

INSTITUTE OF GEOLOGICAL SCIENCES  
MINERAL RESOURCES DIVISION

STATISTICAL  
SUMMARY OF THE  
MINERAL INDUSTRY

WORLD PRODUCTION,  
EXPORTS AND IMPORTS

1963-1968



LONDON  
HER MAJESTY'S STATIONERY OFFICE  
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NATURAL ENVIRONMENT RESEARCH COUNCIL  
INSTITUTE OF GEOLOGICAL SCIENCES  
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1970

## PREFACE

This publication is prepared by the Statistics Unit of the Mineral Resources Division of the Institute of Geological Sciences. The Institute was formed in June 1965 by the incorporation of Overseas Geological Surveys with the Geological Survey of Great Britain and the Museum of Practical Geology and is a constituent body of the Natural Environment Research Council.

The statistical tables have been compiled from a large number of official and commercial sources. The information obtained from Mines Reports, Trade Returns and other published works, and the assistance given by government and private correspondents throughout the world, are gratefully acknowledged.

Institute of Geological Sciences,  
Exhibition Road,  
London, S.W.7.

K. C. DUNHAM,  
*Director.*

All communications should be sent to the Statistics Unit,  
Mineral Resources Division, at the above address.

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## EXPLANATORY NOTES

**Coverage.** Although this Summary attempts to provide a comprehensive world coverage of mineral production and trade, it has not been possible to obtain complete information for every country. In the production tables, estimates for certain countries have been included where necessary in order to arrive at world totals. In the trade tables, however, such estimates have generally not been attempted and the coverage is limited to that available from the official trade returns. The absence of import or export figures for a particular country from a table does not necessarily signify no trade in the commodity concerned, but may mean only that the item has not been separately specified in that country's trade returns.

**Arrangement of Countries.** In each table, Commonwealth countries are grouped separately from other countries. Within their respective groups the countries are then listed alphabetically by continents in the following order: Europe, Africa, North and Central America, South America, Asia and Australasia.

For Swaziland and Botswana, production statistics are recorded separately but the foreign trade is dealt with for Customs purposes as part of that of South Africa. The trade figures for South-West Africa are also generally included with those for South Africa.

The trade statistics for Southern Yemen formerly Aden (1963-1967) may include those of other states in the Federation of South Arabia.

The trade statistics for India include those of Goa.

The production and trade statistics for West Malaysia and Singapore are now shown separately, the trade statistics including trade between these countries. West Malaysia and Singapore constituted the territory "Malaya" shown in previous editions of this Summary.

The trade statistics for Spain and Spanish Dependencies exclude the trade between these territories.

**Production of Ores and Metals.** In the sections on cobalt, copper, lead, tin and zinc, tables are given showing both the production of ore, in terms of its metal content, and the actual production of metal. The metal content of the ore produced is either as calculated from average assay values or is the amount of metal estimated to be recoverable. The ore is, of course, not necessarily smelted in the country of origin and the metal production in a particular country may be derived from both domestic and imported ores. Secondary metal is excluded, as far as possible, from the metal production tables but where important is given in footnotes to the producing countries.

**Imports and Exports.** Except in the cases of gold and silver, the figures shown in the tables are intended to represent exports of domestic produce and imports retained, i.e. total imports less re-exports. In certain cases it has not been possible to allow for re-exports and figures relate to total exports and total imports. Shipments of coal and oil as bunker fuel, which constitute an important part of the trade of some countries, are shown separately in the export tables; where these shipments consist of, or include, foreign produce a footnote is given to that effect.

**Units.** The units of weight employed in the tables are: the metric carat, the troy ounce, the lb. (avdp.) and the long ton. Their equivalents in certain other units are as follows:

1 metric carat	= 0.2 gramme	1 lb. (avdp.)	= 7,000 grains
	= 3.08648 grains		= 14.5833 troy ounces
			= 0.453592 kilogrammes
1 troy ounce	= 480 grains	1 long ton	= 2,240 lb. (avdp.)
	= 31.1035 grammes		= 1.12 short tons
	= 155.5175 metric carats		= 1.016047 metric tons

The factors used for converting volumes of liquids into long tons are given in footnotes to the tables relating to Coal By-Products (p. 86) and Petroleum and Allied Products (pp. 240,254).

**Symbols.** The following symbols are used in this Summary:

— = Nil, or negligible. *r* = Revised figure. *n.a.* = Information not available.

# ABRASIVES\*

## PRODUCTION OF NATURAL ABRASIVES

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Kenya—						
Pumice (b) .. ..	280	1,415	1,023	780	120	<i>n.a.</i>
Corundum .. ..	—	—	—	—	25	<i>n.a.</i>
Rhodesia—						
Corundum .. ..	5,304	2,563	(a) 3,208	(c) 3,500	(c) 4,500	<i>n.a.</i>
Tanzania—						
Corundum (a) .. ..	400	391	—	100	38	—
Canada—						
Grindstones .. ..	9	—	4	4	9	—
Dominica—						
Pumice (b) .. ..	<i>n.a.</i>	1,477	1,965	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
India—						
Corundum .. ..	648	531	473	379	301	<i>n.a.</i>
Garnet .. ..	395	290	218	185	279	<i>n.a.</i>
Australia—						
Garnet .. ..	91	80	130	239	175	<i>n.a.</i>
New Zealand—						
Pumice (b) .. ..	16,606	20,518	107,863	18,039	16,144	16,315
<b>OTHER COUNTRIES</b>						
Belgium—						
Grindstones .. ..	59	48	43	44	37	36
France—						
Pumice (b) .. ..	758	902	697	793	616	<i>n.a.</i>
Millstones .. ..	1,208	1,085	1,173	1,512	1,476	<i>n.a.</i>
Sharpening stones .. ..	39	11	10	12	8	<i>n.a.</i>
Germany (Federal)—						
Pumice (d) .. ..	6,289,000	5,729,000	5,016,000	5,305,000	4,071,000	3,504,000
Tripoli .. ..	25	25	25	8	—	<i>n.a.</i>
Greece—						
Emery .. ..	7,470	7,480	7,500	7,480	7,480	7,500
Pumice .. ..	99,873	225,482	323,247	327,115	200,000	279,000
Pumicite .. ..	234,611	308,701	400,000	(c) 345,000	(c) 491,000	<i>n.a.</i>
Iceland—						
Pumice (b) .. ..	12,303	9,842	(c) 10,000	(c) 10,000	(c) 10,000	(c) 10,000
Italy—						
Pumice .. ..	921,000	947,600	804,198	760,664	<i>n.a.</i>	<i>n.a.</i>
Sharpening stones .. ..	157	—	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Whetstones .. ..	102	59	64	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Spain—						
Garnet .. ..	70	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Pumice .. ..	—	—	50,540	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sweden—						
Grindstones and whetstones .. ..	737	1,945	948	548	217	<i>n.a.</i>
Canary Islands—						
Pumice (b) .. ..	1,505	2,257	4,905	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Malagasy Republic—						
Garnet .. ..	2	(a) 52	(a) 103	(a) 6	(a) 28	(a) 28
South Africa—						
Corundum .. ..	71	53	307	357	313	252

\*See also Aluminium, Diamonds and Diatomaceous earth.

(a) Exports.

(b) May include pumice for use other than as an abrasive.

(c) United States Bureau of Mines' estimate.

(d) Marketable. Including pumice and pumicite for constructional purposes.

PRODUCTION OF NATURAL ABRASIVES (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>United States (c)—</b>						
Emery .. .. .	6,011	8,227	9,571	9,912	<i>n.a.</i>	<i>n.a.</i>
Garnet .. .. .	13,059	14,396	17,259	19,600	18,298	19,764
<b>Pumice and pumicite</b>						
(a) (b) .. .. .	2,337,503	2,478,993	3,010,000	2,873,000	3,076,786	3,151,786
Tripoli .. .. .	59,496	57,690	63,516	59,074	63,379	76,370
<b>Argentina—</b>						
Garnet .. .. .	<i>n.a.</i>	<i>n.a.</i>	59	84	93	<i>n.a.</i>
<b>Turkey—</b>						
Emery .. .. .	7,372	12,201	12,374	29,005	24,088	36,608

Abrasives are also produced in other countries, statistics for which are not available.

The following crude artificial abrasives were produced in Canada (long tons):

	1963	1964	1965	1966	1967	1968
Silicon carbide ..	69,974	76,279	87,987	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Fused alumina ..	132,247	132,446	151,151	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

The United States Bureau of Mines reports the following artificial abrasives sold, shipped or used from plants in the United States and Canada (long tons):

	1963	1964	1965	1966	1967	1968
Silicon carbide ..	97,635	117,772	123,466	142,000	127,000	142,000
Aluminium oxide ..	142,914	153,091	174,532	218,000	185,000	171,000
Metallic abrasives ..	119,114	139,109	170,131	183,000	182,000	193,000

(United States plants only)

The figures given above include material used for refractories and other non-abrasive purposes.

(a) Including pumice for use other than as an abrasive.

(b) Including volcanic cinders used principally for ballast which amounted to 1,399,844 tons in 1963, 1,438,476 tons in 1964, 2,579,000 tons in 1965, 2,383,000 tons in 1966, 2,383,930 tons in 1967 and 2,722,321 tons in 1968.

(c) Sold or used by producers.



EXPORTS OF ABRASIVES\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Abrasives, natural ..	3,975	4,586	3,036	3,617	4,701	8,811
Corundum artificial ..	2,687	4,260	5,023	5,345	4,953	3,226
Grinding wheels, etc. ..	6,902	7,233	7,431	7,005	5,684	5,776
Rhodesia (d)—						
Corundum .. ..	4,660	2,972	3,208	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tanzania—						
Corundum .. ..	400	391	—	100	38	—
Canada—						
Natural abrasives, including diatomaceous earth .. ..	110	172	128	27	55	92
Artificial abrasives, crude .. ..	201,219	211,379	239,454	264,034	227,097	233,519
Artificial abrasive wheels, etc. .. ..						
Grindstones .. ..						
	(£48,105)	(£104,770)	(£57,345)	(£53,068)	(£42,196)	(£112,156)
Hong Kong—						
Grinding and polishing wheels, etc. .. ..	27	58	41	72	48	86
India (c)—						
Grindstones, etc. ..	2,089	2,887	703	250	175	255
New Zealand (e)—						
Pumice (a) .. ..	227	851	933	822	735	638
<b>OTHER COUNTRIES</b>						
Austria—						
Natural abrasives ..	47	8	—	—	—	2
Millstones and grindstones .. ..	5	9	4	6	6	6
Corundum, artificial ..	12,693	10,772	14,750	17,279	19,541	18,769
Belgium-Luxemburg E.U.—						
Natural abrasives ..	272	8	4	303	484	422
Carborundum .. ..	202	253	199	184	186	180
Corundum, artificial ..	82	27	145	224	120	190
Millstones, grindstones, etc. (b) .. ..	1,044	1,150	1,218	1,473	1,581	1,452
Denmark—						
Emery .. ..	—	2	—	2	2	—
Millstones and grindstones .. ..	9	54	37	34	20	12
Finland—						
Grindstones, etc. (b) ..	105	99	46	48	75	70
France—						
Corundum and emery ..	58	103	49	71	43	107
Pumice .. ..	31	52	32	133	296	280
Other natural abrasives	459	630	292	392	487	170
Millstones and grindstones .. ..						
Whetstones .. ..	1,622	1,977	2,007	2,345	2,165	2,351
Carborundum .. ..	2,445	2,599	1,951	1,589	971	2,485
Corundum, artificial ..	12,172	9,784	10,011	13,639	12,160	11,405
Germany (Federal)—						
Emery and corundum ..	189	161	243	174	17	76
Pumice (f) .. ..	694,496	628,613	583,193	554,048	636,054	468,033

\*See also Aluminium, Diamonds and Diatomaceous earth. (c) Years ended March 31 following that stated.

(a) May include pumice for use other than as an abrasive. (d) Figure for 1963 relates to Rhodesia and Nyasaland.

(b) Including artificial.

(e) Year ended June 30 of that stated.

(f) Including pumice and pumicite for construction purposes.

## EXPORTS OF ABRASIVES (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Germany (Federal)</b>						
<i>(cont.)—</i>						
Other natural abrasives	3	2	—	—	—	—
Millstones, grindstones, etc. (a) .. ..	1,751	2,113	5,096	6,421	7,985	5,442
Carborundum .. ..	6,614	6,083	6,926	7,196	7,306	8,027
Corundum, artificial ..	17,030	19,021	21,031	24,443	26,868	27,896
<b>Greece—</b>						
Emery .. .. .	5,423	4,649	5,632	5,170	5,460	6,485
Pumice .. .. .	43,142	121,092	197,849	184,528	113,334	181,128
<b>Italy—</b>						
Pumice .. .. .	338,395	316,665	146,381	314,415	270,090	295,584
Emery and corundum	66	22	306	50	88	21
Other natural abrasives	487	113	891	979	2,179	15,843
Millstones .. .. .						
Grindstones .. .. .	1,237	1,571	2,201	2,774	3,228	3,798
Whetstones .. .. .						
Carborundum .. .. .	7,656	8,236	7,692	8,139	9,574	11,301
Corundum, artificial ..	441	629	2,172	3,083	3,822	4,584
<b>Netherlands—</b>						
Natural abrasives ..	4,248	9,394	4,713	4,801	4,862	5,124
Millstones, grindstones, etc. .. .. .	363	381	557	716	805	988
Corundum, artificial ..	36	13	25	19	30	52
<b>Norway—</b>						
Natural abrasives ..	—	76	—	—	—	—
Carborundum .. .. .	15,411	22,453	27,282	35,071	35,973	41,541
<b>Sweden—</b>						
Emery .. .. .	1	11	15	—	—	10
Other natural abrasives	42	41	44	35	31	504
Carborundum .. .. .	446	216	831	284	130	1,355
Corundum, artificial ..	677	704	890	1,299	1,337	1,355
Millstones, grindstones, etc. .. .. .	486	1,448	227	86	48	104
<b>Switzerland—</b>						
Carborundum, emery, etc., crude .. ..	2,842	3,168	3,666	3,932	3,414	3,267
do. do. ground .. ..						
<b>Yugoslavia—</b>						
Natural abrasives ..	2,009	2,534	48	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Millstones, grindstones, etc. .. .. .	116	190	950	1,044	5,804	1,236
Carborundum .. .. .	101	49	34	79	—	239
Corundum, artificial ..	<i>n.a.</i>	<i>n.a.</i>	3,104	4,078	3,200	4,846
<b>Malagasy Republic—</b>						
Garnet .. .. .	1	52	103	6	28	28
<b>South Africa—</b>						
Corundum .. .. .	71	53	—	—	—	—
Other natural abrasives	<i>n.a.</i>	87	8	92	5	6
Grinding wheels, etc. ..	<i>n.a.</i>	212	227	171	178	196
<b>Mexico—</b>						
Pumice, etc. .. .. .	6,378	7,051	7,067	6,619	3,596	7,206
<b>United States—</b>						
Corundum .. .. .	67	138	(b)	(b)	(b)	(b)
Emery powder .. .. .	559	607	(b)	(b)	(b)	(b)
Grindstones .. .. .	37	160	1,932	1,960	1,620	2,291
Whetstones, etc. .. ..	62	332	210	273	410	329
Pulp stones .. .. .	1,269	1,463	1,461	1,951	1,838	982
Other natural abrasives	11,362	12,492	12,010	14,893	12,806	18,607
Aluminium oxide, fused	11,729	16,706	15,405	16,282	17,468	13,860
Carborundum .. .. .	8,762	10,013	(c) 11,392	7,994	5,770	6,324

(a) Including artificial.

(c) May include other crude artificial abrasives.

(b) Included with "other natural abrasives".

EXPORTS OF ABRASIVES (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES (cont.)						
United States (cont.)—						
Unfused alumina ..	168	403	n.a.	n.a.	n.a.	n.a.
Other crude artificial abrasives .. ..	93	155	n.a.	n.a.	n.a.	n.a.
Japan—						
Emery .. .. .	284	361	414	622	637	894
Other natural abrasives	58	96	74	104	564	1,582
Grindstones, etc. ..	363	788	972	1,234	1,376	1,948
Artificial abrasives ..	1,063	817	1,529	2,489	2,706	3,151
Turkey—						
Emery .. .. .	8,220	9,071	16,392	26,414	20,328	23,134

## IMPORTS OF ABRASIVES\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Natural abrasives ..	11,998	14,153	13,789	21,382	55,274	79,885
Corundum, artificial ..	14,031	15,151	17,409	12,411	18,140	13,801
Carborundum ..	11,508	13,763	16,918	12,291	12,780	14,491
Grinding wheels of hard abrasives ..	531	917	1,018	1,503	1,218	1,691
Grindstones and whetstones etc. ..						
Malta—						
Pumice ..	431	7	(£1,089)	(£3,134)	(£2,673)	(£3,011)
Grinding and polishing wheels ..	(£3,442)	(£5,924)	(£4,771)	(£7,507)	(£8,331)	(£13,528)
Ghana—						
Grinding and polishing wheels ..	60	57	62	438	103	1,110
Kenya and Uganda—						
Grindstones, etc. ..	50	69	54	45	53	80
Mauritius—						
Grindstones, etc. ..	43	30	51	39	30	46
Nigeria—						
Natural abrasives ..	<i>n.a.</i>	183	119	334	180	43
Grinding stones, etc. ..	135	238	290	203	129	124
Rhodesia (a)—						
Grinding and polishing wheels and stones ..	201	187	179	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tanzania—						
Grindstones, etc. ..	13	12	22	24	18	30
Zambia—						
Grinding and polishing wheels and stones ..	<i>n.a.</i>	63	96	116	107	99
Canada—						
Pumice ..	<i>n.a.</i>	9,711	9,404	12,881	7,890	5,713
Other natural abrasives	<i>n.a.</i>	3,955	5,552	7,296	7,441	8,746
Artificial abrasives, ground ..	(£982,982)	}	}	}	}	}
Artificial abrasive manufactures ..	(£198,462)					
Grindstones and wheels	(£896,632)					
Jamaica—						
Natural abrasives ..	5	12	4	61	4	42
Grindstones ..	8	11	10	14	14	66
Trinidad and Tobago—						
Grindstones and wheels	19	15	22	22	13	20
Ceylon—						
Natural abrasives ..	308	21	16	19	70	32
Grinding and polishing wheels, etc. ..	(£8,369)	(£9,435)	(£17,741)	(£13,587)	(£9,093)	(£30,525)
Cyprus—						
Grindstones and millstones ..	(£11,170)	(£6,538)	(£9,193)	(£11,838)	(£17,867)	(£25,757)
Hong Kong—						
Natural abrasives ..	250	200	212	256	448	416
Grinding and polishing wheels, etc. ..	820	1,867	329	257	285	337
India (b)—						
Natural abrasives ..	3,196	3,455	536	206	54	388
Carborundum ..	390	107	226	523	474	176
Grinding stones, etc. ..	187	262	322	293	237	129

\*See also Aluminium, Diamonds and Diatomaceous earth.

(a) Figure for 1963 relates to Rhodesia and Nyasaland.

(b) Years ended March 31 following that stated.

## IMPORTS OF ABRASIVES (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
Malaysia (West)—						
Natural abrasives ..	<i>n.a.</i>	<i>n.a.</i>	109	134	106	104
Grinding and polishing wheels, etc. ..	<i>n.a.</i>	<i>n.a.</i>	304	288	313	377
Sarawak—						
Grinding and polishing wheels, etc. ..	32	35	46	23	26	19
Singapore—						
Grinding and polishing wheels ..	124	200	155	136	107	233
Australia (a)—						
Pumice .. ..	1,128	920	1,012	628	624	417
Grindstones, etc. ..	254	293	386	(b) 174	(b) 375	(b) 447
Garnet grains .. ..	44	105	128	92	116	87
Tripoli .. ..	453	729	536	499	425	519
Other natural abrasives ..	590	1,129	1,520	(b) 522	(b) 420	(b) 403
Artificial abrasives ..	4,586	4,547	5,611	4,063	3,592	4,218
New Zealand (a)—						
Pumice .. ..	47	53	56	78	53	<i>n.a.</i>
Corundum, emery, etc. ..	3	8	3	7	5	<i>n.a.</i>
Grindstones, etc. ..	£ (156,565)	(180,167)	(214,677)	(232,789)	(275,935)	<i>n.a.</i>
Irish Republic—						
Grindstones, oilstones, etc. .. ..	178	219	233	239	254	297
<b>OTHER COUNTRIES</b>						
Austria—						
Pumice .. ..	350	698	643	722	312	456
Other natural abrasives ..	114	136	106	122	100	140
Carborundum .. ..	1,466	1,589	1,778	1,843	1,840	2,073
Corundum, artificial ..	2,565	3,390	3,338	4,070	3,580	4,924
Grindstones .. ..	} 93	} 95	} 116	} 111	} 141	} 218
Millstones .. ..						
Belgium-Luxemburg						
E.U.—						
Pumice .. ..	206,435	187,555	206,788	168,845	194,728	138,772
Other natural abrasives ..	855	889	711	801	619	1,044
Corundum, artificial ..	2,050	2,632	3,110	3,211	3,456	3,579
Millstones, grindstones, etc. (c) .. ..	1,191	1,447	1,408	1,436	1,302	1,156
Carborundum .. ..	1,729	2,929	2,526	2,905	2,227	2,289
Denmark—						
Emery, etc. .. ..	520	673	721	662	521	483
Pumice .. ..	2,177	3,459	2,371	4,286	4,807	2,939
Carborundum .. ..	289	391	440	313	288	342
Corundum, artificial ..	407	439	439	424	476	576
Millstones and grindstones .. ..	45	73	49	60	64	55
Finland—						
Emery, pumice, etc. ..	342	377	295	267	286	183
Carborundum .. ..	599	207	602	589	841	718
Millstones, grindstones, etc. (c) .. ..	1,146	1,397	1,399	1,355	1,305	1,243
France—						
Emery and corundum ..	2,522	1,372	4,857	1,100	788	674
Pumice .. ..	28,384	36,897	36,100	38,723	33,168	26,807
Other natural abrasives ..	3,534	3,646	2,135	2,682	7,984	3,147

(a) Years ended June 30 of that stated.

(b) Owing to reclassification not strictly comparable with earlier years.

(c) Including artificial.

## IMPORTS OF ABRASIVES (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
France <i>(cont.)</i> —						
Millstones and grindstones .. .. .	} 2,569	2,998	3,478	4,087	4,279	4,373
Whetstones .. .. .						
Corundum .. .. .						
Corundum, artificial .. .. .	3,046	3,876	4,514	6,473	7,597	9,392
Germany (Federal)—	2,170	1,391	1,544	2,358	3,145	2,602
Emery and corundum .. .. .	762	1,182	538	(b)	647	876
Pumice, etc. .. .. .	186,688	203,795	108,748	75,538	71,303	25,087
Other natural abrasives	1,475	1,737	2,512	3,416	1,826	2,301
Millstones, grindstones, etc. (a) .. .. .	300	391	2,242	6,834	2,533	1,719
Carborundum .. .. .	4,424	5,144	6,401	7,994	7,973	11,197
Corundum, artificial .. .. .	3,290	3,707	4,546	6,636	4,534	5,848
Greece—						
Millstones, grindstones, etc. .. .. .	194	129	261	188	218	162
Other abrasives .. .. .	48	73	40	n.a.	n.a.	9
Iceland—						
Millstones, etc. .. .. .	10	11	13	14	8	8
Italy—						
Emery and corundum .. .. .	1,898	1,556	1,316	1,469	1,078	1,793
Other natural abrasives	1,358	1,397	1,282	1,797	1,876	2,005
Millstones Grindstones etc. .. .. .	2,996	2,519	2,489	3,373	3,743	3,591
Corundum, artificial .. .. .	5,806	5,577	3,829	6,887	8,276	6,282
Carborundum .. .. .	3,081	1,869	1,800	2,253	1,839	2,339
Netherlands—						
Emery .. .. .	4,993	4,803	5,417	(b)	(b)	(b)
Pumice and tripoli .. .. .	465,654	435,652	421,349	377,455	355,476	365,471
Other natural abrasives	482	404	426	7,883	9,764	8,009
Millstones and grindstones (a) .. .. .	1,216	1,417	1,642	1,680	1,436	1,679
Corundum, artificial .. .. .	2,057	2,714	3,160	2,849	3,251	3,093
Carborundum .. .. .	544	695	714	679	844	919
Norway—						
Natural abrasives .. .. .	381	344	332	392	427	393
Whetstones .. .. .	8	4	7	5	2	5
Carborundum .. .. .	966	16	76	84	12	10
Corundum, artificial .. .. .	513	698	609	928	738	623
Portugal—						
Emery, etc. .. .. .	331	280	420	355	111	326
Pumice .. .. .	211	360	356	245	181	122
Millstones etc. .. .. .	170	192	220	215	20	279
Spain—						
Emery powder .. .. .	n.a.	138	664	417	370	171
Corundum, artificial .. .. .	453	776	1,232	2,172	1,681	1,646
Carborundum .. .. .	904	871	1,138	1,380	1,313	1,137
Sweden—						
Emery .. .. .	589	546	630	359	425	} 588
Other natural abrasives	716	643	516	944	301	
Carborundum, etc. .. .. .	3,492	3,868	4,495	5,392	3,863	4,588
Corundum, artificial .. .. .	3,623	4,453	5,671	5,397	5,177	6,233
Millstones Grindstones, etc. .. .. .	73	63	80	31	38	17
Switzerland—						
Emery, crude .. .. .						
Carborundum, emery, etc., ground .. .. .	737	677	1,163	1,031	233	243
Pumice (c) .. .. .	14,794	7,544	2,375	2,744	1,261	1,038

(a) Including artificial.

(b) Included with "other natural abrasives."

(c) May include pumice for use other than as an abrasive.

