	1 207	1 056	1 085	870
Metal	29	13	2	23	6
Portugal					
Concentrates	3 990	2 924	2 802	2 045	5 918
Romania					
Concentrates	685	678	827	809	552
Metal	48	12	22	30	22
Slovenia					
Concentrates	440	440	529	416	625
Spain					
Concentrates	133 013	145 970	142 949	143 860	153 619
Metal	163	41	60	94	56
Sweden					
Concentrates	435	424	480	564	588
Metal	66	138	172	82	91
Switzerland					
Metal	66	115	85	86	117
Turkey					
Concentrates	2 263	3 914	3 954	3 881	4 539
Metal	5	23	5	9	14
United Kingdom					
Concentrates	46 548	30 656	39 285	32 917	19 519
Metal	693	394	346	444	338

Note(s) :-

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

(a) Including niobium and tantalum concentrates

Zirconium concentrates – EU31 trade in 2005



## Borates

- Borates is a general term for a range of boron-containing minerals of which borax (tincal), ulexite, colemanite and datolite are the most commercially significant. These minerals are processed via boron trioxide to boric acid. The chief use of borate minerals is in glass manufacture (in particular fibreglass) and ceramics.
- Economic concentrations of borates form in unusual geological environments and so production is restricted to a few countries. In 2005, Turkey was the largest world producer (39%).
- Borates are traded in a variety of forms. The price of Turkish lump colemanite (FOB 40–42% B<sub>2</sub>O<sub>3</sub>) was between \$270–\$290/tonne. Processed chemical (borax) ranged from £300–£900/tonne with the higher prices referring to anhydrous borax.

### Production of borates

tonnes

Country	2001	2002	2003	2004	2005
Turkey	1 399 000	1 328 000	1 324 000	1 727 000	2 087 000

## Primary magnesium metal

- Magnesium is a light metal chiefly used as an alloying agent with aluminium to reduce weight. The use of magnesium castings is increasing, especially in the automotive industry. Its other chief use is in desulphurising steel.
- Magnesium is produced mainly from dolomite rock, lake and sea brines and magnesite (magnesium carbonate rock). The largest producer in 2005 was China. Until recently Norway and France produced recycled magnesium, however, the EU31 is now entirely import dependent for magnesium metal.
- The market was generally oversupplied with magnesium in 2005 and, with the exception of a slight increase at the beginning of the year, magnesium prices decreased steadily to below \$1600/tonne.

### Production of primary magnesium metal

tonnes

Country	2001	2002	2003	2004	2005
France	4 800	2 000	—	—	—
Norway	40 700	3 100	—	—	—

## Nepheline syenite

- Nepheline syenite is an igneous rock composed chiefly of feldspar and nepheline (one of a family of minerals called feldspathoids). The chief uses are similar to those for feldspar, i.e. in the manufacture of glass, in ceramics and as a filler.
- Economic concentrations form in rare geological environments and only three countries produce nepheline syenite. Russia was the largest producer in 2005, followed by Canada and Norway.
- Norwegian nepheline syenite (bulk FOL, UK port, glass grade, 0.5mm) traded at £97/tonne throughout 2005.

### Production of nepheline syenite

tonnes

Country	2001	2002	2003	2004	2005
Norway	330 362	330 461	332 000	329 000	320 000

## Perlite

- Perlite is a silicate mineral that results from the alteration of natural glass with the chemical composition of granite. Upon heating the mineral swells and dewateres — resulting in a sudden increase in volume accompanied by a decrease in density. It has remarkable thermal insulation properties, porosity, chemical stability, nonflammability, high heat resistance and high sound absorption. It is chiefly used in building materials.
- More than 20 countries produce perlite. Greece is the largest perlite producer in the world, representing approximately 36% of world production in 2005. China and the USA are also significant perlite producers.
- Perlite can have a wide range of properties and shipments are individually assessed according to need. Thus, the price range is large. During 2005 perlite (aggregate, expanded, ex-works UK) traded between £320–£650/tonne.