## IMPORTS OF ABRASIVES (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
Switzerland (cont.)—						
Millstones .. ..	72	98	76	71	44	n.a.
Grindstones .. ..						n.a.
Whetstones .. ..	22	11	14	11	2	n.a.
Corundum, artificial ..	3,413	4,004	4,882	4,678	4,006	4,430
Yugoslavia—						
Natural abrasives ..	766	422	267	456	684	384
Millstones, grindstones, etc. .. ..	328	350	486	858	615	820
Corundum, artificial ..	n.a.	n.a.	513	497	977	1,127
Carborundum .. ..	596	1,024	844	951	1,737	974
Malagasy Republic—						
Natural abrasives ..	18	14	13	12	14	19
Morocco—						
Millstones and grind- stones .. ..	144	148	132	40	48	51
Natural abrasives ..	27	23	12	39	23	9
South Africa—						
Emery .. ..	164	3,526	1,737	4,821	2,792	4,656
Pumice .. ..	126					
Other abrasives .. ..	(£271,772)	181	281	176	251	260
Abrasive wheels and discs .. ..	(£102,890)					
Grindstones, millstones, etc. .. ..	(£7,760)					
Sudan—						
Natural abrasives ..	167	152	34	51	3	91
Grindstones .. ..	221	172	221	298	77	143
Tunisia—						
Pumice .. ..	11	46	29	256	22	n.a.
Millstones and grind- stones (a) .. ..	31	71	33	71	52	132
Costa Rica—						
Pumice, emery and corundum .. ..	45	6	10	13	7	n.a.
Guatemala—						
Natural abrasives ..	11	6	5	6	13	25
Mexico—						
Emery and carborundum	990	1,626	(b) 302	(b) 669	(b) 402	(b) 406
Pumice .. ..	9	156	18	17	39	6
Millstones and grind- stones .. ..	121	306	362	297	165	124
United States—						
Corundum, crude ..	1,817	1,758	1,696	2,700	1,986	5,357
Emery, crude .. ..	500	n.a.	n.a.	n.a.	n.a.	n.a.
Corundum and emery, ground .. ..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Pumice, crude .. ..	2,171	4,910	8,889	8,386	5,612	8,425
do. manufactured ..	2,019	2,761	3,152	3,848	2,050	2,849
Tripoli, etc. .. ..	20	n.a.	8	n.a.	n.a.	n.a.
Crude artificial abrasives	182,353	198,260	226,767	260,000	220,000	260,000
Argentina—						
Emery .. ..	1,098	2,389	3,426	n.a.	n.a.	n.a.
Grindstones .. ..	14	45	14	24	14	23
Brazil—						
Emery, pumice, etc. ..	31	52	55	463	695	858
Carborundum .. ..	155	149	172	246	500	47
Millstones, grindstones, etc. .. ..	77	85	49	130	112	192

(a) Including artificial.

(b) Emery only.

## IMPORTS OF ABRASIVES (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Chile—						
Emery .. .. .	166	61	84	<i>n.a.</i>	29	<i>n.a.</i>
Carborundum .. ..	4	11	16	<i>n.a.</i>	43	<i>n.a.</i>
Millstones, grindstones, etc. .. .. .	371	311	460	<i>n.a.</i>	247	<i>n.a.</i>
Colombia—						
Emery and pumice .. ..	102	75	105	109	67	75
Tripoli and other natural abrasives .. ..	46	31	31	21	30	49
Millstones and grindstones (a) .. .. .	239	253	193	114	109	48
Corundum, artificial .. ..	99	255	104	176	<i>n.a.</i>	266
Peru—						
Emery and pumice .. ..	53	53	53	125	86	<i>n.a.</i>
Millstones, grindstones, etc. (a) .. .. .	112	125	284	159	298	<i>n.a.</i>
Venezuela—						
Natural abrasives .. ..	35	138	164	193	196	336
Carborundum .. .. .	16	9	49	33	75	41
Burma—						
Natural abrasives .. ..	<i>n.a.</i>	—	—	—	<i>n.a.</i>	<i>n.a.</i>
Iran (b)—						
Emery, etc. .. .. .	<i>n.a.</i>	16	48	53	50	34
Iraq—						
Emery, pumice, etc. .. ..	1	4	<i>n.a.</i>	9	4	<i>n.a.</i>
Grindstones, whetstones, etc. .. .. .	209	166	<i>n.a.</i>	258	218	<i>n.a.</i>
Israel—						
Natural abrasives .. ..	105	112	1,651	107	110	126
Japan—						
Emery .. .. .	89	60	38	49	34	31
Other natural abrasives	1,099	1,445	1,337	1,796	2,849	4,127
Grindstones, etc. .. ..	18	12	110	89	123	144
Artificial abrasives .. ..	743	1,283	1,224	970	1,473	3,403
Lebanon—						
Emery .. .. .	10	6	1	3,513	13	<i>n.a.</i>
Pumice, etc. .. .. .	767	1,007	23	6,167	33	<i>n.a.</i>
Millstones .. .. .	155	137	204	213	194	<i>n.a.</i>
Philippine Republic—						
Emery .. .. .	178	243	247	<i>n.a.</i>	388	<i>n.a.</i>
Pumice .. .. .	24	19	16	<i>n.a.</i>	—	<i>n.a.</i>
Other natural abrasives	30	55	79	<i>n.a.</i>	113	<i>n.a.</i>
Thailand—						
Natural abrasives .. ..	624	549	892	854	1,149	1,077
Turkey—						
Natural abrasives .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	28	24	24
Carborundum .. .. .	135	17	26	58	61	85
Millstones and grindstones (a) .. .. .	443	313	534	684	573	589

(a) Including artificial.

(b) Years ended March 20 following that stated.



**ALUMINIUM**  
**(Including Bauxite and Cryolite)**  
**PRODUCTION OF BAUXITE**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Ghana .. .. .	309,400	246,400	304,200	346,800	345,400	287,000
Sierra Leone .. .. .	(a) 19,635	128,418	204,000	270,826	329,259	462,891
Rhodesia .. .. .	1,812	2,438	2,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Jamaica (b) .. .. .	6,903,115	7,811,188	8,514,365	8,918,378	9,247,258	8,391,000
Guyana (c) .. .. .	2,129,046	2,477,628	2,872,588	3,304,701	3,328,000	3,663,000
India .. .. .	557,743	582,862	695,000	734,000	776,538	921,503
Malaysia (West) .. .. .	444,047	463,829	843,172	940,447	885,389	786,042
Sarawak .. .. .	155,243	158,090	135,163	—	—	—
Australia .. .. .	354,206	783,900	1,167,671	1,798,261	4,176,474	4,882,620
<b>TOTAL .. .. .</b>	<b>10,878,000</b>	<b>12,654,800</b>	<b>14,738,000</b>	<b>16,320,000</b>	<b>20,536,000</b>	<b>19,396,000</b>
<b>OTHER COUNTRIES</b>						
Austria .. .. .	17,548	3,649	—	—	—	—
France .. .. .	1,996,873	2,394,308	2,619,764	2,766,164	2,768,167	2,667,000
Germany (Federal) .. .. .	4,263	4,090	3,832	3,609	2,248	3,200
Greece .. .. .	1,256,342	1,030,000	1,250,429	r 1,359,248	1,620,000	1,790,000
Hungary .. .. .	1,341,140	1,453,958	1,454,000	1,406,000	1,623,000	1,928,000
Italy .. .. .	265,400	247,814	240,571	238,339	238,206	212,782
Roumania .. .. .	10,000	7,000	12,000	(d) 15,000	(e) 15,000	(e) 20,000
Spain .. .. .	11,632	6,665	4,097	1,918	(d) 5,000	<i>n.a.</i>
U.S.S.R. (e) .. .. .	4,300,000	4,300,000	4,600,000	4,700,000	5,000,000	5,000,000
Yugoslavia .. .. .	1,265,000	1,273,000	1,549,000	1,857,000	2,097,000	2,038,000
Guinea .. .. .	1,638,000	1,652,000	1,840,000	1,583,000	1,639,000	2,084,000
Mozambique .. .. .	6,493	6,179	5,593	r 6,000	6,177	3,000
Dominican Republic (b) .. .. .	712,050	800,662	878,921	895,463	1,074,370	923,576
Haiti (b) .. .. .	327,000	430,256	376,546	355,718	354,000	439,000
United States (b) .. .. .	1,525,000	1,601,000	1,654,000	1,796,000	1,654,000	1,665,000
Brazil .. .. .	166,957	129,571	153,505	245,984	298,070	301,000
Surinam .. .. .	3,384,000	3,929,875	4,291,000	5,475,000	5,380,000	5,571,000
Indonesia .. .. .	485,323	637,574	677,389	690,150	905,633	865,413
Turkey .. .. .	—	4,398	10,121	31,770	21,151	<i>n.a.</i>
<b>TOTAL (d) .. .. .</b>	<b>18,700,000</b>	<b>19,900,000</b>	<b>21,600,000</b>	<b>23,000,000</b>	<b>24,800,000</b>	<b>25,500,000</b>
<b>WORLD'S TOTAL (d) .. .. .</b>	<b>29,600,000</b>	<b>32,600,000</b>	<b>36,300,000</b>	<b>39,600,000</b>	<b>45,300,000</b>	<b>44,900,000</b>

Bauxite is known to have been produced in China.

(a) Exports.

(b) Dried bauxite equivalent.

(c) Dried bauxite equivalent. Shipments of dried and calcined ore were as follows (long tons):

	1963	1964	1965	1966	1967	1968
Metallurgical .. .. .	897,922	740,244	1,123,848	1,306,804	1,582,717	1,547,460
Chemical .. .. .	76,248	100,321	133,781	204,098	184,005	214,609
Refractory .. .. .	236,065	326,180	361,714	363,258	368,218	393,684
Abrasive .. .. .	124,032	142,432	124,239	133,921	92,174	128,936

Exports of calcined ore are shown on page 13.

(d) Estimated.

(e) United States Bureau of Mines' estimate.

**PRODUCTION (EXPORTS) OF CRYOLITE IN GREENLAND**

Year	Long tons
1963 .. .. .	66,076
1964 .. .. .	50,078
1965 .. .. .	58,971
1966 .. .. .	63,037
1967 .. .. .	65,619
1968 .. .. .	66,432

## PRODUCTION OF ALUMINIUM

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	30,574	31,711	35,635	36,548	38,400	37,600
Canada .. .. .	642,312	752,357	741,522	794,567	860,128	874,260
India .. .. .	54,358	55,772	58,600	82,000	94,703	118,203
Australia .. .. .	41,263	78,744	86,379	90,412	91,326	95,810
<b>TOTAL .. .. .</b>	<b>768,507</b>	<b>918,600</b>	<b>922,100</b>	<b>1,003,000</b>	<b>1,095,300</b>	<b>1,125,873</b>
<b>OTHER COUNTRIES</b>						
Austria .. .. .	75,256	64,716	76,410	76,618	77,501	84,542
Czechoslovakia (b) .. .	60,000	60,000	61,000	61,000	64,000	64,000
France .. .. .	293,653	310,999	335,150	357,770	355,505	359,924
Germany—						
Federal .. .. .	205,485	216,445	234,433	240,035	248,902	253,362
East (a) .. .. .	40,000	45,000	50,000	50,000	50,000	50,000
Greece .. .. .	—	—	—	35,628	71,000	75,300
Hungary .. .. .	54,621	55,976	57,180	59,541	60,820	62,092
Italy .. .. .	89,984	113,769	122,018	125,629	125,760	140,100
Netherlands .. .. .	—	—	—	20,020	31,250	48,000
Norway .. .. .	212,687	256,897	274,891	318,580	355,282	460,903
Poland .. .. .	45,900	47,000	46,600	54,300	91,000	92,000
Roumania .. .. .	—	—	22,435	46,111	49,210	(a) 75,000
Spain .. .. .	44,770	48,860	51,086	62,673	83,689	93,106
Sweden .. .. .	16,800	31,600	29,100	28,000	33,000	52,700
Switzerland .. .. .	59,161	63,220	66,089	67,640	71,178	75,641
U.S.S.R. (b) .. .. .	750,000	800,000	830,000	875,000	950,000	982,000
Yugoslavia .. .. .	34,845	34,756	38,160	41,358	43,870	47,320
Cameroun .. .. .	52,077	51,033	50,000	47,400	47,540	44,682
Mexico .. .. .	5,400	17,399	18,787	20,572	21,173	22,164
United States .. .. .	2,064,757	2,279,238	2,459,355	2,650,327	2,918,981	2,906,287
Brazil .. .. .	17,332	26,219	29,927	26,461	29,232	n.a.
China (b) .. .. .	100,000	100,000	100,000	100,000	80,000	90,000
Formosa .. .. .	11,740	19,066	18,613	16,945	15,196	19,704
Japan (c) .. .. .	r 220,405	r 261,563	r 289,261	r 331,945	376,109	474,294
<b>TOTAL .. .. .</b>	<b>4,500,000</b>	<b>4,900,000</b>	<b>5,300,000</b>	<b>5,700,000</b>	<b>6,200,000</b>	<b>6,600,000</b>
<b>WORLD'S TOTAL</b>	<b>5,300,000</b>	<b>5,800,000</b>	<b>6,200,000</b>	<b>6,700,000</b>	<b>7,300,000</b>	<b>7,700,000</b>

In addition secondary metal produced in certain countries was as follows (long tons):

	1963	1964	1965	1966	1967	1968
United Kingdom ..	161,077	183,113	185,801	195,135	188,207	197,190
France .. .. .	49,000	50,000	44,000	59,000	59,000	74,000
Germany (Federal) ..	153,929	185,583	199,716	193,632	182,579	228,240
Italy .. .. .	64,000	57,000	60,000	84,000	100,000	100,000
United States .. .. .	451,421	492,581	572,070	618,778	622,992	729,382
Japan .. .. .	89,400	102,800	116,000	137,200	175,300	216,900

(a) Estimated.

(b) United States Bureau of Mines' estimate.

(c) Including high-purity aluminium.

## EXPORTS OF ALUMINIUM, ETC.\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Alumina and hydrate ..	19,458	17,138	20,915	13,660	21,847	16,853
Unwrought (a) ..	7,444	6,738	23,931	26,017	21,873	20,980
Scrap (a) ..	2,305	1,561	6,790	7,489	2,004	1,591
Semi-manufactures (a)	54,999	47,081	44,764	47,402	37,760	39,397
of which—Foil ..	6,617	7,273	7,153	7,212	6,721	8,872
Powder ..	289	427	600	840	969	1,162
Aluminium sulphates ..	24,352	36,651	38,317	19,167	13,664	17,822
Ghana—						
Bauxite .. ..	207,423	264,458	282,887	306,098	295,693	237,193
Sierra Leone—						
Bauxite .. ..	19,635	126,553	173,472	240,488	329,259	462,891
Canada—						
Alumina (e) .. ..	2,361	4,501	6,937	11,656	11,277	13,414
Unwrought (a) ..	567,131	560,707	631,707	639,627	679,151	770,210
Scrap .. ..	38,880	29,292	(a) 34,746	(a) 40,867	(a) 47,579	(a) 46,487
Semi-manufactures (a)	24,187	16,458	23,590	30,732	27,385	26,612
of which—Foil ..	1,080	338	389	262	206	248
Jamaica—						
Bauxite (b) .. ..	5,161,568	5,967,210	6,784,459	7,019,615	7,142,416	6,212,053
Alumina .. ..	725,613	768,085	720,599	790,690	824,533	907,818
Guyana—						
Bauxite, dried ..	974,170	585,452	1,263,490	1,530,893	1,823,734	1,777,747
do. calcined ..	358,366	733,854	494,374	492,496	458,808	587,217
Alumina .. ..	221,993	245,195	275,211	296,953	268,908	244,231
Hong Kong—						
Scrap .. ..	790	992	1,456	1,533	1,852	1,978
Semi-manufactures (a)	1,665	2,803	2,292	3,523	3,287	4,625
India—						
Bauxite .. ..	133,035	92,932	61,840	76,705	59,912	97,354
Unwrought (a) (c) ..	7,204	534	2	396	749	18,554
Semi-manufactures (a)(c)	76	290	1,112	1,075	1,173	4,059
Aluminium sulphate (c)	5,819	11,815	7,336	157	904	6,611
Malaysia (West)—						
Bauxite .. ..	450,463	547,945	670,894	1,007,158	852,299	648,701
Sarawak—						
Bauxite .. ..	172,181	165,903	164,609	—	—	—
Singapore—						
Semi-manufactures (a)	1,326	725	762	889	574	866
of which—Foil ..	334	159	113	191	171	146
Aluminium sulphates ..	3,566	3,014	4,504	6,956	8,211	10,029
Australia—						
Bauxite .. ..	143,339	405,825	610,574	(d) 859,000	(d) 1,118,000	(d) 1,540,000
Unwrought (a) ..	5,323	15,128	21,207	16,210	10,501	5,577
Scrap (a) .. ..	250	405	1,073	1,454	1,126	2,036
Semi-manufactures (a)	253	563	2,152	6,470	4,835	4,753
<b>OTHER COUNTRIES</b>						
Austria—						
Bauxite .. ..	6,747	2,350	—	—	—	—
Unwrought (a) ..	34,829	33,327	31,466	36,498	23,220	24,413
Scrap .. ..	4,137	4,210	4,369	5,365	5,806	9,039
Semi-manufactures (a)	19,204	21,725	21,346	26,166	28,655	31,233
of which—Foil ..	2,831	2,958	3,796	3,545	4,828	4,551
Powder .. ..	868	1,126	913	2,422	3,800	4,312

\*In these tables the description "unwrought" aluminium corresponds to item 684.1 of the Standard International Trade Classification (revised) and comprises ingots, blocks, unwrought bars, etc. "Semi-manufactures" corresponds to S.I.T.C. (revised) 684.2 and includes foil and powder as well as wrought bars, rods, wire, sheets, tubes, pipes, etc.

(a) Including alloys.

(c) Years ended March 31 following that stated.

(b) Estimated dry equivalent; shipments contain 8–14% free moisture. (d) Estimated.

(e) Officially described as "Aluminium ores and concentrates" but believed to consist wholly or largely of alumina.

## EXPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Belgium-Luxemburg</b>						
E.U.—						
Bauxite .. .. .	73	14	315	—	—	20
Cryolite .. .. .	88	141	140	489	1	—
Alumina and hydrate ..	1	3	8	13	131	25
Unwrought .. .. .	113	334	1,201	1,633	5,160	6,225
do. alloys .. .. .	700	723	1,120	1,493	1,551	807
Scrap .. .. .	5,040	6,501	8,362	8,284	9,741	11,283
Semi-manufactures (a)	69,050	83,025	97,230	121,559	101,427	112,668
Aluminium sulphates ..	13,962	14,511	15,030	15,015	13,947	n.a.
<b>Denmark—</b>						
Refined cryolite .. ..	24,861	23,988	25,732	26,381	27,844	28,345
Unwrought .. .. .	130	1	—	146	18	25
do. alloys .. .. .	1,884	1,880	3,019	2,513	1,808	2,333
Scrap .. .. .	454	329	443	1,040	1,174	808
Semi-manufactures (a)	729	683	895	1,151	1,473	2,637
of which—Foil .. .. .	178	192	223	218	350	495
<b>Finland—</b>						
Unwrought .. .. .	76	788	293	806	830	1,266
Semi-manufactures .. ..	1,041	1,182	1,093	1,256	1,646	2,695
of which—Foil .. .. .	982	1,037	988	1,158	1,516	2,367
<b>France—</b>						
Bauxite .. .. .	202,649	196,481	198,596	275,748	155,757	154,836
Cryolite .. .. .	87	39	547	11	102	1,573
Alumina .. .. .	168,100	139,557	105,030	141,902	181,314	204,079
do. hydrate .. .. .	12,905	14,555	24,616	13,691	19,758	26,287
Unwrought .. .. .	82,513	85,409	122,687	110,682	102,170	120,319
do. alloys .. .. .	40,209	37,778	57,127	57,661	35,896	63,588
Scrap (a) .. .. .	12,174	11,246	6,181	11,657	13,144	12,123
Semi-manufactures (a)	32,713	51,624	45,103	57,208	66,313	68,657
of which—Foil .. .. .	8,106	7,876	8,382	8,453	9,588	10,187
Powder .. .. .	166	256	423	810	663	1,112
Aluminium sulphates ..	10,992	10,956	11,690	9,903	11,911	5,522
<b>Germany (Federal)—</b>						
Bauxite and cryolite ..	732	833	1,323	4,367	2,486	2,152
Alumina .. .. .	70,378	74,200	77,448	90,674	111,992	85,195
do. hydrate .. .. .	28,834	34,869	37,575	37,777	42,194	47,554
Unwrought .. .. .	9,523	4,487	4,808	10,695	8,890	8,441
do. alloys .. .. .	4,437	5,194	5,197	10,454	12,568	14,333
Scrap (a) .. .. .	1,428	1,126	842	6,750	10,494	7,663
Semi-manufactures (a) ..	52,259	56,656	58,700	79,022	94,683	116,242
of which—Foil .. .. .	19,853	22,503	26,392	31,143	32,372	37,293
Powder .. .. .	1,391	1,686	2,135	2,376	3,117	3,554
<b>Greece—</b>						
Bauxite .. .. .	1,100,000	1,046,324	1,131,921	1,150,820	1,113,827	1,171,464
Unwrought .. .. .	n.a.	n.a.	n.a.	27,144	58,971	62,695
Semi-manufactures .. ..	927	994	426	1,344	2,160	1,606
Alumina .. .. .	n.a.	n.a.	n.a.	n.a.	33,223	71,125
<b>Hungary—</b>						
Bauxite .. .. .	656,409	749,069	555,000	611,000	657,450	654,847
Alumina .. .. .	132,300	154,149	191,000	172,000	241,131	355,457
Unwrought .. .. .	10,373	11,998	19,278	16,087	19,172	46,778
Semi-manufactures .. ..	5,007	4,839	5,696	6,834	7,817	4,637
<b>Italy—</b>						
Bauxite .. .. .	915	3,145	516	1,589	315	—
Alumina .. .. .	20,165	5,305	8,456	6,994	8,556	9,224
do. hydrate .. .. .	2,647	2,993	2,966	2,515	1,883	2,212
Unwrought .. .. .	248	18,875	31,536	20,317	4,864	24,977
do. alloys .. .. .						
Semi-manufactures (a)	8,224	17,209	22,644	26,640	29,471	43,202
of which—Foil .. .. .	902	1,207	1,736	3,294	4,018	5,535
Aluminium sulphates ..	8,869	126	2,506	3,654	n.a.	n.a.

(a) Including alloys.

## EXPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Netherlands—</b>						
Bauxite .. .. .	830	147	2	375	70	380
Unwrought (a) .. .	267	741	1,003	15,901	25,193	43,031
Scrap (a) .. .. .	7,279	8,843	9,318	11,549	10,055	11,645
Semi-manufactures (a)	11,723	13,499	15,605	17,188	18,760	26,551
of which—Foil .. .	3,430	3,695	3,592	4,242	5,030	5,957
Powder .. .. .	3	2	1	26	5	2
Aluminium sulphates ..	6	10	192	18	4	15,433
<b>Norway—</b>						
Alumina .. .. .	—	—	4	—	1	1
Unwrought .. .. .	195,491	248,852	227,262	316,031	292,854	390,562
do. alloys .. .. .	8,722	11,768	11,303	26,480	17,091	37,762
Scrap .. .. .	636	251	618	1,821	3,728	5,500
Semi-manufactures (a)	4,171	4,595	4,995	7,574	7,645	12,134
of which—Foil .. .	146	189	263	236	287	210
Powder .. .. .	129	95	82	84	35	32
<b>Roumania—</b>						
Bauxite .. .. .	7,874	—	—	—	—	n.a.
<b>Spain—</b>						
Unwrought .. .. .	10,130	8,105	—	—	10,673	5,516
Semi-manufactures (a)	5,308	2,603	1,989	3,161	4,555	6,952
<b>Sweden—</b>						
Unwrought (a) .. .	501	2,114	1,764	587	3,826	15,849
Scrap .. .. .	802	887	598	719	1,428	948
Semi-manufactures (a)	9,959	11,380	8,212	13,769	18,336	18,154
of which—Powder ..	404	365	421	447	504	584
Aluminium sulphates ..	11,463	8,374	6,814	4,530	3,575	8,030
<b>Switzerland—</b>						
Alumina and hydrate	60	118	110	102	65	87
Unwrought and scrap ..	17,891	18,864	19,111	13,176	19,516	23,829
do. alloys .. .. .						
Semi-manufactures (a)	16,842	19,909	22,528	7,138	25,958	26,580
<b>U.S.S.R.—</b>						
Cryolite .. .. .	3,000	3,400	3,200	3,800	3,800	5,300
Unwrought .. .. .	120,200	172,400	225,400	251,700	249,103	283,058
Semi-manufactures .. .	25,294	33,561	41,400	53,900	59,400	78,244
<b>Yugoslavia—</b>						
Bauxite .. .. .	981,512	1,062,639	932,672	1,455,887	1,784,128	1,817,636
Alumina and hydrate ..	13,058	13,700	11,419	12,831	11,405	20,536
Unwrought .. .. .	930	1,141	1,169	1,646	6,225	18,378
Scrap .. .. .	2,209	1,637	2,384	145	153	4,102
Semi-manufactures .. .	13,966	18,201	21,321	17,841	18,053	21,948
<b>Cameroun—</b>						
Unwrought .. .. .	51,459	47,956	45,377	45,384	46,170	n.a.
<b>Guinea—</b>						
Bauxite .. .. .	n.a.	164,017	240,188	n.a.	n.a.	n.a.
Alumina .. .. .	479,000	n.a.	n.a.	512,000	n.a.	n.a.
<b>Morocco—</b>						
Scrap (a) .. .. .	469	261	440	565	429	481
<b>Mozambique—</b>						
Bauxite .. .. .	5,760	7,249	5,880	5,535	n.a.	n.a.
<b>South Africa—</b>						
Semi-manufactures	n.a.	936	1,362	1,513	1,375	1,699
<b>Tunisia—</b>						
Unwrought and scrap	256	187	224	181	139	n.a.

(a) Including alloys.

## EXPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Dominican Republic—						
Bauxite .. ..	931,966	909,028	1,121,380	985,465	c) 1,000,644	n.a.
Greenland—						
Cryolite .. ..	66,076	50,078	58,971	63,037	65,619	66,432
Haiti—						
Bauxite (b) (c) .. ..	379,630	458,287	382,000	328,000	362,000	461,506
United States						
Alumina, etc. .. ..	203,196	293,542	288,540	296,127	499,090	790,181
Cryolite (d) .. ..	3,320	3,022	3,895	2,481	1,096	671
Unwrought (a) .. ..	147,625	186,702	147,849	168,071	186,615	160,964
Scrap (a) .. ..	63,429	61,263	34,417	43,451	48,689	44,131
Semi-manufactures .. ..	62,354	66,415	102,041	87,374	100,910	119,145
of which—Foil .. ..	1,636	1,487	2,762	2,761	3,225	3,633
Powder (Al content)	438	495	562	810	1,009	1,149
Aluminium sulphates ..	15,693	14,742	13,965	19,696	14,440	16,296
Argentina—						
Unwrought .. ..	1,729	1,295	134	8	10	—
Aluminium sulphates ..	13	50	34	39	25	47
Brazil—						
Bauxite .. ..	2,264	3,494	2,166	2,235	2,195	3,193
Surinam—						
Bauxite .. ..	3,427,146	3,921,312	4,299,917	4,512,113	3,804,839	3,100,000
Alumina .. ..	—	—	58,419	343,344	673,727	n.a.
Unwrought .. ..	—	—	1,233	25,295	30,606	n.a.
Formosa—						
Unwrought (a) .. ..	3,377	7,093	5,645	3,747	2,215	n.a.
Semi-manufactures (a)	2,326	3,225	2,691	2,819	3,288	n.a.
Aluminium sulphates ..	n.a.	n.a.	522	240	424	n.a.
Indonesia—						
Bauxite .. ..	n.a.	r 645,246	r 567,592	r 677,134	887,754	834,312
Israel—						
Scrap .. ..	699	855	801	889	836	875
Japan—						
Bauxite .. ..	394	591	787	796	514	325
Cryolite .. ..	—	—	1	—	—	—
Alumina .. ..	99,856	102,100	92,427	106,623	73,317	12,196
do. hydrate .. ..	4,209	6,155	8,101	11,031	12,840	14,602
Unwrought .. ..	13,872	18,870	28,654	18,392	1,249	250
do. alloys .. ..	17	291	50	577	658	1,010
Semi-manufactures (a)	17,929	16,916	24,833	30,633	19,243	35,283
of which—Foil .. ..	2,495	2,809	3,296	4,212	4,959	5,518
Aluminium sulphates ..	17,749	14,582	12,228	14,587	13,048	9,878

(a) Including alloys.

(b) Including shipments from stockpile built up during development period.

(c) United States imports.

(d) Including artificial.

## IMPORTS OF ALUMINIUM, ETC.\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Bauxite, uncalcined ..	(d) 331,195	(d) 373,550	{ 437,941	454,068	436,604	405,722
do. calcined ..			{ 106,527	104,531	91,049	118,706
Cryolite ..	3,110	3,398	2,476	2,439	1,533	2,300
Alumina ..	4,884	8,603	9,591	6,856	5,910	5,777
Unwrought ..	203,978	255,164	236,815	259,029	223,971	260,063
do. alloys ..	62,814	70,203	79,748	81,436	77,779	94,230
Scrap (a) ..	8,992	12,010	23,479	15,981	13,905	12,783
Semi-manufactures (a)	26,142	26,166	23,893	28,261	30,284	37,870
of which—Foil ..	2,341	3,177	2,682	3,423	2,210	3,659
<b>Malta—</b>						
Semi-manufactures ..	(£49,060)	(£114,924)	(£60,373)	(£38,835)	(£52,911)	(£86,185)
<b>Ghana—</b>						
Alumina ..	—	—	—	18,320	114,673	680,819
Unwrought (a) ..	191	78	283	207	387	233
Semi-manufactures (a)	7,207	1,122	5,909	7,068	2,020	1,836
<b>Kenya—</b>						
Unwrought (a) ..	1,743	761	22	n.a.	3	2
Semi-manufactures (a)	864	630	728	653	693	1,273
of which—Foil ..	174	176	184	179	209	174
<b>Malawi—</b>						
Semi-manufactures ..	—	—	372	511	494	226
<b>Mauritius—</b>						
Semi-manufactures (a)	285	345	324	277	272	166
<b>Nigeria—</b>						
Unwrought and semi-manufactures (a) ..	5,896	6,325	2,402	1,232	1,950	2,927
<b>Rhodesia (b)—</b>						
Semi-manufactures (a)	1,127	806	1,106	n.a.	n.a.	n.a.
of which—Foil ..	216	115	129	n.a.	n.a.	n.a.
<b>Sierra Leone—</b>						
Semi-manufactures (a)	123	29	62	168	165	n.a.
<b>Tanzania—</b>						
Unwrought ..	231	2,217	1,272	3,349	673	2,024
Semi-manufactures (a)	190	932	757	341	215	161
<b>Uganda—</b>						
Semi-manufactures (a)	88	162	433	463	400	733
of which—Foil ..	55	113	97	112	83	147
<b>Zambia—</b>						
Semi-manufactures (a)	n.a.	184	346	340	368	509
<b>Barbados—</b>						
Semi-manufactures (a)	48	63	98	120	116	109
<b>Jamaica—</b>						
Semi-manufactures (a)	1,212	1,925	2,049	2,656	4,403	3,239
<b>Canada—</b>						
Bauxite ..	1,967,842	{ 1,563,668	1,827,745	2,254,078	2,286,887	2,241,430
Alumina ..		{ 777,655	714,265	721,285	679,228	759,367
Cryolite ..	4,336	(c) 2,163	(c) 2,161	(c) 3,260	(c) 2,751	(c) 4,052
Unwrought ..	1,731	3,568	6,200	15,110	7,300	13,431
Scrap ..	1,331	(a) 17,957	(a) 29,658	(a) 20,899	(a) 8,522	(a) 14,539
Semi-manufactures (a)						
(excluding Foil) ..	28,258	34,410	41,248	53,076	71,796	78,877
of which—Powder ..	147	250	807	797	524	545
Foil ..	n.a.	576	509	406	916	553
Aluminium sulphates ..	3,072	2,484	1,755	2,104	1,608	1,658

\*See footnote on p.13 concerning the descriptions "unwrought" aluminium and "semi-manufactures" used in these tables.

(a) Including alloys.

(b) Figure for 1963 relates to Rhodesia and Nyasaland.

(c) Natural cryolite only.

(d) Owing to reclassification figures may not be strictly comparable with those for 1965 onwards.

## IMPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES—(cont.)						
Trinidad and Tobago—						
Semi-manufactures (a)	(e) 5,807	1,602	447	638	766	398
Aluminium sulphates ..	672	876	1,394	1,128	1,165	1,647
Guyana—						
Semi-manufactures (a)	n.a.	405	128	140	182	524
Aluminium sulphates ..	n.a.	—	499	347	536	243
Ceylon—						
Semi-manufactures (a)	2,984	3,801	2,859	2,409	2,034	2,305
of which—Foil.. ..	125	114	68	65	362	405
Cyprus—						
Semi-manufactures (a)	268	248	284	400	417	480
Hong Kong—						
Bauxite .. .. .	300	633	437	63	500	348
Unwrought (a) ..	5,644	10,337	4,725	7,088	9,761	13,267
Scrap .. .. .	42	20	41	81	120	57
Semi-manufactures (a)	3,055	3,820	3,946	3,669	2,466	4,740
of which—Foil.. ..	723	737	910	683	751	795
Aluminium sulphate ..	1,076	1,480	2,282	1,065	888	2,216
India (b)—						
Cryolite .. .. .	2,390	2,414	3,051	1,152	1,068	384
Alumina .. .. .	3,487	2,062	800	15,798	19,064	5,720
Unwrought .. .. .	3,875	3,473	1,494	9,593	24,977	7,825
do. alloys .. .. .	—	9	100	52	98	18
Scrap .. .. .	—	10	44	—	—	—
Semi-manufactures (a)	20,412	19,094	12,711	22,697	13,123	1,812
of which—Foil.. ..	426	185	189	90	144	99
Powder .. .. .	151	144	178	156	202	64
Aluminium sulphate ..	4	17	120	—	10	—
Malaysia (West)—						
Unwrought (a) ..	n.a.	n.a.	550	1,566	1,522	1,593
Semi-manufactures (a)	n.a.	n.a.	3,253	2,953	2,927	2,808
of which—Foil.. ..	n.a.	n.a.	736	804	813	816
Pakistan—						
Unwrought (a) ..	5,064	22,363	n.a.	n.a.	n.a.	n.a.
Semi-manufactures (a)	2,398	3,738	n.a.	n.a.	n.a.	n.a.
Aluminium sulphates ..	67	36	n.a.	n.a.	n.a.	n.a.
Sabah—						
Semi-manufactures (a)	86	148	173	130	104	35
Sarawak—						
Semi-manufactures (a)	124	283	325	340	179	352
Aluminium sulphates ..	131	329	484	340	374	479
Singapore—						
Bauxite .. .. .	—	4	101	61,080	295	688
Alumina and hydrate ..	565	423	1,644	3,293	3,722	5,109
Semi-manufactures (a)	5,349	2,747	2,997	3,108	2,730	4,294
of which—Foil.. ..	469	236	294	370	455	482
Aluminium sulphate ..	5,539	2,190	1,761	252	139	503
Australia—						
Bauxite .. .. .	14,113	577	n.a.	n.a.	n.a.	n.a.
Cryolite .. .. .	5,078	3,282	(d) 2,387	187	237	201
Alumina and hydrate (c)	49,237	65,427	64,927	51,074	59,045	10,204
Unwrought (a) ..	12,115	565	357	449	361	11,975
Scrap (a) .. .. .	3,108	872	797	937	1,468	856
Semi-manufactures (a)	3,313	2,788	3,856	2,460	2,177	2,168
of which—Foil.. ..	1,212	1,063	1,433	702	516	511
Powder .. .. .	205	297	440	257	365	418
New Zealand (c)—						
Unwrought .. .. .	5,148	6,633	8,937	7,872	9,910	6,790
Semi-manufactures (a)	2,779	2,732	2,537	2,924	5,621	4,372
of which—Foil.. ..	3	758	684	829	875	n.a.

(a) Including alloys.

(b) Years ended March 31 following that stated.

(c) Years ended June 30 of that stated.

(d) Including artificial.

(e) Excess of re-exports.



## IMPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>Irish Republic—</b>						
Unwrought (a) .. .. .	5,373	8,813	7,707	10,189	8,228	8,295
Semi-manufactures (a) .. .. .	3,268	3,894	3,984	4,851	4,706	5,666
of which—Foil.. .. .	644	677	796	841	694	786
Aluminium sulphates .. .. .	3,276	2,011	3,539	3,288	845	394
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Bauxite .. .. .	13,072	16,590	22,534	24,191	30,459	24,656
Cryolite .. .. .	483	434	410	415	351	255
Alumina .. .. .	149,223	139,606	163,750	151,498	163,102	164,342
do. hydrate .. .. .	4,565	5,603	5,954	6,008	5,402	6,092
Unwrought (a) .. .. .	655	2,011	1,381	2,463	5,256	7,592
Semi-manufactures (a) .. .. .	2,722	4,378	6,913	7,683	7,148	6,701
Aluminium sulphates .. .. .	1,868	1,793	1,734	2,141	2,379	2,408
<b>Belgium-Luxemburg—</b>						
Bauxite .. .. .	3,200	5,071	7,129	9,546	7,975	11,154
Cryolite .. .. .	88	141	140	136	254	281
Alumina .. .. .	881	1,010	918	1,342	1,945	2,061
do. hydrate .. .. .	9,344	11,022	10,023	11,738	11,841	9,908
Unwrought .. .. .	67,242	81,764	79,287	106,061	105,645	111,432
do. alloys .. .. .	20,408	29,091	35,884	44,080	32,127	45,474
Scrap .. .. .	2,315	2,636	3,707	1,765	1,701	2,086
Semi-manufactures (a) .. .. .	16,355	18,047	18,373	24,861	22,401	22,728
of which—Foil.. .. .	3,343	3,941	3,813	3,473	3,508	3,982
Powder .. .. .	266	192	415	533	718	341
Aluminium sulphates .. .. .	137	133	131	229	233	7,927
<b>Denmark—</b>						
Bauxite .. .. .	500	400	2,770	1,363	1,997	935
Crude cryolite .. .. .	49,473	37,732	38,169	46,123	48,456	54,402
Unwrought .. .. .	5,242	6,364	6,534	5,089	5,716	7,512
do. alloys .. .. .	469	758	2,634	1,354	3,214	2,331
Scrap .. .. .	1,215	921	1,253	1,075	605	3,086
Semi-manufactures (a) .. .. .	11,395	14,735	13,985	14,467	16,787	18,721
of which—Foil.. .. .	2,122	2,616	3,457	3,577	4,116	4,276
Powder .. .. .	176	152	170	146	172	159
Aluminium sulphates .. .. .	4,773	4,813	5,753	5,611	4,659	6,038
<b>Finland—</b>						
Alumina .. .. .	36	89	56	54	74	66
do. hydrate .. .. .	8,433	11,368	13,499	13,470	16,388	12,029
Unwrought (a) .. .. .	3,995	6,238	8,113	11,788	14,232	12,068
Semi-manufactures (a) .. .. .	10,821	13,141	12,189	13,702	13,564	15,787
of which—Foil.. .. .	588	848	1,310	1,489	1,405	1,476
Powder .. .. .	103	422	273	171	126	174
Aluminium sulphates .. .. .	11,239	9,912	9,809	7,507	6,431	3,383
<b>France—</b>						
Bauxite .. .. .	140,248	143,542	114,669	151,131	222,803	329,558
Cryolite .. .. .	1,320	1,703	1,358	1,953	1,408	1,604
Alumina .. .. .	124,720	65,979	19,332	20,072	2,902	30,826
do. hydrate .. .. .	71	30	57	133	312	383
Unwrought .. .. .	51,915	65,746	64,514	80,024	91,263	87,867
do. alloys .. .. .	3,074	5,548	6,048	5,868	5,951	8,446
Scrap (a) .. .. .	2,260	2,643	1,071	5,397	5,455	5,228
Semi-manufactures (a) .. .. .	12,215	15,997	20,550	29,943	37,608	58,279
of which—Foil.. .. .	5,336	6,493	7,187	8,805	10,408	13,753
Powder .. .. .	207	854	605	855	1,675	2,382
Aluminium sulphates .. .. .	20	40	2	1,030	1,360	2,220
<b>Germany (Federal)—</b>						
Bauxite .. .. .	1,484,200	1,596,607	1,610,277	1,852,721	1,773,565	1,947,020
Cryolite .. .. .	2,935	3,187	3,519	2,734	1,580	1,523
Alumina .. .. .	48,880	52,717	56,816	50,743	64,488	47,709
do. hydrate .. .. .	1,389	1,480	805	1,304	1,664	1,604
Unwrought .. .. .	104,211	134,041	136,663	147,335	153,665	220,923
do. alloys .. .. .	14,554	28,623	30,178	26,666	28,788	66,687
Scrap .. .. .	43,240	55,918	57,736	50,045	48,933	66,031

(a) Including alloys.

## IMPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES (cont.)						
Germany (Federal) (cont.)—						
Semi-manufactures (a)	18,150	28,387	32,152	37,917	38,143	68,186
of which—Foil ..	3,049	2,785	3,666	4,844	4,502	6,257
Powder ..	269	437	540	1,281	2,785	3,439
Germany (East)—						
Bauxite ..	322,072	322,002	246,156	285,549	313,990	237,014
Alumina ..	18,023	41,522	45,454	28,599	49,310	43,788
Greece—						
Alumina ..	450	816	445	2,286	294	n.a.
do. hydrate ..	683	469	882	8,961	1,420	1,047
Unwrought ..	5,639	8,422	8,446	6,406	2,419	1,598
Semi-manufactures (a)	1,099	1,291	2,437	1,494	967	1,061
of which—Foil ..	905	896	746	434	762	923
Aluminium sulphates ..	79	1	249	209	n.a.	—
Hungary—						
Cryolite ..	519	1,727	n.a.	n.a.	n.a.	n.a.
Unwrought ..	2,418	7,522	—	—	—	—
Iceland—						
Semi-manufactures ..	364	310	288	400	241	630
Italy—						
Bauxite ..	344,083	373,533	469,079	526,353	533,968	576,670
Cryolite ..	1,063	895	601	559	623	436
Alumina ..	8,643	4,543	1,978	29,549	22,507	41,537
do. hydrate ..	377	364	708	7,446	3,754	5,450
Unwrought ..	53,257	32,174	33,159	62,236	80,834	84,504
do. alloys ..	52,152	31,268	27,364	52,339	63,842	43,100
Scrap ..	16,000	17,198	15,640	20,290	25,933	23,378
Semi-manufactures (a)	4,577	3,640	3,193	4,810	5,266	4,730
of which—Foil ..	157	206	168	143	79	160
Powder ..	783	178	1,360	4,332	6,524	6,859
Aluminium sulphates ..						
Netherlands—						
Bauxite ..	10,204	4,262	21,347	34,745	16,278	40,296
Cryolite ..	380	207	141	1,533	779	1,018
Alumina ..	784	834	1,204	61,312	65,339	101,258
do. hydrate ..	6,902	8,077	9,224	9,428	9,857	18,530
Unwrought (a) ..	19,501	22,020	19,855	19,515	19,112	32,700
Scrap (a) ..	2,146	2,925	3,086	3,823	4,516	8,646
Semi-manufactures (a)	17,218	29,262	28,906	34,218	36,520	40,626
of which—Foil ..	4,093	4,818	5,425	5,880	6,422	7,641
Powder ..	98	126	160	148	196	319
Aluminium sulphates ..	10,684	11,438	12,433	13,074	13,630	12,249
Norway—						
Bauxite ..	24,480	29,560	28,792	32,056	34,293	36,510
Cryolite ..	3,239	2,613	4,226	4,442	4,247	4,362
Alumina ..	437,524	515,664	531,793	604,873	701,340	916,897
Unwrought ..	1,236	10,829	9,036	8,085	10,714	9,766
do. alloys ..	221	822	676	964	1,487	11,476
Scrap ..	170	56	31	571	294	576
Semi-manufactures (a)	8,714	9,952	6,926	10,565	11,846	10,323
of which—Foil ..	407	495	535	648	666	930
Powder ..	180	174	208	123	145	135
Aluminium sulphates ..	11,633	9,989	4,328	1,441	780	461
Poland—						
Bauxite ..	59,200	85,700	113,973	113,687	106,112	110,482
Cryolite ..	1,086	1,616	1,460	4,127	4,351	4,208
Alumina ..	87,500	91,800	84,700	118,136	164,670	193,198
Portugal—						
Cryolite ..	39	30	45	32	49	47
Unwrought (a) ..	1,062	733	1,157	836	610	756
Semi-manufactures (a)	4,880	6,293	7,195	8,014	7,783	8,350
of which—Powder ..	76	78	79	101	186	92
Aluminium sulphates ..	2,771	4,177	3,704	4,723	4,213	5,414

(a) Including alloys.

(b) Exports to Poland from Hungary.

## IMPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Spain—</b>						
Bauxite .. .. .	64,668	52,285	83,890	76,327	63,675	71,592
Cryolite .. .. .	246	418	645	1,143	1,155	1,042
Alumina and hydrate ..	90,532	99,541	113,690	137,219	156,262	178,350
Unwrought and scrap ..	10,483	9,989	16,798	25,736	15,669	15,874
Semi-manufactures (a)	3,620	6,421	7,907	11,418	9,069	5,871
<i>of which—Powder</i> ..	24	27	53	55	51	75
<b>Sweden—</b>						
Bauxite .. .. .	13,572	30,856	22,625	26,770	48,344	40,397
Cryolite .. .. .	493	1,190	1,159	292	1,234	1,255
Alumina and hydrate ..	38,497	67,204	69,833	47,162	84,977	141,480
Unwrought .. .. .	29,659	17,324	17,559	31,899	20,587	14,040
do. alloys .. .. .	6,620	7,550	9,262	8,562	8,598	10,423
Scrap .. .. .	318	112	28	235	1,074	2,125
Semi-manufactures (a)	14,632	19,831	18,727	21,825	24,997	25,693
<i>of which—Foil</i> ..	2,059	2,929	3,008	4,216	3,596	3,930
<i>Powder</i> .. .. .	268	240	381	414	318	324
Aluminium sulphates ..	4,571	10,370	4,817	6,489	5,284	5,867
<b>Switzerland—</b>						
Bauxite .. .. .	1,440	2,553	2,871	1,954	583	329
Cryolite .. .. .	825	226	155	507	876	640
Alumina .. .. .	122,805	118,767	134,225	132,545	141,888	159,342
Unwrought and scrap (a)	4,489	5,871	12,055	13,176	6,694	15,331
Semi-manufactures (a)	8,708	8,029	6,769	7,138	6,615	7,938
Aluminium sulphates ..	3,862	3,926	4,126	4,799	4,063	3,936
<b>U.S.S.R.—</b>						
Bauxite .. .. .	(b) 434,300	(b) 442,200	(b) 473,400	(c) 774,800	(d) 620,960	(d) 705,213
Semi-manufactures ..	6,299	5,512	7,200	600	n.a.	2,160
<b>Yugoslavia—</b>						
Bauxite .. .. .	3,029	5,442	3,368	6,983	7,693	9,803
Cryolite .. .. .	30	358	n.a.	n.a.	n.a.	n.a.
Alumina and hydrate ..	582	2,638	61	67	3,429	1,287
Unwrought .. .. .	6,629	15,612	19,476	25,707	24,900	21,221
Semi-manufactures (a)	1,036	1,103	1,161	1,188	2,739	4,279
<i>of which—Foil..</i> ..	778	393	253	824	1,278	1,702
<b>Angola—</b>						
Semi-manufactures ..	430	643	856	695	854	909
Aluminium sulphates ..	381	1,032	1,207	n.a.	n.a.	966
<b>Cameroun—</b>						
Alumina.. .. .	123,021	92,550	83,637	43,140	72,540	n.a.
<b>Egypt—</b>						
Unwrought and scrap ..	3,849	4,717	4,881	8,196	8,384	8,007
Semi-manufactures ..	966	884	1,675	1,542	500	277
<i>of which—Foil..</i> ..	681	415	593	258	140	158
<b>Malagasy Republic—</b>						
Aluminium sulphates	320	281	271	276	441	502
<b>Morocco—</b>						
Bauxite .. .. .	2,513	907	2,462	984	1,970	1,575
Alumina and hydrate ..	120	n.a.	119	598	652	737
Semi-manufactures (a)	1,749	1,864	1,584	1,565	2,505	2,114
<i>of which—Foil..</i> ..	456	320	243	129	41	55
<i>Powder</i> .. .. .	75	51	60	62	102	63
Aluminium sulphates ..	1,443	1,346	1,412	661	65	40
<b>Mozambique—</b>						
Semi-manufactures (a)	255	275	384	465	n.a.	n.a.
<b>South Africa—</b>						
Bauxite .. .. .	n.a.	8,504	7,641	} 15,438	8,310	12,059
Cryolite .. .. .	n.a.	71	76			
Alumina and hydrate ..	n.a.	284	732	559	685	903
Unwrought .. .. .	16,487	16,659	20,052	26,907	17,560	23,816

(a) Including alloys.

(b) Imports from Greece.

(c) Imports from Greece and Yugoslavia.

(d) Imports from Yugoslavia.

## IMPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
South Africa <i>(cont.)</i> —						
Semi-manufactures (a)	4,607	7,823	8,262	9,225	9,924	8,502
of which—Foil . . .	572	640	667	205	370	516
Powder . . .	45	150	20	31	63	84
Aluminium sulphates . .	3,535	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sudan—						
Semi-manufactures (a)	653	888	862	1,193	1,368	938
Aluminium sulphates . .	970	1,134	507	809	669	1,214
Tunisia—						
Unwrought and scrap (a)	1	—	22	16	14	<i>n.a.</i>
Semi-manufactures . .	374	394	506	394	556	510
Costa Rica—						
Semi-manufactures (a)	510	670	764	794	828	<i>n.a.</i>
Cuba—						
Sulphate . . . . .	691	354	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Unwrought . . . . .	841	497	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Semi-manufactures . .	6,100	4,089	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Honduras—						
Semi-manufactures . .	150	230	221	484	1,114	386
Mexico—						
Bauxite, calcined . . .	5,860	4,801	14,745	9,732	13,332	11,351
Alumina and hydrate . .	23,384	36,761	48,697	46,790	47,310	49,123
Unwrought . . . . .	8,928	50	529	117	145	1,589
Semi-manufactures . .	14,414	6,883	4,379	1,164	3,885	7,308
Aluminium sulphates . .	1,077	831	2	3	2	18
Nicaragua—						
Semi-manufactures . .	271	282	617	745	751	528
Salvador—						
Semi-manufactures (a)	51	356	426	882	1,387	1,235
United States—						
Bauxite, crude dried (c)	9,212,000	10,180,000	11,199,000	11,529,000	11,594,000	10,976,000
do. calcined . . . . .	87,951	188,970	215,989	204,173	214,136	207,316
Cryolite . . . . .	24,031	21,664	21,438	28,263	32,428	30,154
Alumina and hydrate . .	170,128	227,961	202,303	478,387	871,793	1,200,883
Unwrought (a) . . . . .	371,132	350,788	468,542	466,060	398,446	608,169
Scrap . . . . .	8,309	7,279	24,133	30,015	27,222	33,501
Semi-manufactures . .	41,125	51,431	61,685	113,890	55,928	63,616
of which—Foil (b) . .	4,301	4,619	<i>n.a.</i>	2,490	1,573	1,706
Aluminium sulphates . .	3,698	<i>n.a.</i>	7,362	<i>n.a.</i>	<i>n.a.</i>	13,587
Argentina—						
Bauxite . . . . .	4,225	30,781	28,954	42,873	33,539	36,935
Ingots and bars . . . .	14,798	33,107	35,814	36,356	30,532	<i>n.a.</i>
Brazil—						
Cryolite . . . . .	555	962	988	1,076	1,121	1,367
Alumina . . . . .	562	39	1,018	576	455	67
do. hydrate . . . . .	497	460	391	582	467	642
Unwrought (a) . . . . .	25,408	18,256	21,499	38,916	28,641	30,753
Semi-manufactures (a)	549	250	387	1,342	1,068	1,571
of which—Foil . . . .	92	98	114	242	203	234
Powder . . . . .	32	16	77	176	424	646
Aluminium sulphates . .	1	—	1	6	7	—
Chile—						
Unwrought . . . . .	3,043	2,502	3,099	<i>n.a.</i>	3,990	<i>n.a.</i>
Bars, sheets and alloys .	277	192	211	<i>n.a.</i>	1,000	<i>n.a.</i>
Aluminium sulphates . .	1	—	—	<i>n.a.</i>	—	<i>n.a.</i>
Colombia—						
Bauxite . . . . .	7,087	4,413	9,024	8,841	5,893	5,836
Alumina and hydrates . .	99	92	155	206	259	472
Unwrought (a) . . . . .	2,371	6,163	3,828	8,473	4,673	8,876
Semi-manufactures (a)	918	1,182	621	1,211	972	1,135
Aluminium sulphates . .	310	1,368	1,069	641	4	1

(a) Including alloys. (b) Excluding leaves 5½ in. by 5½ in. recorded by number only.  
 (c) Dry Bauxite equivalent.

## IMPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Ecuador—						
Semi-manufactures ..	525	517	651	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Aluminium sulphates ..	827	1,041	866	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru—						
Unwrought (a) ..	627	865	1,743	2,391	3,016	<i>n.a.</i>
Semi-manufactures (a) ..	1,841	2,394	2,250	1,555	1,504	<i>n.a.</i>
Aluminium sulphates ..	3,104	275	219	249	54	<i>n.a.</i>
Uruguay—						
Unwrought .. ..	<i>n.a.</i>	<i>n.a.</i>	399	1,463	1,746	<i>n.a.</i>
Aluminium sulphates ..	<i>n.a.</i>	<i>n.a.</i>	20	1,722	3,445	<i>n.a.</i>
Venezuela—						
Unwrought .. ..	855	1,970	2,921	1,727	2,651	306
Semi-manufactures ..	6,768	6,136	4,685	6,255	9,906	8,420
Aluminium sulphates ..	7,096	8,683	11,449	12,023	9,688	13,642
Alumina and hydrate ..	231	268	323	364	458	25,489
Burma—						
Unwrought .. ..	376	} 3,284	3,609	1,360	<i>n.a.</i>	<i>n.a.</i>
Semi-manufactures (a) ..	2,719					
Formosa—						
Bauxite .. ..	52,176	88,446	103,087	88,921	101,715	<i>n.a.</i>
Foil .. ..	13	27	18	17	62	<i>n.a.</i>
Iran (b)—						
Unwrought (a) ..	2,271	4,066	2,986	6,048	4,547	5,691
Semi-manufactures ..	1,104	1,767	1,381	2,013	2,809	3,471
Iraq—						
Unwrought (a) ..	207	—	<i>n.a.</i>	—	—	<i>n.a.</i>
Semi-manufactures (a) ..	1,858	2,768	<i>n.a.</i>	4,106	3,206	<i>n.a.</i>
Aluminium sulphates ..	3,543	4,314	<i>n.a.</i>	7,043	3,323	<i>n.a.</i>
Israel—						
Unwrought and semi-manufactures ..	5,689	8,089	7,544	9,156	8,044	13,841
of which—Foil .. ..	50	54	122	120	115	203
Japan—						
Bauxite .. ..	1,398,974	1,596,316	1,648,943	1,793,101	2,052,979	2,411,163
Cryolite .. ..	6,310	7,428	6,234	4,883	8,863	7,445
Unwrought .. ..	16,434	18,239	23,268	47,504	133,543	139,081
do. alloys .. ..	6,438	15,612	18,741	28,281	29,025	27,409
Scrap .. ..	11,786	9,160	4,169	} 18,792	{ 2,665	} 2,404
do. alloys .. ..	6,448	15,673	5,059			
Semi-manufactures (a) ..	824	1,788	925	1,866	3,473	3,781
Alumina and hydrate ..	49,112	48,269	53,884	96,697	116,721	175,828
Jordan—						
Semi-manufactures ..	295	156	502	532	386	516
of which—Foil .. ..	68	87	238	117	84	87
Korea (South)—						
Unwrought and semi-manufactures ..	7,532	3,228	7,282	9,852	12,198	<i>n.a.</i>
Lebanon—						
Unwrought .. ..	2,029	2,337	1,406	3,860	3,658	<i>n.a.</i>
Semi-manufactures ..	508	636	570	575	511	<i>n.a.</i>
Philippine Republic—						
Unwrought .. ..	4,685	4,386	4,215	} 7,100	{ 7,345	} <i>n.a.</i>
Semi-manufactures (a) ..	744	937	1,003			
of which—Foil .. ..	315	269	324	<i>n.a.</i>	255	<i>n.a.</i>
Aluminium sulphates ..	8,713	3,196	1,606	<i>n.a.</i>	1,117	<i>n.a.</i>
Southern Yemen—						
Unwrought .. ..	10	386	296	208	164	183
Syria—						
Unwrought .. ..	398	287	428	116	69	425

(a) Including alloys.

(b) Years ending March 20 following that stated.

## IMPORTS OF ALUMINIUM, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
<b>Thailand—</b>						
Unwrought (a) ..	1,625	2,953	1,807	3,853	4,484	5,148
Semi-manufactures (a) ..	3,136	2,311	3,220	2,873	3,434	3,522
of which—Foil.. ..	567	740	998	1,010	1,381	1,197
Aluminium sulphates ..	550	351	702	199	326	528
<b>Turkey—</b>						
Unwrought (a) ..	1,197	1,554	5,551	8,102	9,128	12,445
Semi-manufactures (a) ..	2,600	1,616	1,720	2,825	3,925	2,928
of which—Foil.. ..	1,113	471	873	1,846	2,630	1,970
Aluminium sulphates ..	4,930	3,152	4,687	8,382	1,415	6,448
Alumina and hydrate ..	33	23	67	56	186	131

(a) Including alloys.

**ANTIMONY**  
**PRODUCTION OF ANTIMONY ORE**  
*(Metal content)*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Rhodesia	49	36	123	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada (a) .. ..	—	—	—	—	—	—
Pakistan .. .. .	8	81	60	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sarawak .. .. .	—	70	50	65	31	23
Australia (b) .. .	74	273	35	98	91	158
<b>OTHER COUNTRIES</b>						
Austria .. .. .	853	879	681	650	679	692
Czechoslovakia (h) ..	2,000	2,000	2,000	2,000	2,000	2,000
France .. .. .	98	165	119	275	164	—
Italy .. .. .	237	529	261	261	609	1,248
Portugal .. .. .	6	12	11	4	23	20
Spain .. .. .	58	53	85	92	108	128
U.S.S.R. (h) .. .. .	7,000	7,000	7,000	7,000	7,000	7,000
Yugoslavia .. .. .	<i>r</i> 3,602	<i>r</i> 3,579	<i>r</i> 3,906	<i>r</i> 3,550	3,030	(h) 3,000
Algeria .. .. .	—	—	65	(f) 60	60	<i>n.a.</i>
Morocco .. .. .	664	1,535	2,165	1,232	1,463	1,254
South Africa .. .. .	10,983	12,679	12,312	11,191	12,201	16,585
Guatemala .. .. .	(e) 28	—	—	14	30	<i>n.a.</i>
Mexico .. .. .	4,750	4,712	4,396	4,407	3,741	3,408
United States (d) .. .	576	564	754	828	796	764
Bolivia (g) .. .. .	7,443	9,488	8,627	10,499	11,295	10,940
Peru (i) .. .. .	601	671	637	662	624	660
China (f) .. .. .	15,000	15,000	15,000	15,000	12,000	12,000
Japan .. .. .	189	495	180	76	56	<i>n.a.</i>
Thailand .. .. .	604	1,249	(f) 1,250	1,046	1,010	186
Turkey .. .. .	1,614	1,720	1,643	1,589	1,156	1,469
<b>TOTAL*</b> .. .. .	<b>55,000</b>	<b>62,000</b>	<b>60,000</b>	<b>60,000</b>	<b>58,000</b>	<b>62,000</b>

\*Excluding any antimony ore produced in Hungary, Afghanistan and Iran.

- (a) The following figures represent the antimony content of antimonial lead and of flue dust and slags (long tons): 1963—715; 1964—711; 1965—581; 1966—628; 1967—566; 1968—502.
- (b) In addition the antimony content of antimonial slag obtained as a by-product of lead refining was as follows (long tons): 1963—933; 1964—843; 1965—909; 1966—873; 1967—810; 1968—672.
- (c) Metal.
- (d) Secondary metal was recovered as follows (long tons): 1963—18,574; 1964—19,946; 1965—21,715; 1966—21,659; 1967—21,129; 1968—21,160.
- (e) Imports into the United States.
- (f) United States Bureau of Mines' estimate.
- (g) Content of ore exported plus exports of metal.
- (h) Estimate.
- (i) Metal plus content of ore.

## EXPORTS OF ANTIMONY

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom— Regulus and refined ..	1,454	1,079	1,241	751	840	1,678
Rhodesia (a)—						
Ore .. .. .	213	162	207	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sarawak—						
Ore .. .. .	—	—	106	—	—	—
<b>OTHER COUNTRIES</b>						
Austria—						
Ore .. .. .	806	820	730	383	465	389
Sulphide .. .. .	317	312	199	262	290	397
Belgium-Luxemburg						
E.U.—						
Oxide .. .. .	1,137	1,765	1,609	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
France—						
Ore .. .. .	98	50	—	—	—	—
Crude and regulus ..	262	54	56	38	52	139
Germany (Federal)—						
Ore .. .. .	—	—	1	—	106	—
Regulus, scrap, etc. ..	769	226	172	205	186	118
Oxide .. .. .	87	438	<i>n.a.</i>	263	238	236
Italy—						
Regulus and scrap ..	—	1	1	1	1	20
Netherlands—						
Regulus (b) .. .. .	57	55	30	7	9	12
Oxide .. .. .	19	130	122	31	22	31
Sweden—						
Regulus .. .. .	39	34	12	22	11	1
U.S.S.R.—						
Regulus .. .. .	3,200	4,200	2,700	2,400	1,300	787
Yugoslavia—						
Regulus .. .. .	2,324	1,921	2,261	1,981	1,720	1,267
Algeria—						
Ore .. .. .	—	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Morocco—						
Ore .. .. .	1,327	1,838	2,979	3,169	3,272	2,687
South Africa—						
Ore .. .. .	19,485	21,722	18,711	17,658	20,437	24,942
Mexico—						
Ore and concentrates ..	11,720	11,871	11,170	14,264	9,404	6,079
Regulus and refined ..	316	290	276	316	186	307
United States—						
Ore .. .. .	129	346	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Metal and alloys .. ..	14	375	13	26	73	97
Oxide .. .. .	<i>n.a.</i>	<i>n.a.</i>	34	75	148	106
Bolivia—						
Ore ( <i>Sb content</i> ) .. ..	7,443	9,488	8,621	10,471	11,287	10,900
Regulus .. .. .	—	—	6	27	8	<i>n.a.</i>
Peru—						
Ore and metal ( <i>Sb content</i> ) .. ..	840	978	686	852	886	1,000
Burma—						
Ore .. .. .	21	—	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Thailand—						
Ore .. .. .	852	1,447	1,964	3,146	2,734	1,085
Turkey—						
Ore .. .. .	3,722	2,587	3,380	2,863	2,586	1,983
Sulphide .. .. .	<i>n.a.</i>	—	220	352	950	565

(a) Figure for 1963 relates to Rhodesia and Nyasaland.

(b) Including scrap.



## IMPORTS OF ANTIMONY, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ore and concentrates (b)	11,995	13,989	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Zambia (e)—						
Refined and regulus ..	110	61	12	81	13	53
Canada—						
Regulus .. ..	463	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oxide .. ..	290	317	275	332	237	354
India—						
Ore .. ..	1,690	1,323	1,675	2,077	1,504	1,777
Metal .. ..	15	59	34	56	17	1
Oxide (d) .. ..	39	41	92	65	90	23
Sulphide (d) .. ..	2	4	37	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Australia (c)—						
Concentrates .. ..	44	43	21	—	<i>n.a.</i>	<i>n.a.</i>
Regulus .. ..	393	829	251	186	20	2
<b>OTHER COUNTRIES</b>						
Austria—						
Regulus .. ..	263	162	94	112	125	127
Belgium-Luxemburg						
E.U.—						
Regulus (a) .. ..	238	162	111	102	108	23
Oxide .. ..	213	287	88	60	50	115
Denmark—						
Regulus .. ..	313	106	106	146	119	66
France—						
Ore .. ..	853	2,648	1,651	1,497	1,241	1,698
Crude and regulus (a) ..	2,743	2,623	1,700	2,398	2,177	1,213
Sulphide .. ..	6	7	7	11	11	14
Germany (Federal)—						
Ore .. ..	2,131	2,619	2,749	3,147	2,976	3,323
Regulus, scrap, etc. ..	4,707	3,298	2,707	2,733	2,364	1,418
Oxide .. ..	402	815	<i>n.a.</i>	581	572	1,042
Greece—						
Regulus .. ..	53	18	56	34	28	44
Italy—						
Ore .. ..	<i>n.a.</i>	<i>n.a.</i>	15	830	760	4,610
Regulus and scrap ..	620	334	430	491	584	145
Oxide .. ..	283	226	256	264	298	397
Sulphide .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	18	25	3
Netherlands—						
Regulus (a) .. ..	380	289	230	273	145	144
Oxide .. ..	560	590	583	510	485	543
Norway—						
Regulus .. ..	90	93	100	43	84	119
Portugal—						
Sulphide .. ..	—	1	—	—	—	—
Spain—						
Ore .. ..	507	523	696	305	64	885
Regulus .. ..	133	151	268	140	288	216
Oxide .. ..	190	253	221	307	193	160
Sweden—						
Regulus .. ..	439	419	270	340	299	475
Switzerland—						
Regulus .. ..	311	349	205	191	266	274
Yugoslavia—						
Ore .. ..	<i>n.a.</i>	<i>n.a.</i>	132	160	<i>n.a.</i>	<i>n.a.</i>

(a) Including scrap.

(b) Including crude.

(c) Years ended June 30 of that stated.

(d) Years ended March 31 following that stated.

(e) Figure for 1963 relates to Rhodesia and Nyasaland.

## IMPORTS OF ANTIMONY, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Morocco—						
Regulus .. ..	19	10	12	15	12	8
South Africa—						
Refined and regulus ..	314	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cuba—						
Regulus .. ..	156	110	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Mexico—						
Oxide .. ..	20	18	24	26	18	20
United States—						
Ore ( <i>Sb content</i> ) ..	8,736	9,532	9,250	11,125	10,351	9,477
Crude .. ..	20	28	21	56	<i>n.a.</i>	<i>n.a.</i>
Regulus .. ..	5,086	2,953	2,366	2,697	2,687	3,074
Oxide .. ..	1,865	2,795	1,940	4,807	4,552	4,286
Argentina—						
Ore .. ..	370	497	1,058	427	484	279
Brazil—						
Ore .. ..	79	64	269	290	232	227
Regulus .. ..	580	157	71	233	69	313
Oxide .. ..	36	14	34	111	77	113
Sulphide .. ..	139	108	37	106	109	108
Chile—						
Regulus .. ..	52	33	69	<i>n.a.</i>	25	<i>n.a.</i>
Colombia—						
Metal .. ..	66	11	15	20	19	16
Uruguay—						
Regulus .. ..	<i>n.a.</i>	<i>n.a.</i>	10	10	4	<i>n.a.</i>
Venezuela—						
Regulus .. ..	17	13	21	34	10	71
Japan—						
Ore and concentrates ..	6,098	6,398	4,473	7,286	8,927	7,946
Regulus .. ..	158	911	124	305	876	61
Sulphide .. ..	270	98	49	20	152	<i>n.a.</i>

**ARSENIC**  
**PRODUCTION OF ARSENIC**

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Rhodesia—						
White arsenic .. ..	540	184	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada—						
White arsenic (a) ..	84	145	180	313	337	309
<b>OTHER COUNTRIES</b>						
France—						
White arsenic .. ..	11,900	11,217	11,944	11,853	13,947	13,300
Germany (Federal) (b)—						
White arsenic, etc. ..	55	37	69	371	102	595
Portugal—						
White arsenic .. ..	555	366	183	191	248	180
Spain—						
White arsenic .. ..	143	140	116	110	127	128
Sweden—						
White arsenic .. ..	14,615	17,686	16,264	14,458	19,901	20,767
South West Africa—						
Lead concentrates						
( <i>As content</i> ) .. ..	—	—	—	744	<i>n.a.</i>	<i>n.a.</i>
White arsenic .. ..	—	—	—	39	<i>n.a.</i>	<i>n.a.</i>
Mexico—						
Ores ( <i>As<sub>2</sub>O<sub>3</sub> content</i> ) ..	9,336	10,992	9,968	11,706	11,157	10,086
Brazil—						
White arsenic .. ..	288	185	252	315	218	307
Peru—						
White arsenic .. ..	610	611	492	359	263	1,352
Japan—						
White arsenic .. ..	807	491	471	538	633	675

Arsenic has also been produced in the United Kingdom, Austria, Belgium, Czechoslovakia, East Germany, Hungary, U.S.S.R., United States, Argentina, Iran, China and Korea.

(a) Refined white arsenic produced plus the content of crude arsenic exported but excluding arsenic contained in gold ores exported.

(b) Exports.

(c) United States Bureau of Mines' estimate.

EXPORTS OF ARSENIC, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Arsenates and Arsenites	<i>n.a.</i>	<i>n.a.</i>	7,849	8,941	6,874	2,962
	£440,827	£461,045	£519,544	£619,648	£509,060	£271,567
Organo-arsenic compounds .. ..	£59,739	£68,143	£52,210	£45,483	£34,464	£38,061
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Arsenates and arsenites	291	121	127	2	—	59
France—						
White arsenic .. ..	9,411	9,316	10,211	10,714	12,514	13,041
Arsenates .. ..	98	48	38	49	94	46
Germany (Federal)—						
White arsenic, etc. .. ..	55	37	69	371	102	595
Arsenates .. ..	102	57	59	64	22	16
Italy—						
White arsenic .. ..	15	—	41	5	3	30
Arsenates and arsenites	25	104	11	12	4	3
Netherlands—						
White arsenic .. ..	13	38	40	2	9	14
Arsenates and arsenites	32	27	3	8	13	10
Portugal—						
White arsenic .. ..	702	491	349	370	186	105
Sweden—						
White arsenic .. ..	13,000	13,577	11,692	16,580	<i>n.a.</i>	<i>n.a.</i>
Metallic arsenic .. ..	298	344	432	512	<i>n.a.</i>	<i>n.a.</i>
South West Africa—						
Lead concentrates				744	<i>n.a.</i>	<i>n.a.</i>
( <i>As content</i> ) .. ..	—	—	—	39	<i>n.a.</i>	<i>n.a.</i>
White arsenic .. ..	—	—	—	—	<i>n.a.</i>	<i>n.a.</i>
Mexico—						
White arsenic, pure .. ..	8,515	11,023	9,063	9,260	8,122	3,295
do. crude	125	86	813	1,612	2,416	2,985
United States—						
Arsenate of lead .. ..	358	836	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Arsenate of lime .. ..	83	686	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Japan—						
White arsenic .. ..	2	22	9	42	52	63

IMPORTS OF ARSENIC, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
White arsenic .. .. .	8,806	9,619	10,914	9,918	9,527	<i>n.a.</i>
Arsenates and arsenites	<i>n.a.</i>	<i>n.a.</i>	3	9	13	<i>n.a.</i>
<b>Canada—</b>						
Arsenate of lead .. .. .	28	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Arsenate of lime .. .. .	59	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>India (b)—</b>						
Arsenic and its oxides ..	239	524	529	248	556	668
<b>Malaysia (West)—</b>						
Arsenite of soda .. .. .	<i>n.a.</i>	<i>n.a.</i>	7,882	8,157	5,875	3,149
<b>Pakistan—</b>						
Arsenic and its oxides ..	24	10	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Australia (a)—</b>						
White arsenic .. .. .	1,906	1,800	1,729	1,198	1,499	1,863
Arsenates and arsenites	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	42	49	13
<b>New Zealand (a)—</b>						
White arsenic, etc. .. ..	187	160	72	153	159	<i>n.a.</i>
Arsenate of lead .. .. .	34	40	26	23	30	<i>n.a.</i>
Other arsenates and arsenites .. .. .	61	99	55	5	20	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
White arsenic, etc. .. ..	33	49	40	46	21	32
<b>Belgium-Luxembourg</b>						
<b>E.U.—</b>						
White arsenic .. .. .	12	72	44	21	20	5
<b>Denmark—</b>						
White arsenic .. .. .	30	21	15	22	25	27
Arsenates and arsenites	115	158	50	2	2	2
<b>France—</b>						
Metallic arsenic .. .. .	17	33	33	38	16	51
White arsenic .. .. .	62	79	108	39	5	20
<b>Germany (Federal)—</b>						
Metallic arsenic .. .. .	28	34	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
White arsenic, etc. .. ..	1,796	950	1,288	1,151	1,058	1,007
Sulphide .. .. .	—	1	—	—	1	—
<b>Greece—</b>						
White arsenic .. .. .	29	31	32	66	<i>n.a.</i>	<i>n.a.</i>
Arsenates and arsenites	52	59	—	1	<i>n.a.</i>	<i>n.a.</i>
<b>Italy—</b>						
White arsenic .. .. .	1,600	1,600	1,836	1,587	1,461	2,620
Metallic arsenic (c) .. ..	19	21	16	28	61	88
Arsenates and arsenites	27	4	5	12	14	29
<b>Netherlands—</b>						
White arsenic etc. .. ..	944	840	887	823	950	932
Arsenates and arsenites	26	55	43	19	—	—
<b>Norway—</b>						
White arsenic .. .. .	63	88	67	69	72	105
<b>Portugal—</b>						
White arsenic .. .. .	1	—	—	—	—	—
Arsenate of soda .. .. .	1	1	1	12	1	—
<b>Switzerland—</b>						
White arsenic, etc. .. ..	90	97	78	85	85	120
<b>Yugoslavia—</b>						
Metallic arsenic .. .. .	3	6	8	1	9	10
White arsenic .. .. .	<i>n.a.</i>	<i>n.a.</i>	11	104	250	481
Arsenates .. .. .	<i>n.a.</i>	<i>n.a.</i>	12	17	<i>n.a.</i>	4
<b>Malagasy Republic—</b>						
Arsenates .. .. .	9	15	20	11	17	11

(a) Years ended June 30 of that stated.

(b) Years ended March 31 of year following that stated.

(c) May include some tellurium.