### Production of perlite

tonnes

Country	2001	2002	2003	2004	2005
Bulgaria	12 300	10 500	16 800	8 500	15 300
Greece	840 660	838 997	1 079 036	1 053 388	*1 100 000
Hungary	89 900	72 196	95 100	65 000	69 900
Italy	*60 000	*60 000	*60 000	*60 000	*60 000
Slovakia	14 910	18 635	15 000	23 840	12 700
Turkey	154 515	151 902	136 683	133 829	156 935

## Selenium metal

- Selenium is a light, weakly toxic, metalloid. Selenium has a wide range of uses; the largest is in glass-making where it acts as a decolourizer, and it is also used in ceramics, pigments, electronics, animal feed supplement and in base-metal alloys. Its former major use in photocopiers has declined as it has been replaced by other materials.
- Selenium is most commonly produced as a by-product of copper refining. Thus, production tends to occur in the countries that produce significant amounts of refined copper. The largest producer in 2005 was Japan. Within the EU31, Belgium and Sweden are thought to be the largest producers but precise statistics are unavailable.
- The average US price for selenium metal min. 99.5% was \$47.40/lb in 2005. Selenium prices have risen dramatically since 2003, primarily as a result of demand exceeding supply. At the beginning of 2005 selenium was trading around \$37/lb. Prices steadily increased throughout the year to a year-end high of around \$52/lb.

### Production of selenium metal

tonnes

Country	2001	2002	2003	2004	2005
Belgium	*200	*200	*200	*200	*200
Finland	42	37	52	65	66
Germany	*100	*100	*100	*100	*14
Poland	65	68	78	83	82
Sweden	88	118	107	131	...

## Strontium minerals

- Strontium is a soft metallic element. The most common strontium mineral is celestite (strontium sulphate). This is frequently converted into strontium carbonate before marketing.
- The dominant use of strontium is (in oxide form) in the faceplate glass of cathode ray tubes where it blocks X-ray emissions. Strontium compounds are also used in pigments, pyrotechnics and fluorescent tubes. Strontium metal has only very minor uses.
- Only seven countries reported production of strontium minerals in 2005. China is the world's largest producer with almost two thirds of world production. In 2005 celestite traded at between \$54–\$100/tonne depending on source and grade.

### Production of strontium minerals

tonnes

Country	2001	2002	2003	2004	2005
Spain	164 030	171 293	152 383	206 001	190 000
Turkey	63 635	*70 000	*70 000	*60 000	*60 000

Note(s):-

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

## Uranium

- Uranium is a dense metallic element. It is chiefly used as the fuel source for nuclear power stations and in weapons.
- Uranium ore is milled and processed into 'yellowcake' (a uranium oxide), which is the chief form in international trade. Yellowcake is converted to uranium hexafluoride, which is then enriched to enable it to be used as a fuel.
- Canada was the world's largest mine producer during 2005, accounting for 28% of the world total. Australia is also a significant producer, contributing 23% to world production. In the EU31, a small amount of uranium was mined in the Czech Republic. In addition there was minor production from Romania and Germany.
- During 2005, the uranium spot price steadily climbed from around \$20/lb U<sub>3</sub>O<sub>8</sub> at the start of the year to a year-end price of \$36.25/lb U<sub>3</sub>O<sub>8</sub>. The price for long-term contracts reached \$27/lb U<sub>3</sub>O<sub>8</sub>.

### Mine production of uranium

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Czech Republic	490	477	458	435	420
France	194	12	—	—	—
Germany	27	221	104	77	80
Portugal	4	2	—	—	—
Romania	85	90	90	90	*90
EU31 Total	800	802	652	602	590
EU31 Total (U <sub>3</sub> O <sub>8</sub> equivalent)	944	946	770	710	696

Note(s):-

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

## Wollastonite

- Wollastonite (calcium metasilicate) is a commercially important mineral because of its bladed (acicular) crystals. It is used as filler in plastics, ceramics, paint and friction products and as an asbestos substitute.
- Production is restricted to a handful of countries, of which China is the largest (55% of world production). Finland contributed 2% to world production.
- Wollastonite is traded on the basis of the aspect ratio of its crystals and by mesh size. Prices were stable throughout 2005 at between \$205–\$345/short ton, depending on grade.

### Production of wollastonite

tonnes

Country	2001	2002	2003	2004	2005
Finland	18 399	17 400	17 300	16 763	15 950

Note(s):-

- (1) In addition to the countries listed, Turkey is believed to produce wollastonite