## IMPORTS OF ARSENIC, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES (cont.)						
Tunisia—						
Arsenates and arsenites	—	1	3	5	6	<i>n.a.</i>
Mexico—						
White arsenic .. ..	—	17	—	—	—	—
United States—						
Metallic arsenic .. ..	151	137	161	162	263	366
White arsenic .. ..	12,999	16,237	13,862	16,679	24,186	22,500
Sulphide .. ..	31	25	41	27	258	22
Arsenate of soda .. ..	122	143	138	163	113	33
Argentina—						
White arsenic .. ..	397	522	329	481	396	427
Brazil—						
Metallic arsenic .. ..	5	15	21	7	15	—
White arsenic .. ..	743	297	112	256	612	514
Arsenates .. ..	7	2	—	5	—	12
Chile—						
White arsenic .. ..	119	56	124	<i>n.a.</i>	113	<i>n.a.</i>
Arsenates .. ..	23	<i>n.a.</i>	—	<i>n.a.</i>	—	<i>n.a.</i>
Colombia—						
White arsenic .. ..	126	39	18	9	23	157
Uruguay—						
Arsenate of lead .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	10	<i>n.a.</i>	<i>n.a.</i>
Japan—						
White arsenic .. ..	2,633	2,169	2,526	2,743	2,011	3,365
Sulphide .. ..	35	47	41	30	22	73
Turkey—						
Arsenic compounds .. ..	10	—	17	26	19	77

**ASBESTOS**  
**PRODUCTION OF ASBESTOS**

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Botswana .. ..	2,114	1,929	793	—	—	<i>n.a.</i>
Kenya—						
Anthophyllite .. ..	70	182	121	65	50	<i>n.a.</i>
Rhodesia .. ..	127,014	137,010	(b) 164,762	(c) 156,000	<i>n.a.</i>	<i>n.a.</i>
Swaziland .. ..	29,778	35,591	36,503	32,270	35,852	38,341
Canada (a)—						
Chrysotile .. ..	1,138,866	1,267,724	1,239,475	1,329,513	1,296,521	1,425,010
Crude .. ..	194	211	145	<i>n.a.</i>	257	<i>n.a.</i>
Fibre .. ..	517,040	593,111	588,927	<i>n.a.</i>	629,728	<i>n.a.</i>
Shorts and Waste .. ..	621,632	674,402	650,403	<i>n.a.</i>	666,536	<i>n.a.</i>
Cyprus .. ..	17,823	12,281	15,733	24,519	20,208	19,012
India .. ..	2,712	3,313	4,700	6,826	6,903	8,800
Australia—						
Chrysotile .. ..	847	1,577	1,046	560	527	799
Crocidolite .. ..	11,094	10,614	9,280	11,464	120	—
New Zealand .. ..	392	—	—	—	—	—
<b>Total .. ..</b>	<b>1,331,000</b>	<b>1,470,000</b>	<b>1,472,000</b>	<b>1,561,000</b>	<b>1,470,000</b>	<b>1,648,000</b>
<b>OTHER COUNTRIES</b>						
Austria .. ..	570	—	—	—	—	—
Bulgaria .. ..	1,181	1,279	1,279	1,772	(c) 1,280	(c) 1,280
Finland .. ..	9,108	10,367	(e) 11,881	11,830	(c) 11,600	(c) 11,800
France .. ..	23,298	21,687	9,981	295	148	—
Greece .. ..	66	62	—	38	—	<i>n.a.</i>
Italy .. ..	56,264	67,109	70,441	80,774	99,149	101,803
Portugal .. ..	26	—	47	10	51	84
U.S.S.R. (c) .. ..	675,000	720,000	r 733,000	r 743,000	757,000	787,000
Yugoslavia .. ..	8,102	8,286	9,451	7,509	8,879	10,230
Egypt .. ..	171	1,553	2,880	1,837	11,748	2,560
Mozambique .. ..	—	—	80	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Amosite .. ..	69,302	68,996	72,085	85,658	84,730	86,831
Blue .. ..	88,545	91,424	108,145	128,462	119,901	107,803
Chrysotile .. ..	25,829	32,072	34,728	32,841	35,086	37,982
Tremolite .. ..	25	—	—	—	—	—
United States (d) .. ..	59,282	90,261	105,603	112,436	109,990	107,759
Argentina .. ..	326	484	217	56	492	341
Bolivia (b) .. ..	<i>n.a.</i>	<i>n.a.</i>	7	4	2	1
China (c) .. ..	100,000	120,000	130,000	140,000	150,000	150,000
Formosa .. ..	539	469	788	644	563	1,181
Japan—						
Chrysotile .. ..	16,259	16,052	14,688	r 14,832	16,019	24,100
Amphibole .. ..	—	—	—	4,300	8,122	<i>n.a.</i>
Korea (South) .. ..	1,893	1,252	1,527	320	2,132	3,259
Philippine Republic .. ..	376	524	—	492	57	<i>n.a.</i>
Turkey .. ..	364	1,153	1,228	3,573	3,206	3,487
<b>Total* .. ..</b>	<b>1,200,000</b>	<b>1,300,000</b>	<b>1,400,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,450,000</b>
<b>WORLD'S TOTAL* .. ..</b>	<b>2,500,000</b>	<b>2,700,000</b>	<b>2,800,000</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>3,000,000</b>

\*Including an estimate for asbestos produced in Brazil but excluding asbestos known to have been produced in Czechoslovakia, Roumania, Eritrea and North Korea.

(a) Sales and shipments.

(b) Exports.

(c) United States Bureau of Mines' estimate.

(d) Sold or used by producers.

(e) Fibre.

## EXPORTS OF ASBESTOS

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Unmanufactured ..	8,126	5,703	5,987	4,695	4,246	4,389
Packing, etc. ..	10,468	10,423	11,068	10,718	8,985	9,469
Cement products ..	44,041	57,857	37,607	33,322	31,427	32,986
Yarn and cloth ..	3,544	3,843	3,846	3,927	3,182	3,656
Other manufactures ..	12,018	14,466	13,085	13,147	12,418	12,778
Rhodesia (e)—						
Unmanufactured ..	109,926	158,769	164,762	n.a.	n.a.	n.a.
Cement products ..	(£180)	(£491,982)	(£634,260)	n.a.	n.a.	n.a.
Canada—						
Crude .. .. .	174	191	110	154	204	180
Fibre .. .. .	495,910	562,960	563,194	654,094	583,286	645,641
Shorts and waste ..	581,081	627,453	614,736	636,969	614,763	657,437
Manufactured ..	(£492,693)	(£654,355)	(£670,009)	(£786,070)	(£866,527)	(£1,231,018)
Cyprus—						
Unmanufactured ..	13,460	11,317	17,263	18,888	18,541	17,700
India—						
Unmanufactured ..	6	8	9	29	68	22
Manufactured (a) ..	119	51	138	70	89	147
Cement products (a) ..	1,021	1,038	444	394	1,587	5,612
Malaysia (West)—						
Cement products ..	n.a.	n.a.	2,453	2,217	3,869	8,649
Other manufactures ..	n.a.	n.a.	50	214	39	17
Singapore—						
Cement products ..	35,396	36,732	26,400	26,762	15,842	16,614
Other manufactures ..	248	53	127	136	640	214
Hong Kong—						
Cement products ..	113	—	—	—	—	—
Australia—						
Unmanufactured ..	2,347	6,500	4,295	4,146	2,254	718
Packing (b) .. ..	(£35,015)	(£74,305)	(£141,226)	(£216,215)	(£41,200)	(£94,181)
<b>OTHER COUNTRIES</b>						
Austria—						
Unmanufactured ..	157	15	9	1,674	13	56
Manufactured (c) ..	1,641	1,973	2,641	2,482	2,923	3,039
Cement products (d) ..	11,203	10,519	13,376	10,833	5,995	17,909
Belgium-Luxemburg						
E.U.—						
Unmanufactured ..	391	128	23	43	32	987
Manufactured (c) ..	454	478	643	663	598	620
Cement products (d) ..	212,442	213,063	210,948	189,675	196,249	204,628
Denmark—						
Unmanufactured ..	34	67	159	47	59	48
Manufactured (c) ..	785	513	875	726	1,058	886
Cement products (d) ..	9,890	7,102	7,447	6,774	6,690	9,866
Finland—						
Unmanufactured ..	5,991	7,435	8,426	8,393	8,709	10,159
Manufactured .. ..	620	725	1,131	570	517	577
France—						
Unmanufactured ..	6,076	8,786	4,934	1,899	1,069	1,014
Manufactured (c) ..	4,543	4,408	5,006	4,776	4,519	5,311
Cement products (d) ..	38,570	38,107	33,731	50,758	28,577	23,301

(a) Years ended March 31 following that stated.

(b) Years ended June 30 of that stated.

(c) Including brake and clutch linings of material other than asbestos.

(d) Including manufactures of other fibro-cements.

(e) Figures for 1963 exclude exports to Malawi and Zambia.



## EXPORTS OF ASBESTOS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Germany (Federal)—						
Unmanufactured .. .. .	294	249	271	469	501	1,474
Manufactured (a) .. .. .	3,681	4,301	5,351	6,863	8,085	11,218
Cement products (b) .. .. .	49,445	57,804	36,156	24,957	55,882	58,424
Greece—						
Manufactured .. .. .	307	949	100	<i>n.a.</i>	505	114
Italy—						
Unmanufactured .. .. .	6,310	8,890	25,293	35,370	33,488	41,168
Manufactured (a) .. .. .	4,008	2,378	1,295	1,493	1,085	617
Cement products (b) .. .. .	31,970	49,877	42,902	50,518	84,568	23,523
Netherlands—						
Unmanufactured .. .. .	120	17	92	15	53	54
Manufactured (a) .. .. .	2,151	2,462	1,899	2,271	2,564	3,489
Cement products (b) .. .. .	8,069	7,906	5,627	4,030	3,485	4,608
Portugal—						
Unmanufactured .. .. .	44	2	41	18	57	<i>n.a.</i>
Manufactured .. .. .	447	552	664	1,134	919	53
Spain—						
Manufactured (a) .. .. .	22	141	268	406	488	691
Cement products (b) .. .. .	288	277	1,893	303	1,610	2,668
Sweden—						
Unmanufactured .. .. .	53	134	13	55	22	20
Manufactured (a) .. .. .	93	111	166	150	66	105
Cement products .. .. .	17,279	22,517	20,005	23,028	25,115	15,627
Switzerland—						
Unmanufactured .. .. .	99	57	71	84	73	31
Manufactured (a) .. .. .	160	233	71	250	261	433
Cement products (b) .. .. .	2,939	3,523	5,837	3,193	1,572	5,930
U.S.S.R.—						
Unmanufactured .. .. .	177,300	208,800	244,500	252,700	280,696	298,805
Yugoslavia—						
Unmanufactured .. .. .	5,376	4,264	4,387	2,533	1,634	1,545
Manufactured .. .. .	255	1,726	1,108	1,181	1,378	2,160
Cement products .. .. .	503	500	6,626	24,410	6,194	45,543
Morocco—						
Cement products .. .. .	9,095	10,561	14,849	5,463	6,381	7,808
Mozambique—						
Unmanufactured .. .. .	—	—	143	106	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Unmanufactured (c) .. .. .	184,244	223,350	221,121	229,827	230,321	254,279
Cement products .. .. .	(£275,902)	(£157,338)	(£272,288)	5,143	9,274	7,450
Other manufactures .. .. .	(£24,173)	(£105,688)	(£94,663)	(£186,849)	(£266,985)	(£261,123)
United States—						
Unmanufactured .. .. .	8,909	24,000	38,388	41,687	46,608	36,801
Spun, woven and packing .. .. .	1,336	1,357	2,255	3,195	4,469	5,236
Brake linings .. .. .	(£1,745,765)	(£1,721,809)	(£1,690,816)	(£1,874,550)	(£2,110,857)	(£2,385,000)
Clutch facings .. .. .	(£628,845)	(£659,061)	(£604,603)	(£679,149)	(£844,488)	(£965,833)
Pipe covering and cement .. .. .	3,661	<i>n.a.</i>	10,327	13,171	21,406	14,774
Other manufactures .. .. .	12,026	11,596	(£2,192,335)	(£1,811,000)	(£1,580,900)	(£2,163,750)
Bolivia—						
Unmanufactured .. .. .	<i>n.a.</i>	<i>n.a.</i>	7	4	2	1
Colombia—						
Cement products .. .. .	2,291	4,358	1,977	17,316	16,700	5,526
Peru—						
Manufactured .. .. .	—	31	4	—	15	<i>n.a.</i>
Venezuela—						
Unmanufactured .. .. .	—	7	—	—	—	—

(a) Including brake and clutch linings of material other than asbestos.

(b) Including manufactures of other fibro-cements.

(c) Including, if any, produce of Botswana and Swaziland.

## EXPORTS OF ASBESTOS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Formosa—</b>						
Unmanufactured ..	34	50	86	68	56	<i>n.a.</i>
Manufactured ..	213	828	16	185	87	<i>n.a.</i>
<b>Japan—</b>						
Unmanufactured ..	106	53	757	700	326	189
Manufactured ..	3,633	4,134	3,332	4,656	3,877	4,588
Cement products ..	21,812	15,942	47,980	37,696	15,254	28,756
<b>Lebanon—</b>						
Cement products ..	14,485	15,021	27,123	28,576	26,984	<i>n.a.</i>
<b>Thailand—</b>						
Cement products ..	3,461	<i>n.a.</i>	<i>n.a.</i>	812	<i>n.a.</i>	<i>n.a.</i>
<b>Turkey—</b>						
Unmanufactured ..	—	—	—	591	—	—

## IMPORTS OF ASBESTOS

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Unmanufactured—						
Crude and fibre ..	144,074	160,626	157,782	178,561	160,173	163,239
Waste .. .. .	13,362	22,759	18,149	10,659	6,996	12,178
Manufactured ..	541	922	709	569	1,991	2,129
Cement products ..	18,058	22,564	27,292	26,071	29,587	30,586
Channel Islands—						
Manufactured .. ..	1,738	2,696	2,594	1,314	2,323	2,243
Malta—						
Manufactured .. ..	(£8,262)	(£13,837)	(£14,367)	(£13,560)	(£22,612)	£22,220
Gambia—						
Cement sheets and pipes	551	534	594	624	311	13
Ghana—						
Cement sheets, pipes etc.	22,663	20,144	18,042	18,222	10,594	70,703
Kenya—						
Manufactured .. ..	2,119	902	976	1,906	4,180	3,994
Mauritius—						
Manufactured .. ..	346	877	1,244	2,252	1,164	2,552
Nigeria—						
Cement sheets and pipes	8,218	7,558	8,478	5,885	1,230	73
Unmanufactured ..	894	1,643	3,744	4,521	9,708	15,036
Sierra Leone—						
Cement sheets and pipes	870	288	—	1,920	1,809	n.a.
Tanzania—						
Manufactured .. ..	618	918	535	2,651	1,420	4,717
Uganda—						
Unmanufactured ..	376	736	860	1,416	764	1,276
Manufactured .. ..	715	619	400	819	841	1,392
Zambia (a)—						
Unmanufactured ..	n.a.	1,175	913	1,106	759	125
Cement products ..	(£33,430)	(£442,007)	(£411,686)	(£403,620)	(£276,486)	(£491,074)
Canada—						
Unmanufactured ..	n.a.	8,230	6,142	5,857	6,512	5,296
Packing .. .. .	238	325	342	425	628	594
Other manufactures ..	(£1,582,563)	(£1,811,982)	(£1,922,075)	(£1,996,352)	(£2,829,464)	(£3,445,618)
Barbados—						
Manufactured .. ..	20	31	30	48	17	139
Bermuda—						
Sheets, etc. .. ..	(£12,261)	(£10,101)	(£13,780)	(£12,424)	(£13,752)	(£19,434)
Grenada—						
Manufactured .. ..	7	2	4	1	7	4
Jamaica—						
Unmanufactured ..	114	171	349	182	539	838
Manufactured .. ..	348	546	369	159	285	272
Cement products ..	1,093	446	2,858	1,952	363	91
St. Vincent—						
Cement products ..	n.a.	n.a.	3	7	11	n.a.
Trinidad and Tobago—						
Cement products ..	891	159	498	706	99	291
Other manufactures ..	599	507	821	1,880	638	103
Guyana—						
Cement products ..	n.a.	900	1,990	453	407	1,443
Other manufactures ..	n.a.	177				
Brunei—						
Cement products ..	n.a.	1,434	1,203	1,227	865	3,009
Ceylon—						
Unmanufactured ..	—	463	693	—	1,766	830
Cement sheets, etc. ..	3,757	158	9	6	91	28
Other manufactures ..	28	777	4,385	4,352	1,820	4,134
Cyprus—						
Sheets and pipes ..	4,585	2,689	4,080	4,336	6,458	n.a.
Other manufactures ..	(£34,516)	(£33,539)	(£88,458)	(£47,711)	(£50,049)	(£55,562)

(a) Figure for 1963 relates to Rhodesia and Nyasaland.

## IMPORTS OF ASBESTOS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
Hong Kong—						
Unmanufactured ..	9	(e) 1	235	362	144	266
Manufactured ..	295	(£103,632)	(£144,149)	(£100,887)	(£130,598)	(£166,893)
Cement products ..	34,578	11,115	8,057	5,903	5,186	9,536
India—						
Unmanufactured ..	36,374	35,222	37,219	29,482	29,315	26,251
Manufactured (b) ..	1,661	1,768	2,669	768	547	353
Cement products (b) ..	2,038	180	162	83	132	115
Malaysia (West)—						
Unmanufactured ..	n.a.	n.a.	7,787	8,837	10,922	10,190
Cement products ..	n.a.	n.a.	14,619	11,836	4,441	1,063
Other manufactures ..	n.a.	n.a.	351	678	1,456	330
Pakistan—						
Cement sheets ..	519	134	n.a.	n.a.	n.a.	n.a.
Sabah—						
Manufactured ..	17	10	22	18	13	29
Cement products ..	3,647	3,587	3,778	2,976	3,328	4,066
Sarawak—						
Cement products ..	1,450	3,786	6,420	5,159	4,425	6,058
Other manufactures ..	4	14	12	13	15	41
Singapore—						
Unmanufactured ..	6,532	8,216	4,778	3,617	4,367	3,020
Cement products ..	13,379	10,689	6,509	3,963	3,821	4,062
Other manufactures ..	450	448	747	1,012	1,631	1,244
Australia—						
Unmanufactured ..	32,704	38,299	46,179	49,243	46,950	59,590
Packing, etc. (a) ..	(£490,708)	(£594,958)	(£665,094)	f(£681,000)	f(£873,200)	f(£910,274)
New Zealand (a)—						
Unmanufactured ..	6,995	5,468	7,566	7,618	7,950	5,851
Manufactured £	} (419,808)	(281,867)	(312,511)	{ (369,774)	(371,704)	n.a.
Cement products £						n.a.
Irish Republic—						
Unmanufactured ..	3,111	3,218	5,009	5,938	4,806	3,955
Manufactured ..	3,021	1,419	1,566	1,297	1,172	1,397
<b>OTHER COUNTRIES</b>						
Austria—						
Unmanufactured ..	20,986	21,091	30,611	33,629	17,199	31,245
Manufactured (c) ..	345	504	579	830	713	742
Cement products (d) ..	5,766	7,537	8,715	12,899	9,902	6,854
Belgium-Luxemburg						
E.U.—						
Unmanufactured ..	48,972	55,026	60,062	51,685	54,893	60,150
Manufactured (c) ..	2,414	2,884	2,720	2,680	2,656	2,332
Cement products (d) ..	9,561	6,919	2,524	2,035	2,692	3,712
Czechoslovakia—						
Unmanufactured ..	22,307	24,130	27,126	32,475	32,000	n.a.
Denmark—						
Unmanufactured ..	17,142	19,126	26,169	20,440	23,122	24,727
Manufactured (c) ..	1,860	1,702	2,431	1,931	1,540	1,916
Cement products (d) ..	1,055	7,338	12,945	2,233	8,617	1,571
Finland—						
Unmanufactured ..	5,991	6,648	7,360	6,292	6,329	4,468
Manufactured ..	620	795	1,825	749	1,362	1,499
France—						
Unmanufactured ..	73,353	107,811	104,981	122,476	124,741	126,583
Manufactured (c) ..	2,535	2,413	3,355	3,138	2,967	3,213
Cement products (d) ..	18,102	38,692	31,101	57,054	120,298	130,965

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

(c) Including brake and clutch linings of material other than asbestos.

(d) Including manufactures of other fibro-cements.

(e) Excess of re-exports.

(f) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF ASBESTOS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
Germany (Federal)—						
Unmanufactured ..	141,169	140,556	170,733	166,738	123,812	185,140
Manufactured (a) ..	6,834	7,885	8,657	8,181	6,572	10,029
Cement products (b) ..	96,652	92,976	109,043	104,517	88,551	105,325
Greece—						
Unmanufactured ..	2,771	4,879	4,397	3,849	5,427	8,331
Manufactured (a) (c) ..	4,910	3,028	4,561	3,806	5,009	6,613
Hungary—						
Unmanufactured ..	14,320	14,744	10,533	14,449	13,891	n.a.
Iceland—						
Unmanufactured ..	11	5	7	15	7	11
Manufactured ..	77	189	178	148	205	176
Italy—						
Unmanufactured ..	38,145	44,505	38,029	42,931	44,712	50,463
Manufactured (a) ..	1,745	3,567	3,235	4,029	4,288	2,312
Cement products (b) ..	14,452	14,554	12,494	13,878	11,074	9,945
Netherlands—						
Unmanufactured ..	16,381	22,908	18,632	16,759	17,802	22,939
Manufactured (a) ..	2,986	4,579	3,841	5,251	4,922	6,407
Cement products (b) ..	30,712	110,011	112,534	101,914	92,732	97,056
Norway—						
Unmanufactured ..	3,474	5,786	5,018	5,492	5,593	4,650
Manufactured (a) ..	1,350	1,828	1,813	1,887	2,167	2,029
Cement products (b) ..	13,534	13,346	12,855	13,778	14,862	15,330
Poland—						
Unmanufactured ..	21,028	21,359	32,000	41,691	41,959	41,574
Portugal—						
Unmanufactured ..	1,817	2,472	3,816	4,032	4,233	4,201
Manufactured (a) ..	367	363	434	516	568	586
Spain—						
Unmanufactured ..	39,309	50,696	48,433	74,328	46,750	61,779
Manufactured (a) (b) ..	1,593	2,525	2,627	2,813	2,426	2,148
Sweden—						
Unmanufactured ..	15,377	19,446	20,828	19,288	13,320	18,435
Manufactured (a) ..	3,428	3,464	4,265	4,257	4,067	3,995
Cement products ..	16,676	13,513	12,527	7,546	10,399	11,675
Switzerland—						
Unmanufactured ..	11,190	12,330	14,436	15,523	12,511	14,762
Manufactured (a) ..	2,277	3,147	3,026	2,399	2,379	2,629
Cement products (b) ..	3,537	5,690	2,230	2,030	1,932	1,168
Yugoslavia—						
Unmanufactured ..	7,975	15,329	12,750	13,165	18,349	16,855
Manufactured ..	563	595	405	617	633	1,730
Cement products ..	184	639	21	6,883	12,196	2,617
Angola—						
Unmanufactured ..	575	992	1,342	1,330	1,425	549
Manufactured (a) ..	97	166	281	284	154	130
Egypt—						
Unmanufactured ..	7,736	3,360	4,533	6,709	5,440	3,896
Manufactured ..	699	518	407	560	276	222
Libya—						
Manufactured ..	220	22	55	72	53	65
Malagasy Republic—						
Manufactured (a) ..	74	85	70	55	89	91
Cement products ..	604	716	490	637	670	1,254
Morocco—						
Unmanufactured ..	2,316	1,964	2,640	2,455	2,104	2,188
Manufactured (a) ..	166	129	147	150	187	52
Cement products ..	163	80	1	1	2	1

(a) Including brake and clutch linings of material other than asbestos.

(b) Including manufactures of other fibro-cements.

(c) Including cement products.

## IMPORTS OF ASBESTOS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968	
<b>OTHER COUNTRIES</b>							
<i>(cont.)</i>							
Mozambique—							
Unmanufactured ..	495	450	863	992	<i>n.a.</i>	<i>n.a.</i>	
Manufactured ..	25	49	52	58	<i>n.a.</i>	<i>n.a.</i>	
South Africa—							
Unmanufactured ..	<i>n.a.</i>	4,489	8,467	11,128	13,772	12,920	
Packing ..	(£263,760)	(d)	(d)	(d)	(d)	(d)	
Cement products	(£15,582)	(£41,476)	(£272,288)	845	595	326	
Other manufactures ..	(£10,981)	(£940,489)	(£1,038,571)	(£832,609)	(£1,006,158)	(£1,014,549)	
Sudan—							
Manufactured ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	3	1,195	
Tunisia—							
Unmanufactured ..	3	279	400	2,934	2,131	1,068	
Manufactured (a) ..	67	179	100	146	96	93	
Cement products (b) ..	8,314	12,917	5,838	3,475	628	1,779	
Costa Rica—							
Manufactured ..	68	77	75	125	163	<i>n.a.</i>	
Cuba—							
Manufactured ..	2,734	4,724	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Cement ..	4,928	5,970	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Guatemala—							
Unmanufactured ..	282	453	983	545	541	361	
Manufactured (c) ..	191	103	140	297	157	189	
Honduras—							
Manufactured ..	35	82	48	61	64	117	
Mexico—							
Unmanufactured ..	19,668	23,715	21,140	25,123	30,085	33,274	
Manufactured ..	823	444	869	646	318	245	
Netherlands Antilles—							
Manufactured ..	313	266	166	145	217	247	
Cement sheets ..	3,028	2,104	2,270	2,741	2,084	2,748	
Nicaragua—							
Manufactured ..	32	55	146	69	56	64	
Panama Republic—							
Cement products ..	355	522	6	<i>n.a.</i>	<i>n.a.</i>	1,003	
Salvador—							
Unmanufactured ..	827	813	781	1,222	679	<i>n.a.</i>	
Manufactured ..	104	84	122	152	6	33	
United States—							
Unmanufactured—							
Crude ..	37,832	} 660,144	{ 49,500	} 56,419	} 575,993	} 658,848	
Mill fibre ..	12,784						15,508
Other ..	545,687						577,456
Manufactured ..	34,605	43,357	42,800	32,296	<i>n.a.</i>	<i>n.a.</i>	
Argentina—							
Unmanufactured and manufactured ..	9,544	12,866	15,396	13,655	14,251	16,721	
Brazil—							
Unmanufactured ..	19,887	13,123	14,912	18,648	17,227	27,150	
Manufactured ..	508	611	240	659	383	726	
Chile—							
Manufactured ..	9,241	7,225	6,081	<i>n.a.</i>	352	<i>n.a.</i>	
Colombia—							
Unmanufactured ..	12,729	7,886	8,818	16,033	13,535	13,870	
Manufactured ..	1,043	1,212	407	708	383	355	
Cement products ..	—	383	1	1	—	5	
Ecuador—							
Unmanufactured ..	319	755	939	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Manufactured ..	202	376	684	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	

(a) Including brake and clutch linings of material other than asbestos.

(b) Including manufactures of other fibro-cements.

(c) Including cement products.

(d) Included with "other manufactures".

## IMPORTS OF ASBESTOS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Peru—						
Unmanufactured ..	2,570	2,861	4,464	3,477	4,098	<i>n.a.</i>
Manufactured ..	445	588	757	355	405	<i>n.a.</i>
Surinam—						
Manufactured ..	720	1,135	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Uruguay ..	<i>n.a.</i>	<i>n.a.</i>	1,276	1,360	1,077	<i>n.a.</i>
Venezuela—						
Unmanufactured ..	2,584	4,643	4,248	5,233	4,932	5,575
Manufactured ..	684	829	488	430	388	388
Cement products ..	20,644	5,294	2,442	9,246	18,379	4,553
Burma—						
Unmanufactured ..	531	1,166	1,871	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cement products ..	560	6	18	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Formosa—						
Unmanufactured ..	876	1,032	1,604	2,329	2,277	<i>n.a.</i>
Manufactured ..	249	385	468	428	<i>n.a.</i>	<i>n.a.</i>
Iran (a)—						
Unmanufactured ..	1,200	2,258	3,289	4,611	5,713	5,821
Manufactured ..	123	136	147	348	431	490
Cement products ..	1,079	895	1,686	1,022	394	623
Iraq—						
Unmanufactured ..	817	2,740	<i>n.a.</i>	503	595	<i>n.a.</i>
Manufactured ..	139	170	<i>n.a.</i>	168	179	<i>n.a.</i>
Cement products ..	10	99	<i>n.a.</i>	12	226	<i>n.a.</i>
Israel—						
Unmanufactured ..	9,156	7,438	8,325	5,759	4,202	8,220
Japan—						
Unmanufactured ..	113,668	141,695	131,413	233,586	185,760	196,266
Manufactured ..	1,092	1,099	958	1,294	1,141	786
Cement products ..	336	151	338	972	228	240
Jordan—						
Manufactured ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	552	929	2,264
Korea (South)—						
Unmanufactured ..	2,490	3,055	6,284	11,880	21,685	<i>n.a.</i>
Lebanon—						
Unmanufactured ..	2,569	3,934	3,843	4,445	4,944	<i>n.a.</i>
Manufactured ..	123	89	96	181	156	<i>n.a.</i>
Cement products ..	368	221	703	373	78	<i>n.a.</i>
Philippine Republic—						
Unmanufactured ..	1,332	1,864	1,268	<i>n.a.</i>	1,808	<i>n.a.</i>
Manufactured ..	124	122	111	<i>n.a.</i>	118	<i>n.a.</i>
Cement products ..	298	71	115	<i>n.a.</i>	16	<i>n.a.</i>
Syria—						
Cement sheets ..	4,508	4,969	4,060	4,862	4,111	2,236
Other manufactures ..	22	69	28	148	100	286
Thailand—						
Unmanufactured ..	7,895	7,742	8,226	16,333	20,132	18,578
Manufactured ..	997	554	632	862	859	804
Cement products ..	4,031	4,871	5,001	8,077	2,752	2,671
Turkey—						
Unmanufactured ..	1,234	2,416	2,612	6,567	5,791	8,180
Manufactured ..	3,518	1,027	393	501	648	257
Cement products ..	119	7,980	35	95	14	5

(a) Years ended March 20 following that stated.

## BARIUM MINERALS

### PRODUCTION OF BARIUM MINERALS\*

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Barytes, unground ..	18,000	7,000	—	6,000	4,000	—
do. ground ..	29,000	28,000	30,000	26,000	26,000	21,000
Witherite ..	7,000	7,000	7,000	5,000	6,000	5,000
Kenya ..	—	—	35	96	209	345
Rhodesia ..	1,744	1,394	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Swaziland ..	83	15	483	1,027	556	876
Canada ..	154,913	151,026	181,272	197,657	153,812	122,946
India ..	37,279	46,217	47,520	51,777	50,890	50,900
Pakistan ..	4,841	11,817	8,696	7,700	(c) 10,000	(c) 14,800
Australia ..	8,220	12,302	11,976	13,726	15,666	39,197
Irish Republic ..	9,100	40,386	92,226	122,000	69,610	141,020
<b>OTHER COUNTRIES</b>						
Austria ..	2,139	1,241	2,297	2,756	2,389	1,437
France ..	73,284	82,497	102,440	97,556	100,386	89,000
Germany (Federal) ..	449,492	460,081	461,941	444,124	403,187	424,637
Greece ..	142,280	116,714	129,286	146,900	148,000	<i>n.a.</i>
Italy ..	101,990	103,091	140,758	169,988	151,633	200,758
Poland ..	44,979	(c) 45,000	(c) 45,000	(c) 46,000	(c) 46,000	(c) 46,000
Portugal ..	1,632	343	1,070	1,000	311	315
Spain ..	47,600	58,199	54,589	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
U.S.S.R. (c) ..	200,000	200,000	210,000	220,000	260,000	260,000
Yugoslavia ..	r 102,836	r 100,064	r 95,576	r 78,923	83,144	<i>n.a.</i>
Algeria ..	28,947	29,165	42,091	(a) 35,000	30,904	44,275
Egypt ..	4,058	4,479	15,111	6,692	1,262	367
Morocco ..	93,061	88,425	102,239	104,577	89,088	76,926
South Africa ..	2,414	2,531	1,319	6,085	1,470	511
Mexico ..	252,540	328,768	362,524	286,979	219,754	242,645
United States ..	717,059	729,202	755,050	899,076	842,930	827,437
Argentina ..	16,433	13,488	16,744	17,703	21,704	15,918
Brazil ..	33,572	33,007	63,344	64,262	84,647	<i>n.a.</i>
Chile ..	1,003	1,074	2,806	2,006	4,430	3,920
Colombia ..	10,500	10,000	8,700	(c) 8,800	5,900	6,900
Peru ..	122,819	123,439	109,022	115,000	110,000	<i>n.a.</i>
Burma ..	—	—	(c) 3,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
China (c) ..	90,000	100,000	100,000	120,000	100,000	118,000
Iran (b) ..	(c) 15,000	42,321	(c) 61,000	(c) 83,000	(c) 89,000	(c) 93,000
Japan ..	36,928	39,116	41,612	r 39,638	36,979	54,534
Korea (South) ..	2,714	2,700	1,267	19	—	5
Korea (North) (c) ..	65,000	65,000	80,000	80,000	100,000	100,000
Philippine Republic ..	900	1,453	—	2	<i>n.a.</i>	<i>n.a.</i>
Turkey ..	966	5,954	11,791	16,833	30,163	21,852
<b>TOTAL†</b> ..	<b>2,900,000</b>	<b>3,100,000</b>	<b>3,300,000</b>	<b>3,500,000</b>	<b>3,300,000</b>	<b>3,500,000</b>

\*Barytes unless otherwise stated.

†Excluding barytes known to have been produced in Bulgaria, Czechoslovakia, Germany (East) and Norway.

(a) Estimated.

(b) Years ended March 20 of year following that stated.

(c) United States Bureau of Mines' estimate.



## EXPORTS OF BARIUM MINERALS, ETC.\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada—						
Barytes .. .. .	142,761	139,756	165,207	177,727	130,449	104,010
India—						
Unground barytes ..	9,048	7,834	4,791	2,718	6,503	2,819
Australia—						
Ground barytes ..	2,600	6,209	2,183	4,797	4,174	19,564
Irish Republic—						
Unground barytes ..	10,228	31,939	95,686	127,827	73,584	140,006
<b>OTHER COUNTRIES</b>						
Austria—						
Barytes .. .. .	20	6	—	1	60	—
Belgium-Luxemburg						
E.U.—						
Barytes and witherite ..	22	191	209	133	45	62
Barytes, ground ..						
Sulphate .. .. .	328	121	20	77	79	10
Carbonate .. .. .	—	30	4	—	—	—
Chloride .. .. .	26	—	25	—	—	27
France—						
Barytes .. .. .	10,704	15,907	13,774	12,695	17,848	14,821
Witherite .. .. .	2	3	49	3	21	3
Chloride .. .. .	7,639	6,922	8,206	10,079	11,449	10,006
Carbonate .. .. .	3,230	2,723	3,154	1,200	1,566	6,704
Sulphate .. .. .	651	1,023	927	1,899	2,619	2,778
Sulphide .. .. .	3	5	—	—	—	1
Germany (Federal)—						
Barytes and witherite ..	102,355	121,560	111,541	112,746	107,209	118,712
Carbonate .. .. .	12,533	15,097	26,634	29,132	27,570	26,700
Chloride .. .. .	3,590	4,401	3,447	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sulphate .. .. .	18,533	19,945	18,559	18,839	21,726	23,336
Greece—						
Barytes .. .. .	76,511	65,854	49,816	47,552	61,855	64,816
Italy—						
Barytes .. .. .	22,025	11,009	32,223	17,323	40,256	30,794
Witherite .. .. .	30	—	64	73	—	198
Carbonate .. .. .	735	694	2,209	2,015	1,096	6,522
Chloride .. .. .	1,243	885	1,462	4,739	6,065	5,351
Sulphate .. .. .	138	104	93	290	119	314
Netherlands—						
Barytes .. .. .	10	278	584	1,161	1,696	444
Carbonate .. .. .	483	622	535	706	109	168
Chloride .. .. .	24	154	92	184	64	49
Sulphate .. .. .	2,394	2,559	1,530	2,605	2,633	3,002
Sulphide .. .. .	—	2,919	79	—	—	—
Poland—						
Barytes .. .. .	39	814	532	189	—	—
Portugal—						
Barytes .. .. .	4	107	20	979	6	10
Spain—						
Barytes .. .. .	27,293	55,779	49,147	48,265	22,787	49,358
Carbonate .. .. .	512	214	380	280	177	153
Sweden—						
Barytes and witherite ..	6	—	—	—	—	—
Yugoslavia—						
Unground barytes ..	59,735	54,601	45,450	31,164	29,771	35,354
Ground barytes ..	15,209	17,124	16,175	15,963	14,547	15,917

\*For Lithopone, see "Zinc".

## EXPORTS OF BARIUM MINERALS, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Algeria—						
Barytes .. ..	1,102	8,267	6,008	9,350	28,739	<i>n.a.</i>
Morocco—						
Barytes .. ..	80,813	71,695	106,234	96,750	87,708	80,298
South Africa—						
Barytes .. ..	<i>n.a.</i>	132	4	—	—	—
Mexico—						
Barytes .. ..	144,371	174,259	216,067	188,535	117,280	97,790
Argentina—						
Barytes .. ..	25	54	59	229	10	1,243
Brazil—						
Barytes .. ..	26,684	57,958	21,738	47,998	48,293	12,098
Peru—						
Barytes .. ..	15,249	124,968	106,246	23,276	66,374	<i>n.a.</i>
Japan—						
Barytes .. ..	<i>n.a.</i>	<i>n.a.</i>	49	1,198	1,636	2,897
Chloride .. ..	16	135	285	1,652	1,809	1,787
Sulphate .. ..	74	77	2,050	77	291	405
Korea (South)—						
Barytes .. ..	1,661	2,560	1,096	—	—	<i>n.a.</i>
Turkey—						
Barytes .. ..	<i>n.a.</i>	—	3	1,162	270	16,419

## IMPORTS OF BARIUM MINERALS, ETC.\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Unground barytes ..	20,689	37,787	54,481	47,100	30,647	17,874
Ground barytes ..	7,330	8,817	12,598	9,790	20,208	14,910
Canada—						
Barytes .. .. .	3,420	2,862	3,291	3,719	5,289	7,054
Blanc fixe .. ..	894	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Carbonate .. ..	—	3,876	5,723	3,235	3,528	3,121
Trinidad and Tobago—						
Barytes .. .. .	40,403	51,711	27,296	50,358	44,106	14,646
India (a)—						
Barytes .. .. .	3	4	11	—	9	—
Carbonate .. ..	1,254	611	333	9	11	5
Chloride .. .. .	526	402	627	1	23	—
Sulphate .. .. .	132	110	252	135	198	125
Pakistan—						
Barytes .. .. .	9	110	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Australia (b)—						
Witherite .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	79	78	75
Barytes ground ..	—	—	636	319	299	869
Barytes unground ..	<i>n.a.</i>	<i>n.a.</i>	1,571	1,108	1,169	749
Carbonate .. ..	539	661	547	598	920	946
Chloride .. .. .	248	286	197	691	1,564	1,548
Sulphate incl. blanc fixe	330	269	331	282	297	610
New Zealand (b)—						
Barytes and witherite ..	621	1,229	780	1,000	2,267	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Austria—						
Barytes .. .. .	8,242	8,421	8,347	5,860	7,280	5,633
Carbonate .. ..	628	659	731	857	1,128	947
Chloride .. .. .	281	327	365	330	286	360
Sulphate .. .. .	225	376	478	404	442	558
Belgium-Luxembourg						
E.U.—						
Barytes and witherite ..	26,783	23,463	25,236	14,677	5,888	5,978
Barytes, ground .. ..						
Sulphate .. .. .						
Carbonate .. .. .						
Chloride .. .. .						
Sulphide .. .. .	3,398	2,929	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Denmark—						
Barytes .. .. .	726	654	612	1,122	1,912	922
Carbonate .. ..	457	642	629	533	556	476
Chloride .. .. .	169	186	189	201	228	<i>n.a.</i>
Sulphate .. .. .	381	362	814	1,514	210	299
Finland—						
Barytes .. .. .	451	627	592	508	636	482
Witherite .. .. .						
Chloride .. .. .						
Carbonate .. .. .						
Sulphate .. .. .						
Sulphate .. .. .	1,043	1,408	1,270	1,616	1,282	2,067
France—						
Barytes .. .. .	65,384	66,626	73,250	81,625	87,278	79,242
Witherite .. .. .	5	1	16	2	9	23
Chloride .. .. .	3	447	380	2	947	315
Carbonate .. .. .	9	111	142	415	823	110
Sulphate .. .. .	824	1,156	1,105	1,357	1,681	2,102

\*For Lithopone, see "Zinc".

(a) Years ended March 31 following that stated.

(b) Years ended June 30 of that stated.

## IMPORTS OF BARIUM MINERALS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
Germany (Federal)—						
Barytes and witherite ..	5,761	44,972	53,190	29,364	38,660	43,398
Carbonate .. ..	497	2,234	3,815	3,648	3,081	3,254
Chloride .. ..	745	802	1,890	n.a.	n.a.	n.a.
Sulphate .. ..	153	190	128	307	446	2,362
Greece—						
Sulphate .. ..	329	292	283	330	367	328
Iceland—						
Sulphate .. ..	17	22	21	43	59	73
Italy—						
Barytes .. ..	21,224	27,418	18,429	40,328	6,552	11,078
Witherite .. ..	31	2	185	—	22	42
Carbonate .. ..	167	118	1,457	79	49	878
Chloride .. ..	13	24	12	71	1	—
Sulphate .. ..	990	1,202	1,274	1,623	1,662	1,874
Netherlands—						
Barytes and witherite ..	14,088	36,485	28,702	27,853	20,819	29,600
Barytes, ground .. ..						
Carbonate .. ..						
Chloride .. ..						
Sulphate .. ..	1,079	1,036	872	975	953	857
Norway—						
Barytes .. ..	616	532	454	1,887	1,168	16,069
Carbonate .. ..	337	463	485	484	563	539
Chloride .. ..	166	243	416	321	308	n.a.
Sulphate .. ..	158	97	69	76	107	209
Poland—						
Barytes .. ..	8,760	5,125	6,912	9,729	26,082	12,196
Portugal—						
Barytes .. ..	65	181	197	231	293	205
Chloride .. ..	5	1	5	6	3	—
Sulphate .. ..	184	212	273	176	108	149
Spain—						
Barytes .. ..	398	96	379	494	341	670
Sulphate .. ..	47	72	133	218	331	795
Sweden—						
Barytes and witherite ..	1,274	1,644	1,848	1,457	1,660	1,265
Carbonate .. ..	1,743	2,819	2,826	3,118	3,017	3,824
Chloride .. ..	248	296	372	280	497	534
Sulphate .. ..	2,234	2,351	2,640	2,399	2,790	2,822
Switzerland—						
Barytes .. ..	1,920	1,989	4,683	3,325	2,214	1,797
Sulphate .. ..	1,788	1,505	1,768	1,825	1,617	1,636
U.S.S.R.—						
Barytes .. ..	104,500	96,100	103,500	139,500	140,839	176,960
Malagasy Republic—						
Barytes and witherite ..	—	2	64	—	5	146
Morocco—						
Barytes .. ..	12	15	4	1	n.a.	n.a.
South Africa—						
Barytes .. ..	1,989	2,376	3,091	3,005	2,826	3,424
Barium compounds ..	303	n.a.	n.a.	n.a.	n.a.	n.a.
Tunisia—						
Barytes .. ..	1,416	4,281	10,009	1,172	2,845	n.a.
Mexico—						
Barytes .. ..	548	442	634	445	454	464
Carbonate .. ..	483	674	697	877	484	343
Chloride .. ..	420	500	735	599	371	414
United States—						
Unground barytes ..	516,159	535,669	635,931	624,000	524,000	591,964
Ground barytes ..	264	947	420	—	—	—
Witherite .. ..	2,482	2,171	2,317	1,989	1,265	1,834

## IMPORTS OF BARIUM MINERALS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
United States ( <i>cont.</i> )—						
Carbonate .. ..	748	929	737	1,027	800	586
Chloride .. ..	1,029	1,012	794	1,104	964	1,262
Sulphate .. ..	1,430	2,066	1,450	2,415	2,213	2,485
Argentina—						
Barytes .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	62	—	—
Sulphate .. ..	16	58	378	142	204	202
Barium compounds ..	150	139	19	6	19	69
Brazil—						
Barytes .. ..	35	24	30	45	7	83
Carbonate .. ..	866	939	1,359	2,140	3,598	3,427
Chloride .. ..	982	383	983	1,051	863	749
Sulphate .. ..	588	392	530	340	295	707
Chile—						
Barytes .. ..	51	<i>n.a.</i>	2,376	<i>n.a.</i>	1,357	<i>n.a.</i>
Carbonate .. ..	199	33	79	<i>n.a.</i>	31	<i>n.a.</i>
Chloride .. ..	—	5	—	<i>n.a.</i>	—	<i>n.a.</i>
Sulphate .. ..	7	17	3	<i>n.a.</i>	35	<i>n.a.</i>
Colombia—						
Barytes .. ..	—	—	1	—	—	—
Carbonate .. ..	106	91	135	176	273	334
Chloride .. ..	55	84	33	54	42	37
Sulphate .. ..	17	20	7	42	105	48
Ecuador—						
Sulphate .. ..	305	579	447	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru—						
Barytes and witherite ..	<i>n.a.</i>	<i>n.a.</i>	89	96	<i>n.a.</i>	<i>n.a.</i>
Carbonate .. ..	131	107	94	96	279	<i>n.a.</i>
Chloride .. ..	90	127	90	36	90	<i>n.a.</i>
Sulphate .. ..	44	44	65	35	27	<i>n.a.</i>
Uruguay—						
Sulphate .. ..	<i>n.a.</i>	<i>n.a.</i>	56	32	10	<i>n.a.</i>
Venezuela—						
Barytes .. ..	53	17,058	17,124	12,009	8,040	14,693
Carbonate .. ..	25	40	55	35	62	54
Chloride .. ..	453	218	352	56	263	141
Sulphate .. ..	87	121	104	79	171	208
Formosa—						
Carbonate .. ..	54	136	182	98	178	<i>n.a.</i>
Chloride .. ..	42	35	30	64	158	<i>n.a.</i>
Iraq—						
Barytes .. ..	32	<i>n.a.</i>	<i>n.a.</i>	—	64	<i>n.a.</i>
Israel—						
Barytes .. ..	476	455	425	518	991	750
Japan—						
Barytes .. ..	5,811	11,164	14,084	38,552	33,259	6,023
Lebanon—						
Barytes and witherite ..	227	206	20	7	31	<i>n.a.</i>
Turkey—						
Barytes .. ..	10	2,416	197	730	—	—
Carbonate .. ..	61	9	62	123	86	99
Chloride .. ..	1	108	162	270	133	178
Sulphate .. ..	741	42	40	94	—	—

**BENTONITE**  
(see also Fuller's Earth)  
**PRODUCTION OF BENTONITE**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Tanzania .. ..	—	5	—	50	200	—
Cyprus (a) .. ..	536	1,528	3,190	2,658	4,539	9,069
India .. .. .	29,133	21,176	n.a.	n.a.	n.a.	n.a.
Australia—						
Bentonite .. ..	197	158	160	159	95	100
Bentonitic clay ..	1,333	841	1,027	667	262	203
New Zealand .. ..	1,660	1,806	2,926	2,416	3,053	3,113
<b>OTHER COUNTRIES</b>						
Austria .. .. .	2,744	3,072	3,973	1,660	945	502
Greece .. .. .	34,788	97,736	112,096	89,096	118,000	128,000
Hungary .. .. .	110,917	96,830	105,000	90,000	83,000	83,000
Italy .. .. .	157,586	129,665	149,965	206,427	240,723	252,529
Spain .. .. .	13,945	14,239	17,597	23,593	n.a.	n.a.
Mozambique .. ..	n.a.	903	2,680	3,805	n.a.	n.a.
South Africa .. ..	7,691	9,166	10,783	11,716	14,922	12,452
United States (c) ..	1,414,746	1,544,199	1,685,667	1,839,836	1,823,965	2,176,362
Argentina .. .. .	n.a.	n.a.	41,871	41,959	41,788	45,915
Peru .. .. .	365	654	4,941	1,637	17,000	n.a.
Turkey .. .. .	(b) 2,000	(b) 2,000	(b) 2,000	(b) 2,000	n.a.	n.a.

Bentonite is also produced in Canada, France, Germany, Algeria, Morocco, and Japan.

(a) Exports of bentonitic clay.

(c) Sold or used by producers.

(b) Estimated.

## EXPORTS OF BENTONITE

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Tanzania .. ..	—	5	—	50	130	27
Cyprus (a) .. ..	536	1,528	3,190	2,658	4,539	9,069
India .. ..	22	66	587	302	400	958
<b>OTHER COUNTRIES</b>						
Austria .. ..	36	3	90	59	53	10
Germany (Federal) ..	206	232	583	1,008	11,401	17,634
Italy .. ..	29,586	22,147	20,893	28,869	26,547	30,598
Spain .. ..	2,186	5,536	3,196	1,695	3,228	2,840
Yugoslavia .. ..	12,846	17,358	14,006	13,483	25,819	23,371
Morocco .. ..	6,253	8,401	6,060	110	155	123
South Africa .. ..	<i>n.a.</i>	41	1,504	1,726	1,237	2,158
United States .. ..	<i>n.a.</i>	<i>n.a.</i>	203,137	270,354	284,512	426,182
Argentina .. ..	5,214	5,548	5,135	6,340	5,265	10,306

(a) Bentonitic clay.

## IMPORTS OF BENTONITE

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (b) ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	31,444	33,219
Canada .. ..	<i>n.a.</i>	102,184	162,645	171,617	196,305	274,732
India .. ..	159	904	57	77	6	11
Australia (a) .. ..	10,727	14,060	16,054	15,104	20,927	43,839
<b>OTHER COUNTRIES</b>						
Austria .. ..	9,976	13,604	17,814	16,523	2,766	323
Germany (Federal) ..	3,859	4,550	11,374	5,931	21,547	22,377
Italy .. ..	3,955	4,642	4,775	2,615	7,415	9,798
Poland .. ..	8,344	8,668	3,648	3,785	4,166	4,804
Portugal .. ..	1,322	1,547	1,579	2,024	1,538	2,596
Spain .. ..	6,851	8,859	12,309	14,963	15,206	14,873
Sweden .. ..	2,127	5,804	4,849	5,423	4,416	8,022
Morocco .. ..	12	20	4	<i>n.a.</i>	—	70
South Africa .. ..	<i>n.a.</i>	1,514	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
United States .. ..	<i>n.a.</i>	160	389	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Brazil .. ..	6,116	8,069	4,476	8,482	5,410	7,808
Chile .. ..	918	2,234	1,817	<i>n.a.</i>	3,108	<i>n.a.</i>
Colombia .. ..	2,599	2,194	1,806	3,034	1,383	<i>n.a.</i>
Ecuador .. ..	125	352	417	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru .. ..			857	793	<i>n.a.</i>	<i>n.a.</i>
Uruguay .. ..	<i>n.a.</i>	<i>n.a.</i>	6	52	31	<i>n.a.</i>
Venezuela .. ..	2,784	4,540	3,687	3,462	4,337	8,282
Turkey (b) .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	968	2,054

(a) Including bentonitic clay.

(b) Not recorded separately prior to 1967.

**BERYL**  
**PRODUCTION OF BERYL**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Kenya .. .. .	—	1	—	—	17	<i>n.a.</i>
Rhodesia .. .. .	222	162	(c) 85	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Uganda .. .. .	354	409	188	278	307	(c) 475
India (c) .. .. .	—	—	r 1,786	r 1,309	1,279	<i>n.a.</i>
Australia .. .. .	110	111	38	52	55	15
<b>OTHER COUNTRIES</b>						
Portugal .. .. .	2	18	39	12	14	126
Sweden .. .. .	(a) —	(a) 44	(a) —	(a) —	(a) —	(a) —
Congo Republic .. .. .	210	121	19	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Malagasy Republic .. .. .	405	209	20	12	29	78
Mozambique .. .. .	548	399	216	79	166	47
Rwanda and Burundi .. .. .	252	281	<i>n.a.</i>	131	107	28
South Africa .. .. .	379	135	41	21	103	304
South West Africa .. .. .	54	7	52	21	<i>n.a.</i>	<i>n.a.</i>
United States (b) .. .. .	671	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Argentina .. .. .	186	185	374	251	264	584
Brazil .. .. .	467	567	440	418	408	458
<b>TOTAL* .. .. .</b>	<b>3,900</b>	<b>3,000</b>	<b>r 4,500</b>	<b>r 3,500</b>	<b>3,000</b>	<b>3,000</b>

\*Excluding beryl known to have been produced in the U.S.S.R.

(a) Imports into the United States.

(b) Shipments from mine. Including lower grade beryllium ore as follows:

1963—670 long tons; 1964—nil; 1965—nil; 1966—nil; 1967—nil; 1968—150 long tons.

(c) Exports.



EXPORTS OF BERYL

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Rhodesia (b) .. ..	268	142	85	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Uganda .. .. .	341	466	272	222	310	475
India (a) .. .. .	—	—	1,346	446	4,828	—
Australia .. .. .	129	93	50	37	637	135
<b>OTHER COUNTRIES</b>						
Italy .. .. .	—	—	—	325	908	—
Portugal .. .. .	<i>n.a.</i>	<i>n.a.</i>	54	10	28	51
Congo Republic .. ..	(a) 455	(a) 225	(a) 1,201	(a) —	(a) —	(a) —
Malagasy Republic .. ..	223	235	62	6	24	56
Mozambique .. .. .	731	376	218	81	<i>n.a.</i>	<i>n.a.</i>
South Africa .. .. .	266	82	96	31	62	318
South West Africa .. ..	36	10	24	2	<i>n.a.</i>	<i>n.a.</i>
U.S.A. .. .. .	42	73	53	27	34	42
Argentina .. .. .	739	395	156	244	262	561
Brazil .. .. .	1,937	1,379	1,095	695	1,289	<i>n.a.</i>

(a) Imports into the United States.

(b) Figures for year 1963 relate to Rhodesia and Nyasaland.

IMPORTS OF BERYL\*

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
France .. .. .	120	375	<i>n.a.</i>	402	—	—
United States .. .. .	5,574	4,844	6,956	1,917	8,492	3,415

\*Imports of Beryl are not recorded separately in the trade returns of most countries.

**BISMUTH**  
**PRODUCTION OF BISMUTH ORE, ETC.\***

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada— Metal plus content of bullion and concen- trates exported ..	160	179	191	235	298	283
<b>OTHER COUNTRIES</b>						
France— Mispickel ( <i>Bi content</i> ) ..	67	68	60	62	55	<i>n.a.</i>
Spain— Ore ( <i>Bi content</i> ) ..	4	—	—	9	<i>n.a.</i>	—
Sweden— Metal ( <i>c</i> ) .. ..	69	67	34	34	30	<i>n.a.</i>
Yugoslavia— Metal .. ..	87	82	87	102	106	84
Mozambique— Ore ( <i>Bi content</i> ) ..	14	9	6	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South Africa— Ore ( <i>Bi content</i> ) ..	1	—	—	—	—	2
South West Africa— Ore .. ..	—	5	1	—	<i>n.a.</i>	<i>n.a.</i>
Mexico— Ore ( <i>Bi content</i> ) ..	420	465	477	447	501	516
Argentina— Concentrates ( <i>Bi content</i> ) ..	1	—	—	—	—	<i>n.a.</i>
Bolivia ( <i>b</i> )— Ore, etc. ( <i>Bi content</i> ) ..	276	270	292	367	523	566
Peru— Concentrates ( <i>a</i> ) ( <i>Bi content</i> ) .. ..	4	14	61	12	21	<i>n.a.</i>
Lead bars ( <i>Bi content</i> ) .. ..	83	46	88	80	62	<i>n.a.</i>
Metal .. ..	468	664	646	655	700	<i>n.a.</i>
Japan— Ore ( <i>Bi content</i> ) ..	226	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Korea (South)— Ore ( <i>Bi content</i> ) ..	156	( <i>c</i> ) 500	<i>n.a.</i>	98	112	96

\*Bismuth ore has also been produced in Germany, Roumania, Burma and China and the metal recovered as a by-product in the United Kingdom, U.S.S.R., United States and Japan.

(a) Recoverable.

(b) Exports.

(c) United States Bureau of Mines' estimate.

## EXPORTS OF BISMUTH, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Bismuth.. ..	603	717	530	325	379	303
Bismuth salts .. ..	<i>n.a.</i>	55	43	48	46	44
Canada—						
Bismuth.. ..	178	134	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
OTHER COUNTRIES						
Belgium-Luxemburg						
E.U.—						
Bismuth (a) .. ..	120	146	84	115	60	156
France—						
Bismuth (a) .. ..	46	60	58	70	82	59
Germany (Federal)—						
Bismuth.. ..	114	58	71	98	125	80
Netherlands—						
Bismuth (a) .. ..	178	155	276	225	211	146
Bismuth salts .. ..	79	47	48	45	6	49
Yugoslavia—						
Bismuth.. ..	57	38	54	46	64	44
South Africa—						
Ore .. ..	—	—	1	—	—	—
Mexico—						
Bismuth, refined ..	141	171	145	271	216	229
do. impure bars ..	263	393	408	242	371	332
United States—						
Matte, residues, etc. ..	2	6	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Metal and alloys ..	14	21	153	40	68	54
Argentina—						
Ore .. ..	—	—	15	—	—	—
Bolivia—						
Ore, etc. ( <i>Bi content</i> ) ..	276	270	292	367	523	566
Peru—						
Bars, etc. ( <i>Bi content</i> ) ..	495	730	730	733	822	780
Japan—						
Bismuth.. ..	159	245	134	251	266	384

(a) Including scrap.

## IMPORTS OF BISMUTH, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Bismuth (c) .. ..	422	609	370	368	324	318
Unwrought alloys ..	278	379	290	150	262	158
Canada—						
Bismuth .. .. .	3	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Bismuth salts .. ..	3	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
India (a)—						
Bismuth and alloys ..	41	56	26	16	20	9
Australia (b)—						
Bismuth .. .. .	16	17	11	8	7	12
Bismuth salts .. ..	8	7	7	1	—	—
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Bismuth .. .. .	1,181	71	37	98	89	169
Bismuth salts .. ..	81	84	98	68	81	78
France—						
Bismuth (c) .. .. .	654	773	689	737	793	928
Germany (Federal)—						
Bismuth (c) .. .. .	250	254	230	258	246	147
Italy—						
Bismuth .. .. .	43	41	44	102	52	55
Bismuth salts .. .. .	<i>n.a.</i>	23	<i>n.a.</i>	4	55	<i>n.a.</i>
Netherlands—						
Bismuth salts .. .. .	119	104	87	123	67	84
Poland—						
Bismuth .. .. .	71	97	66	59	103	119
Spain—						
Bismuth .. .. .	8	21	11	10	12	25
Morocco—						
Bismuth salts .. .. .	10	8	38	11	10	<i>n.a.</i>
Mexico—						
Bismuth salts .. .. .	8	10	5	1	—	—
United States—						
Bismuth .. .. .	502	551	615	751	616	565
Argentina—						
Bismuth and its salts ..	3	9	17	16	18	17
Brazil—						
Bismuth .. .. .	11	2	12	10	10	18
Bismuth salts .. .. .	13	16	11	21	10	15
Chile—						
Bismuth .. .. .	5	<i>n.a.</i>	1	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Colombia—						
Bismuth salts .. .. .	8	6	1	3	1	2
Peru—						
Bismuth salts .. .. .	1	1	1	1	1	<i>n.a.</i>
Japan—						
Bismuth .. .. .	3	2	32	2	2	3
Turkey—						
Bismuth salts .. .. .	5	3	5	5	8	6

(a) Years ended March 31 following that stated.

(c) Including scrap.

(b) Years ended June 30 of that stated.

**BORATES**  
**PRODUCTION OF CRUDE BORATES**

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
Italy— Boric acid .. ..	506	314	85	—	—	—
United States (a)— Borates .. ..	625,163	693,106	721,000	773,000	853,000	916,000
Argentina— Borates .. ..	<i>n.a.</i>	<i>n.a.</i>	45,000	34,787	17,684	20,694
Chile— Boron minerals ..	5,870	3,262	4,441	3,683	—	—
Turkey— Borates .. ..	86,697	126,228	168,277	221,728	224,891	261,696

Borates are known to have been produced in the U.S.S.R., Germany, Iran and Tibet.

(a) Sold or used by producers.

## EXPORTS OF BORATES

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Borax .. .. .	620	917	881	441	332	564
Other borates and perborates .. .. .	6,289	9,835	11,825	11,087	9,613	8,968
<b>OTHER COUNTRIES</b>						
Austria—						
Perborates .. .. .	2,020	2,287	3,132	3,923	3,963	4,231
Belgium-Luxemburg						
E.U.—						
Boron minerals .. .. .	20	10	—	41	4,366	69
Borax, refined .. .. .	7	12	179	10	2	3
Boric acid .. .. .	—	1	4	4	18	16
Borates and perborates	3,375	5,626	6,625	8,625	7,597	11,756
France—						
Boron minerals .. .. .	348	667	1,193	2,086	994	4,044
Borax, refined .. .. .	6,300	7,086	6,442	7,333	7,704	9,056
Boric acid .. .. .	10,865	13,166	13,547	13,995	17,017	17,532
Borates and perborates	5,669	7,935	4,676	7,994	5,251	6,053
Germany (Federal)—						
Boron minerals .. .. .	1	7	110	187	211	1,304
Borax .. .. .	106	95	102	109	87	123
Boric acid .. .. .	60	82	76	51	50	114
Borates and perborates	8,807	12,239	13,596	20,813	22,830	26,497
Italy—						
Boric acid .. .. .	4,365	5,954	5,426	4,865	<i>n.a.</i>	<i>n.a.</i>
Borax, refined .. .. .	2,489	2,056	1,129	1,077	—	—
Perborates .. .. .	343	237	407	401	311	456
Netherlands—						
Boron minerals .. .. .	20	84,194	131,437	167,599	218,549	242,757
Borax, refined .. .. .	257	8,593	34,739	43,762	36,706	37,535
Boric acid .. .. .	44	25	23	37	87	44
Perborates .. .. .	41	<i>n.a.</i>	—	5	7	—
Sweden—						
Perborate of sodium .. .. .	30	42	42	23	16	71
Switzerland—						
Borates and perborates	1,639	1,535	2,012	2,327	2,398	4,111
Yugoslavia—						
Perborates .. .. .	<i>n.a.</i>	<i>n.a.</i>	357	389	871	625
United States—						
Borax, borates and boric acid .. .. .	302,600	342,054	(a) 155,371	(a) 185,142	(a) 166,503	(a) 184,582
Argentina—						
Borates of calcium and sodium .. .. .	5,324	875	200	157	494	197
Japan—						
Borates and perborates	19	83	104	101	187	190
Boric acid .. .. .	10	31	11	12	27	30
Turkey—						
Borates .. .. .	90,094	116,538	169,528	172,556	208,771	209,419

(a) Borax and boric acid only.

## IMPORTS OF BORATES

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Boron minerals .. .. .	25,870	29,893	41,641	<i>n.a.</i>	52,561	<i>n.a.</i>
Borates and perborates .. .. .	<i>n.a.</i>	1,499	396	1,820	4,495	3,913
Borax .. .. .	21,389	27,279	21,848	20,946	14,578	12,991
Boric acid .. .. .	<i>n.a.</i>	3,255	3,068	4,741	6,228	8,808
Rhodesia (c)—						
Borax .. .. .	113	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Boric acid .. .. .	12	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada—						
Borax .. .. .	13,023	9,390	8,601	9,360	8,990	11,421
Boric acid .. .. .	1,352	1,463	2,393	3,280	3,412	3,859
Hong Kong—						
Borax, refined .. .. .	3,356	3,724	3,626	3,735	4,225	3,612
Boric acid .. .. .	122	123	144	187	135	99
India—						
Boron minerals (b) .. .. .	—	—	31	591	1,900	3,038
Borax .. .. .	5,995	8,683	8,986	2,137	4,545	1,671
Boric acid (b) .. .. .	1,041	2,421	571	25	55	61
Pakistan—						
Borax .. .. .	340	445	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Australia (a)—						
Boron minerals .. .. .	1,912	975	1,293	1,870	2,010	1,953
Boron salts .. .. .	3,988	4,462	4,316	(d) 3,454	(d) 4,257	(d) 5,055
Boric acid .. .. .	1,168	1,304	1,425	1,350	1,883	2,006
New Zealand (a)—						
Boric acid .. .. .	422	1,450	1,411	633	477	<i>n.a.</i>
Borates and perborates .. .. .	2,653	2,338	2,920	1,936	1,283	<i>n.a.</i>
Irish Republic—						
Borax .. .. .	1,305	1,035	857	962	561	1,112
<b>OTHER COUNTRIES</b>						
Austria—						
Boron minerals .. .. .	3,634	5,447	5,043	5,698	8,018	8,200
Borates .. .. .	24	27	23	57	9	441
Boric acid .. .. .	5	22	185	31	11	8
Perborates .. .. .	153	3	2	2	(e)	(e)
Belgium-Luxemburg						
E.U.—						
Boron minerals .. .. .	205	922	1,484	11,632	16,659	16,987
Borax, refined .. .. .	6,283	9,507	8,400	3,083	2,361	2,750
Boric acid .. .. .	551	717	588	1,502	961	1,566
Borates and perborates .. .. .	1,966	2,485	2,486	3,665	2,294	2,181
Denmark—						
Boron minerals .. .. .	799	925	1,353	1,292	1,240	1,802
Borax .. .. .	131	140	152	176	225	354
Boric acid .. .. .	104	135	130	101	118	228
Borates and perborates .. .. .	2,250	3,209	4,668	5,347	5,650	6,468
Finland—						
Boron minerals .. .. .	784	1,496	2,333	2,390	2,499	2,865
Borax .. .. .	918	557	758	589	698	786
Boric acid .. .. .	118	172	115	187	149	103
Borates and perborates .. .. .	1,649	2,288	1,840	2,140	2,833	2,998
France—						
Boron minerals .. .. .	39,115	46,436	66,238	72,025	81,601	96,118
Borax refined .. .. .	21,424	25,671	25,311	22,002	18,542	15,382
Boric acid .. .. .	419	613	414	814	596	901
Borates and perborates .. .. .	727	614	729	1,082	1,219	1,436

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

(c) Figure for 1963 relates to Rhodesia and Nyasaland.

(d) Owing to reclassification not strictly comparable with earlier years.

(e) Included with Borates.

## IMPORTS OF BORATES (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
Germany (Federal)—						
Boron minerals .. ..	43,920	47,850	54,183	64,819	91,124	101,028
Boric acid .. ..	6,737	10,906	11,339	11,005	8,936	13,263
Borax .. ..	15,359	20,600	20,399	16,588	14,018	14,312
Borates and perborates	148	1,136	1,396	1,447	153	2,138
Greece—						
Boron minerals .. ..	306	310	333	458	588	472
Borax .. ..	32	1	17	18	16	28
Boric acid .. ..	19	37	39	61	23	101
Italy—						
Boron minerals .. ..	49,383	53,637	82,184	72,417	69,635	80,704
Borax .. ..	6,123	6,683	7,284	9,540	5,482	8,771
Boric acid .. ..	180	108	20	—	—	—
Borates .. ..	74	5,958	1,876	5,297	3,165	1,023
Perborates .. ..	1,221					
Netherlands—						
Boron minerals .. ..	3,445	90,726	162,366	170,902	226,956	276,983
Borax .. ..	11,164	20,691	46,352	50,014	40,203	35,109
Boric acid .. ..	1,974	2,333	2,425	1,643	1,392	1,300
Perborates .. ..	3,703	5,195	5,890	8,290	8,360	12,220
Norway—						
Borax .. ..	1,758	2,492	1,705	2,395	2,571	3,471
Boric acid .. ..	291	726	604	156	208	294
Perborate of sodium ..	1,709	2,018	1,897	2,321	1,983	2,042
Portugal—						
Boric acid .. ..	100	163	125	129	151	123
Borax .. ..	1,103	1,355	1,198	1,818	1,588	2,599
Spain—						
Boron minerals .. ..	6,644	10,876	8,757	13,156	16,810	20,187
Boric acid .. ..	6	316	678	660	696	878
Borates and perborates	37	730	763	1,262	1,720	3,307
Sweden—						
Borax .. ..	3,367	4,166	5,412	5,626	7,973	10,148
Boric acid .. ..	427	418	539	793	1,089	780
Perborate of sodium ..	2,970	4,662	6,095	6,937	4,793	5,560
Switzerland—						
Boron minerals .. ..	155	206	436	459	740	745
Boric acid .. ..	456	583	479	566	479	475
Borates .. ..	4,350	4,737	5,129	5,134	4,907	6,366
Perborates .. ..	468	4	293	123	1,118	2,451
U.S.S.R.—						
Borax .. ..	7,300	15,000	9,800	10,000	7,480	n.a.
Yugoslavia—						
Boron minerals .. ..	n.a.	n.a.	598	1,352	1,821	298
Boric acid .. ..	366	408	703	550	281	3,405
Borates .. ..	n.a.	n.a.	1,599	2,913	2,758	4,531
Perborates .. ..	n.a.	n.a.	184	1,550	2,523	1,074
Angola—						
Borax .. ..	39	24	75	43	60	127
Morocco—						
Borates .. ..	414	317	439	406	862	767
Perborates .. ..	35	16	36	28	27	51
Mozambique—						
Borax .. ..	6	8	5	4	n.a.	n.a.
Boric acid .. ..	2	1	3	2	n.a.	n.a.
South Africa—						
Boron minerals .. ..	n.a.	99	14	804	383	641
Borax .. ..	1,341	n.a.	n.a.	n.a.	n.a.	n.a.
Boric acid .. ..	193	574	236	403	687	403
Borates and perborates	n.a.	2,273	3,942	3,985	3,821	2,988
Tunisia—						
Borax etc. .. ..	20	19	34	37	98	n.a.



## IMPORTS OF BORATES (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Mexico—						
Borax .. .. .	5,937	2,390	<i>n.a.</i>	<i>n.a.</i>	62	105
Boric acid .. ..	822	950	1,425	1,853	936	985
Brazil—						
Boron minerals .. ..	—	—	49	1,161	1,926	2,667
Boric acid .. .. .	967	1,004	865	910	966	1,356
Sodium borate and perborate .. .. .	7,944	7,895	7,089	7,782	6,516	9,564
Borates .. .. .	1	—	6	3	2	18
Colombia—						
Borax .. .. .	961	357	226	1,174	493	899
Boric acid .. .. .	322	189	115	521	129	171
Perborate of sodium .. ..	104	109	68	92	12	102
Ecuador—						
Borax .. .. .	18	34	52	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Boric acid .. .. .	10	16	17	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru—						
Borax .. .. .	331	347	392	388	350	<i>n.a.</i>
Boric acid .. .. .	123	88	108	231	285	<i>n.a.</i>
Uruguay—						
Borates .. .. .	<i>n.a.</i>	<i>n.a.</i>	113	303	109	<i>n.a.</i>
Venezuela—						
Borax .. .. .	584	1,515	1,899	1,092	1,438	1,250
Boric acid .. .. .	87	142	192	127	242	205
Formosa—						
Borax .. .. .	1,100	1,442	1,848	1,634	2,059	<i>n.a.</i>
Boric acid .. .. .	69	110	109	91	79	<i>n.a.</i>
Iran (a)—						
Borax .. .. .	316	230	178	292	449	485
Boric acid .. .. .	11	23	7	22	27	18
Israel—						
Borates .. .. .	310	493	429	<i>n.a.</i>	328	487
Perborate of sodium .. ..	295	271	321	<i>n.a.</i>	241	186
Japan—						
Borax .. .. .	24,482	26,951	26,474	28,621	39,968	35,883
Boric acid .. .. .	6,028	7,351	6,106	7,954	7,819	10,804
Korea (South)—						
Borax .. .. .	444	663	1,425	653	1,354	<i>n.a.</i>
Lebanon—						
Borates and perborates	584	796	1,071	1,330	2,111	<i>n.a.</i>
Philippine Republic—						
Boric acid .. .. .	105	110	203	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Thailand—						
Borax .. .. .	460	467	560	512	582	452
Boric acid .. .. .	101	107	57	95	50	59
Turkey—						
Borax .. .. .	537	590	160	699	1,482	1,734
Boric acid .. .. .	8	21	7	11	106	16
Borates and perborates	51	49	160	266	41	146

(a) Years ended March 20 following that stated.

**BROMINE**  
**PRODUCTION OF BROMINE**

Lb. avdp

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
India .. .. .	608,000	317,000	26,000	210,000	344,000	514,000
<b>OTHER COUNTRIES</b>						
France (a) .. .. .	4,259,000	5,858,000	6,177,000	7,044,000	7,652,000	<i>n.a.</i>
Germany (Federal) .. .. .	<i>n.a.</i>	5,434,000	6,493,000	7,000,000	7,000,000	7,000,000
Italy .. .. .	2,562,428	3,537,402	4,539,756	4,359,640	7,722,792	8,943,491
United States (a) (b) .. .. .	203,333,000	238,019,000	274,569,000	275,009,000	292,072,000	315,000,000
Israel .. .. .	<i>n.a.</i>	8,400,000	(a)9,300,000	9,300,000	616,300,000	20,700,000
Japan .. .. .	6,120,000	6,360,000	9,508,000	11,000,000	13,000,000	13,000,000

Bromine is also produced in the United Kingdom (from sea water) and Spain.

(a) Sales.

(b) Including bromine content of compounds.

**EXPORTS OF BROMINE, ETC.**

Lb. avdp.

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom— Bromides and bromates (a) .. .. .	(£138,775)	(£180,195)	(£181,972)	(£161,337)	(£120,840)	(£251,679)
<b>OTHER COUNTRIES</b>						
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Bromine .. .. .	—	33,069	2,205	—	—	—
Bromides, etc. .. .. .	—	16,314	7,496	32,200	23,100	77,603
<b>France—</b>						
Bromine .. .. .	1,682,127	2,153,916	2,427,289	2,416,000	2,879,000	3,730,221
Bromides .. .. .	1,732,833	2,087,777	1,856,292	2,848,000	2,454,000	2,012,820
<b>Germany (Federal)—</b>						
Bromides .. .. .	131,000	177,500	72,500	76,500	60,600	58,900
<b>Italy—</b>						
Bromine .. .. .	—	215,389	186,300	205,300	278,003	280,640
Bromides .. .. .	15,873	35,133	1,100	5,500	15,873	9,259
<b>Netherlands—</b>						
Bromides, etc. .. .. .	1,027,000	1,045,000	664,000	628,000	740,753	877,440
<b>United States—</b>						
Bromine and compounds (b) .. .. .	10,839,960	17,036,442	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Israel—</b>						
Bromine .. .. .	2,193,000	<i>n.a.</i>	6,867,000	4,967,000	<i>n.a.</i>	6,741,735
<b>Japan—</b>						
Bromine compounds .. .. .	277,725	390,172	796,828	557,990	793,699	287,423

(a) Quantity not available.

(b) Including organic compounds.

IMPORTS OF BROMINE, ETC.

Lb. avdp.

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada—						
Bromine .. .. .	39,389	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Bromide of soda ..	100,077	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Hong Kong—						
Bromates and bromides	<i>n.a.</i>	13,328	5,152	18,256	18,592	33,600
India (b)—						
Bromine .. .. .	397,895	265,961	113,238	3,146	163	629,320
Bromide of potash ..	22,046	602	694	1,008	4,409	3,386
Bromide of soda ..	22,046	—	16,480	5,278	<i>n.a.</i>	<i>n.a.</i>
Australia (a)—						
Bromate of potash ..	44,406	42,096	103,595	145,429	161,713	176,206
Bromide of potash ..	65,364	78,978				
Bromates and bromides of soda .. .. .	69,064	94,734	97,085	72,778	150,130	162,384
Other bromates and bromides .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	137,283	109,652	144,034
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Bromine .. .. .	27,600	37,000	30,000	44,800	35,000	48,000
Bromides, etc. ..	957,200	1,465,000	902,100	1,162,300	1,567,300	1,440,700
Denmark—						
Bromine .. .. .	11,000	6,600	18,000	24,000	63,000	5,000
Bromide of potash ..	11,000	8,800	18,000	11,000	22,000	
Bromide of soda ..	44,100	94,800	130,000	148,000	143,000	
Other bromides ..	46,297	39,683	40,000	35,000	57,000	
Finland—						
Bromine .. .. .	2,646	1,733	1,664	2,520	2,721	1,682
France—						
Bromine .. .. .	6,600	253,500	—	13,000	—	57,300
Bromides .. .. .	13,200	33,100	156,500	104,000	295,400	189,600
Germany (Federal)—						
Bromides .. .. .	238,800	399,300	755,700	887,700	1,163,400	1,178,591
Greece—						
Bromine .. .. .	454	2,313	1,486	2,652	3,221	<i>n.a.</i>
Bromides, etc. ..	13,794	31,456	24,837	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Italy—						
Bromine .. .. .	111,995	177,700	49,400	26,455	26,235	44,313
Bromides .. .. .	252,650	155,100	280,900	286,601	395,729	383,383
Netherlands—						
Bromine .. .. .	1,157,000	911,000	1,543,000	1,391,000	1,644,648	1,488,120
Bromides, etc. ..	245,000	327,000	282,000	165,000	158,733	191,802
Norway—						
Bromine .. .. .	—	—	2,000	—	—	—
Portugal—						
Bromine .. .. .	220	441	661	882	661	1,764
Bromide of soda ..						
Bromide of potash ..	12,800	32,600	5,700	6,614	24,250	<i>n.a.</i>
Bromide of ammonium						
Spain—						
Bromine .. .. .	31,284	75	381,347	110,284	172,685	219,356
Bromides .. .. .	82,978	85,608	76,053	78,773	66,357	126,335
Sweden—						
Bromine .. .. .	17,637	2,205	—	—	—	—
Yugoslavia—						
Bromine .. .. .	<i>n.a.</i>	<i>n.a.</i>	14,185	8,045	2,427	5,004
Bromides, bromates, etc. .. .. .	<i>n.a.</i>	<i>n.a.</i>	31,110	65,319	111,470	96,265

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

## IMPORTS OF BROMINE, ETC. (cont.)

Lb. avdp.

Importing Country and Description	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES (cont.)						
Morocco—						
Bromides .. ..	5,344	6,241	3,604	10,161	9,952	4,147
South Africa—						
Bromine .. ..	9,956	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Mexico—						
Bromine .. ..	84,433	100,650	79,735	80,281	102,771	79,366
Bromides of potash and soda .. ..	22,368	40,730	41,277	29,657	64,035	41,127
United States—						
Bromine and compounds	374,012	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Argentina—						
Bromine and compounds	239,598	342,552	300,131	186,026	344,840	165,408
Brazil—						
Bromine .. ..	344	743	408	30,206	11,788	558
Bromides .. ..	573,332	332,298	514,676	624,281	268,274	75,311
Chile—						
Bromine .. ..	871	<i>n.a.</i>	1,457	<i>n.a.</i>	2	<i>n.a.</i>
Bromides .. ..	1,105	<i>n.a.</i>	44	<i>n.a.</i>	13	<i>n.a.</i>
Colombia—						
Bromine .. ..	1,181	2,571	1,243	—	2,023	2
Bromides, etc. ..	17,331	25,153	13,369	27,941	<i>n.a.</i>	<i>n.a.</i>
Peru—						
Bromine .. ..	926	324	328	1,122	637	<i>n.a.</i>
Bromides .. ..	7,311	6,660	14,987	7,198	5,794	<i>n.a.</i>
Iran (a)—						
Bromides .. ..	22,578	36,564	11,872	3,450	30,479	56,934
Japan—						
Bromine compounds ..	26,440	40,431	60,777	165,115	76,397	22,218
Philippine Republic—						
Bromide of potash ..	21,599	4,683	4,497	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Thailand—						
Bromide of potash ..	19,207	19,619	31,603	27,750	33,826	23,850
Turkey—						
Bromine .. ..	322	176	324	463	450	990
Bromides .. ..	7,209	10,748	21,343	13,623	20,461	20,818

(a) Years ended March 20 following that stated.

**CADMIUM**  
**PRODUCTION OF CADMIUM**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom ..	110	194	217	181	205	204
Zambia .. ..	15	14	18	12	10	9
Canada (b) .. ..	1,105	1,238	784	1,445	2,159	2,428
Australia .. ..	486	494	516	518	516	452
<b>OTHER COUNTRIES</b>						
Austria .. ..	19	19	21	21	19	19
Belgium .. ..	1,000	1,000	800	r 700	700	800
France .. ..	292	484	421	440	490	543
Germany (Federal) ..	219	314	322	350	392	337
Italy .. ..	277	273	269	241	215	246
Netherlands (e) .. ..	100	105	90	100	100	140
Norway .. ..	107	111	77	71	83	86
Poland (g) .. ..	410	410	420	425	409	409
Spain .. ..	59	60	(e) 60	(e) 60	(e) 66	(e) 69
U.S.S.R. (g) .. ..	1,700	1,800	1,900	1,900	2,165	2,165
Yugoslavia .. ..	(g) 39	(g) 40	(g) 40	(g) 40	(g) 41	(g) 49
Congo Republic ..	389	464	393	414	279	315
South West Africa (a) ..	472	315	535	433	n.a.	n.a.
Guatemala .. ..	3	—	2	1	n.a.	n.a.
Honduras .. ..	86	103	87	107	111	118
Mexico (c) .. ..	713	737	713	799	1,226	1,175
United States—						
Metal (d) .. ..	4,460	4,669	4,317	4,670	3,883	4,755
Ecuador .. ..	2	2	1	1	1	—
Peru (f) .. ..	189	223	322	297	223	n.a.
Japan .. ..	996	1,196	1,456	1,476	1,867	2,009
Philippine Republic ..	11	11	10	5	3	n.a.
<b>TOTAL* .. ..</b>	<b>12,000</b>	<b>13,000</b>	<b>13,000</b>	<b>13,000</b>	<b>15,000</b>	<b>15,000</b>

\*In the case of South West Africa and Mexico the metal is wholly or mainly extracted in other countries and, to avoid duplication, is excluded from the total. A certain amount of duplication in the case of certain other countries, however, is unavoidable.

Cadmium is also reported to be produced in Bulgaria.

- (a) Estimated cadmium content of copper-lead-zinc concentrates produced and exported for treatment, plus, as from 1965, production of metal.
- (b) Metal produced plus cadmium content of concentrates exported.
- (c) Including cadmium content of flue dust, etc., exported for treatment.
- (d) Including secondary.
- (e) Estimate. Source: "Metallgesellschaft".
- (f) Including recoverable cadmium content of concentrates.
- (g) Estimate. Source: United States Bureau of Mines.

## EXPORTS OF CADMIUM, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
Zambia (e) .. ..	19	13	13	8	11	9
Canada .. ..	866	725	609	898	749	805
Australia .. ..	325	340	449	512	467	545
OTHER COUNTRIES						
Belgium-Luxemburg E.U. (a) ..	867	829	724	573	646	847
France—						
Cadmium (a) .. ..	64	76	102	45	47	49
Cadmium sulphide .. ..	4	—	—	2	19	24
Germany (Federal)—						
Cadmium (a) .. ..	48	52	109	136	145	68
Cadmium oxide .. ..	18	9	n.a.	n.a.	n.a.	13
Italy—						
Cadmium (a) .. ..	3	14	12	93	74	53
Netherlands (a) .. ..	242	183	302	262	248	402
Norway .. ..	85	72	97	69	65	75
Poland .. ..	285	292	393	334	277	284
U.S.S.R. .. ..	984	689	900	600	500	689
Yugoslavia .. ..	50	2	n.a.	n.a.	12	71
Congo Republic (d) ..	380	470	380	340	260	470
South West Africa (b) ..	472	315	271	411	n.a.	n.a.
Mexico (c) .. ..	1,073	953	955	1,110	876	171
United States—						
Metal, alloys, dross, flue dust, etc. .. ..	586	643	33	169	309	237
Peru .. ..	147	205	220	248	152	240
Japan .. ..	1,175	345	705	648	556	698

(a) Including scrap.

(b) Cadmium content of concentrates exported for treatment plus, as from 1966, exports of metal.

(c) Including cadmium content of flue dust, etc., exported for treatment.

(d) Estimated.

(e) Figure for year 1963 relates to Rhodesia and Nyasaland.

## IMPORTS OF CADMIUM, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	1,380	1,549	1,375	638	1,070	1,238
India (a) .. .. .	60	105	151	62	109	34
<b>OTHER COUNTRIES</b>						
Austria .. .. .	15	12	12	8	8	10
Belgium-Luxemburg						
E.U. (b) .. .. .	481	222	327	514	392	624
Denmark .. .. .	29	21	23	15	22	24
France—						
Cadmium (b) .. .. .	795	567	403	540	497	346
Cadmium sulphide .. .. .	18	12	15	17	21	15
Germany (Federal)—						
Cadmium (b) .. .. .	987	890	1,177	1,129	1,171	1,512
Cadmium oxide .. .. .	62	73	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Italy—						
Cadmium (b) .. .. .	73	47	41	56	89	167
Cadmium oxide .. .. .	15	15	1	15	11	6
Cadmium sulphide .. .. .	<i>n.a.</i>	12	<i>n.a.</i>	<i>n.a.</i>	18	24
Netherlands—						
Cadmium (b) .. .. .	186	174	247	257	168	343
Cadmium salts .. .. .	48	75	78	92	123	121
Spain .. .. .	10	16	12	21	3	4
Sweden .. .. .	185	140	110	215	113	93
U.S.S.R. .. .. .	255	153	233	179	217	231
Yugoslavia .. .. .	—	12	13	9	4	—
United States—						
Cadmium .. .. .	342	493	947	1,499	708	860
Flue dust (cadmium content) .. .. .	333	568	580	527	520	717
Argentina—						
Cadmium and salts .. .. .	1	1	3	2	1	—
Brazil—						
Cadmium .. .. .	46	28	33	56	45	62
Cadmium salts .. .. .	—	—	—	—	3	1
Japan .. .. .	16	22	23	14	31	17

(a) Years ended March 31 following that stated.

(b) Including scrap.

**CEMENT**  
**PRODUCTION OF CEMENT**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	13,837,000	16,698,000	16,921,000	16,486,000	17,304,000	17,592,000
Kenya .. .. .	338,000	415,000	476,000	463,000	485,804	535,000
Malawi .. .. .	25,000	31,000	31,000	43,000	43,000	54,000
Nigeria .. .. .	519,000	653,000	967,000	986,000	709,810	564,000
Uganda .. .. .	54,282	71,524	132,662	120,000	135,142	150,000
Zambia .. .. .	114,000	149,000	218,000	252,000	240,000	275,000
Canada (a) .. .. .	6,262,198	7,006,593	7,462,234	7,973,707	7,138,351	7,392,100
Bahamas (c) .. .. .	—	—	n.a.	820,000	820,000	820,000
Jamaica .. .. .	197,550	277,465	311,069	349,819	329,722	403,000
Trinidad .. .. .	159,700	173,300	186,200	208,500	187,200	204,500
Ceylon .. .. .	74,049	73,436	84,477	81,572	188,741	218,490
Cyprus .. .. .	83,457	77,792	95,255	89,566	182,158	235,661
Hong Kong .. .. .	213,198	211,636	236,836	243,016	212,000	255,000
India .. .. .	9,207,000	9,537,000	10,411,000	10,877,000	11,122,000	11,400,000
Malaysia (West) .. .. .	356,000	458,000	726,000	771,000	885,000	892,000
Pakistan .. .. .	1,474,000	1,522,000	1,680,000	1,856,000	2,006,000	2,532,000
Australia .. .. .	3,071,000	3,568,000	3,742,000	3,616,000	3,769,000	3,868,000
Fiji .. .. .	—	31,000	39,000	40,000	46,000	50,000
New Zealand .. .. .	711,000	775,000	829,000	864,000	801,000	751,000
<b>TOTAL .. .. .</b>	<b>37,000,000</b>	<b>42,000,000</b>	<b>45,000,000</b>	<b>46,000,000</b>	<b>45,000,000</b>	<b>48,000,000</b>
Irish Republic .. .. .	869,482	1,020,067	1,202,084	1,118,016	1,243,786	1,331,000
<b>OTHER COUNTRIES</b>						
Albania .. .. .	127,549	125,153	132,000	n.a.	n.a.	n.a.
Austria .. .. .	3,259,960	3,709,200	3,980,410	4,429,990	4,476,240	4,478,600
Belgium (b) .. .. .	4,635,020	5,753,730	5,811,873	5,702,000	4,828,400	5,652,222
Bulgaria .. .. .	2,170,000	2,545,000	2,639,000	2,811,000	3,305,000	3,344,000
Czechoslovakia .. .. .	5,096,000	5,406,000	5,623,000	6,033,000	6,100,000	6,300,000
Denmark—						
Portland cement .. .. .	1,267,106	1,676,665	1,798,548	} 1,993,535	2,168,653	2,241,976
Special cements .. .. .	229,851	191,322	169,584			
Finland .. .. .	1,405,624	1,547,099	1,742,047	1,532,000	1,490,088	1,453,000
France—						
Portland cement .. .. .	12,447,198	15,970,694	16,578,377	17,746,365	18,928,390	} 24,886,000
Portland blast furnace cements .. .. .	3,827,851	3,417,770	3,577,982	3,494,278	3,557,425	
Slag cements .. .. .	43,472	4,569	3,560	1,805	49,490	
Masonry cements .. .. .	521,148	585,288	608,850	628,055	542,224	
Natural cements .. .. .	270,958	251,470	209,388	80,160	102,249	
Special cements .. .. .	737,134	966,934	1,033,616	985,332	852,203	
Germany (Federal)—						
Portland cement .. .. .	21,179,000	24,397,000	25,033,000	25,375,000	23,287,000	24,919,000
Portland blast furnace cements .. .. .	6,723,000	7,756,000	7,741,000	7,960,000	7,090,000	7,109,000
Special cements .. .. .	854,000	947,000	820,000	854,000	832,000	887,000
Germany (East) .. .. .	5,372,000	5,676,000	5,991,000	6,348,000	7,069,000	7,432,000
Greece .. .. .	2,257,293	2,629,688	3,161,460	3,537,583	3,675,602	4,015,072
Hungary .. .. .	1,769,200	2,221,037	2,345,771	2,560,000	2,614,000	2,757,000
Iceland .. .. .	97,000	106,000	112,000	113,000	114,000	100,000
Italy .. .. .	21,700,000	22,500,000	20,400,000	22,000,000	26,000,000	29,000,000
Luxemburg .. .. .	198,467	202,000	218,000	209,000	179,848	188,322
Netherlands .. .. .	2,048,000	2,827,300	2,926,300	3,113,000	3,296,000	3,382,000
Norway .. .. .	1,414,998	1,516,171	1,576,703	1,797,685	2,118,278	2,260,809
Poland .. .. .	7,553,000	8,623,000	9,422,000	9,881,000	10,962,000	11,410,000
Portugal .. .. .	1,410,159	1,595,985	1,653,156	1,692,682	1,792,664	1,832,521
Roumania .. .. .	4,300,000	4,677,000	5,321,000	5,793,000	6,239,000	6,915,000

(a) Sold or used by producers. Excluding Portland cement made from imported clinker.

(b) Excluding natural cement.

(c) Estimate based on full capacity production.



## PRODUCTION OF CEMENT (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES (cont.)						
Spain—						
Portland cement ..	6,665,709	7,509,853	8,708,235	} 11,620,000	12,892,000	14,710,000
Natural cement ..	585,565	376,718	331,417			
Other cements ..	274,855	312,065	777,053			
Sweden—						
Portland cement ..	3,100,488	3,449,785	3,591,531	3,591,834	3,743,590	} 3,850,511
Other cements ..	152,938	119,152	124,241	105,209	96,274	
Switzerland ..	3,524,768	4,254,047	3,975,658	4,257,326	4,109,723	4,252,278
U.S.S.R. ..	60,054,000	63,900,000	71,240,000	78,740,000	83,460,000	86,069,000
Yugoslavia ..	2,802,000	2,992,000	3,054,000	3,181,000	3,261,000	3,703,000
Algeria ..	869,900	772,000	728,000	648,000	719,000	853,000
Angola ..	190,962	210,440	241,582	259,858	274,862	306,764
Canary Islands ..	99,296	167,213	241,129	(g)	(g)	(g)
Cape Verde Islands ..	11,000	12,000	r 4,000	r 3,000	8,000	n.a.
Congo Republic ..	242,308	228,663	244,000	(e) 260,000	287,000	289,000
Egypt ..	2,488,000	2,229,000	2,283,000	2,587,000	2,711,000	3,097,124
Ethiopia (d) ..	43,000	33,000	94,000	(e) 98,000	148,000	168,000
Morocco ..	747,300	911,800	776,000	843,200	860,368	999,794
Mozambique ..	160,558	178,675	216,873	220,529	239,115	281,000
Senegal ..	186,600	201,700	178,500	191,400	169,700	199,100
Sudan ..	114,000	89,289	48,365	98,000	89,000	145,000
Tunisia ..	355,000	448,000	446,000	469,000	464,000	462,000
South Africa ..	2,838,820	3,401,610	3,819,890	3,926,980	3,750,000	3,995,000
Costa Rica ..	—	29,839	112,468	113,894	115,312	126,442
Cuba ..	799,000	793,000	788,000	787,000	882,000	n.a.
Dominican Republic ..	224,566	292,817	208,474	273,110	305,442	321,540
Guatemala (f) ..	128,000	152,000	189,000	167,000	165,629	161,517
Haiti ..	49,687	50,587	41,000	37,000	39,000	40,000
Honduras ..	59,000	72,000	93,000	103,000	109,000	127,000
Mexico ..	3,703,000	4,347,000	4,254,000	4,890,000	5,400,000	5,913,000
Nicaragua ..	52,962	60,088	65,028	86,600	89,285	100,000
Panama Republic ..	140,000	123,000	162,000	148,000	148,000	n.a.
Salvador ..	77,030	88,621	79,444	139,176	143,054	151,000
United States (a)—						
Portland cement ..	59,176,900	61,877,700	62,345,800	64,563,200	62,006,300	66,288,300
Prepared masonry cement (b) ..	2,602,800	2,765,900	2,878,000	2,858,000	2,745,000	2,900,100
Natural, slag and hydraulic lime cements	59,900	46,200	46,800	19,000	15,900	14,400
Argentina ..	2,479,318	2,845,206	3,253,266	3,431,720	3,496,650	4,163,442
Bolivia ..	63,382	62,514	64,786	65,000	(f) 66,000	70,000
Brazil ..	4,803,940	5,123,520	5,138,434	5,465,000	6,363,000	7,240,000
Chile ..	1,150,137	1,246,673	1,169,148	1,342,686	1,184,064	1,230,963
Colombia ..	1,806,000	1,941,000	2,837,303	2,192,803	2,080,314	2,329,826
Ecuador ..	254,313	284,000	(f) 320,000	372,000	422,914	434,000
Paraguay ..	18,000	23,000	29,000	26,000	15,000	24,000
Peru ..	742,147	800,598	1,000,772	1,052,000	1,026,000	1,070,000
Uruguay ..	335,000	406,000	424,000	471,000	414,000	506,000
Venezuela ..	1,555,255	1,820,384	2,078,492	2,080,272	2,242,320	2,398,173
Afghanistan (c) ..	101,000	123,000	167,000	172,000	172,000	174,000
Burma ..	122,000	129,000	133,000	139,000	138,000	174,000
Cambodia ..	—	n.a.	50,000	58,000	(e) 59,000	59,000
China ..	9,842,000	e 10,334,000	e 11,000,000	e 11,000,000	e 8,000,000	8,853,000
Formosa ..	2,210,000	2,320,000	2,410,000	3,060,000	3,431,743	3,930,300
Indonesia ..	503,000	432,000	(e) 360,000	333,000	324,000	404,000
Iran (c) ..	(f) 730,000	(f) 730,000	772,000	1,372,000	1,372,000	1,377,000
Iraq ..	909,450	1,006,660	1,265,000	1,321,000	e 1,575,000	1,575,000

(a) Including Puerto Rico.

(b) Excluding masonry cement produced by companies purchasing Portland cement for reprocessing.

(c) Years ended March 20 of year following that stated.

(d) Years ended September 10 of that stated.

(e) United States Bureau of Mines' estimate.

(f) Estimated.

(g) Included with Spain.

PRODUCTION OF CEMENT (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Israel .. .. .	1,010,000	1,080,000	1,240,000	1,150,000	791,000	1,087,000
Japan .. .. .	29,475,000	32,460,000	32,173,000	37,672,000	42,608,000	46,927,000
Jordan .. .. .	280,772	302,929	300,272	368,264	315,495	375,189
Korea (South) .. .. .	766,006	1,222,496	1,588,648	1,850,528	2,402,473	3,500,000
Korea (North) .. .. .	2,490,000	2,569,000	2,362,000	2,460,000	2,559,000	2,656,000
Lebanon .. .. .	882,457	867,244	950,000	1,079,000	1,000,000	892,000
Philippine Republic .. .. .	936,295	1,182,148	1,505,000	1,620,000	2,079,000	2,518,000
Saudi Arabia .. .. .	193,000	238,000	249,000	246,000	348,000	393,000
Syria .. .. .	674,000	625,000	663,000	671,000	677,000	902,000
Thailand .. .. .	980,000	1,053,635	1,228,286	1,459,312	1,710,000	2,328,034
Turkey .. .. .	2,655,186	2,893,445	3,193,189	3,803,696	4,181,892	4,653,000
Vietnam (South) .. .. .	20,852	74,116	186,295	132,527	177,901	143,000
Vietnam (North) .. .. .	483,000	639,000	740,000	(b) 738,000	(b) 738,000	(b) 500,000
<b>TOTAL (a)</b> .. .. .	<b>334,000,000</b>	<b>366,000,000</b>	<b>382,000,000</b>	<b>409,000,000</b>	<b>425,000,000</b>	<b>454,000,000</b>
<b>WORLD'S TOTAL (a)</b>	<b>371,000,000</b>	<b>408,000,000</b>	<b>427,000,000</b>	<b>456,000,000</b>	<b>470,000,000</b>	<b>503,000,000</b>

(a) Estimated.

(b) United States Bureau of Mines' estimate.

**CHINA CLAY**  
**PRODUCTION OF CHINA CLAY**

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (h) ..	1,898,000	2,033,000	2,203,000	2,482,000	2,591,000	2,763,000
Kenya .. .. .	6,558	1,268	1,687	879	1,433	n.a.
Nigeria .. .. .	15	3	25	20	320	n.a.
Rhodesia .. .. .	10,929	18,750	n.a.	n.a.	n.a.	n.a.
Swaziland .. .. .	1,975	307	741	578	1,830	2,111
Tanzania .. .. .	179	109	164	286	307	596
Ceylon .. .. .	—	1,502	803	1,591	2,574	2,822
Hong Kong .. .. .	5,019	5,043	4,712	5,771	8,435	5,575
India .. .. .	428,339	428,022	504,000	540,329	504,898	498,000
Malaysia (West) ..	1,176	1,420	1,562	1,576	1,758	1,497
Pakistan .. .. .	696	956	1,426	2,714	2,881	3,033
Australia .. .. .	44,544	40,808	59,683	50,110	66,112	59,343
<b>OTHER COUNTRIES</b>						
Austria (crude) ..	343,829	362,305	322,503	371,715	377,718	321,978
Belgium .. .. .	49,920	n.a.	n.a.	178,267	97,245	(g) 97,000
Bulgaria (f) .. ..	76,000	82,000	93,000	92,000	n.a.	n.a.
Czechoslovakia ..	316,000	308,056	317,000	320,000	330,000	n.a.
Denmark (c)—						
Crude .. .. .	11,871	n.a.	n.a.	n.a.	n.a.	n.a.
Washed waste ..	5,069	n.a.	n.a.	n.a.	n.a.	n.a.
France .. .. .	130,000	123,000	130,000	150,000	148,000	n.a.
Germany (Federal) ..	381,620	403,010	393,270	400,687	397,339	460,912
Greece .. .. .	30,185	48,750	81,648	72,311	98,000	69,000
Hungary .. .. .	43,535	49,543	53,000	61,000	65,000	65,000
Italy—						
Crude .. .. .	86,525	95,850	106,149	83,352	86,397	85,659
Kaolinic earth ..	110,893	92,751	48,600	35,579	15,000	10,000
Portugal—						
Crude and washed ..	37,385	37,688	39,756	33,528	36,621	40,754
Spain .. .. .	(e) 204,330	(f) 138,701	(f) 144,396	n.a.	n.a.	n.a.
Sweden (b) .. .. .	31,222	43,342	41,075	26,855	28,666	27,263
Yugoslavia .. .. .	4,000	5,000	5,000	5,000	4,500	n.a.
Angola .. .. .	150	n.a.	n.a.	n.a.	n.a.	n.a.
Egypt .. .. .	20,677	61,804	47,020	49,198	31,613	30,776
Eritrea .. .. .	(g) 500	(g) 500	(g) 200	n.a.	500	n.a.
Morocco .. .. .	—	—	967	—	n.a.	n.a.
Mozambique .. .. .	5	10	150	345	612	n.a.
South Africa .. ..	33,404	38,835	40,740	39,879	32,316	32,195
Mexico .. .. .	45,826	63,211	79,854	95,065	77,350	74,520
United States (a) ..	2,824,619	2,974,412	3,217,815	3,915,577	3,547,249	3,751,000
Argentina .. .. .	35,332	41,711	71,580	72,270	63,084	71,009
Chile .. .. .	36,316	45,237	29,625	39,862	28,959	26,000
Colombia .. .. .	75,000	79,416	82,000	25,893	82,700	82,700
Ecuador .. .. .	812	718	416	1,907	795	900
Peru .. .. .	52	325	384	411	n.a.	n.a.
Iran (d) .. .. .	n.a.	6,860	9,448	n.a.	n.a.	n.a.
Japan .. .. .	97,662	105,655	87,871	r 115,706	147,913	n.a.
Korea (South) ..	51,437	59,580	71,103	110,460	101,054	119,000
Vietnam (South) ..	1,834	2,038	n.a.	n.a.	n.a.	n.a.

China clay is known to have been produced in East Germany, Roumania, U.S.S.R., Brazil, China, Formosa, Israel, Indonesia and Thailand.

(a) Sold or used by producers.

(b) Sales.

(c) Production in major establishments only.

(d) Years ended March 20 of year following that stated.

(e) From 1965 onwards the figures are unofficial. The official production statistics for China Clay and China Stone together are as follows (long tons): 1965—2,232,000; 1966—2,512,000; 1967—2,611,000; 1968—2,793,000.

(e) Crude.

(f) Washed or equivalent.

(g) United States Bureau of Mines' estimate.

## EXPORTS OF CHINA CLAY

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	1,251,387	1,360,813	1,482,160	1,712,091	1,760,137	1,848,145
Tanzania .. .. .	51	10	—	—	—	—
Hong Kong .. .. .	4,122	2,900	3,665	3,924	4,823	3,062
India (a) .. .. .	208	698	147	80	529	107
Malaysia (West) .. .. .	<i>n.a.</i>	<i>n.a.</i>	114	216	120	138
<b>OTHER COUNTRIES</b>						
Austria .. .. .	38,538	34,401	30,180	30,990	27,374	26,385
Belgium-Luxemburg .. .. .						
E.U. .. .. .	323	71	400	921	1,220	1,052
Czechoslovakia .. .. .	160,000	163,000	167,000	163,000	<i>n.a.</i>	<i>n.a.</i>
Denmark .. .. .	204	73	47	92	57	46
France .. .. .	51,137	55,056	55,223	55,062	52,784	59,206
Germany (Federal) .. .. .	51,476	55,866	54,508	65,300	77,311	75,594
Germany (East) .. .. .	63,158	61,722	68,878	71,522	78,503	72,444
Italy .. .. .	267	359	528	390	234	469
Netherlands .. .. .	96	209	114	740	145	20,792
Portugal .. .. .	12,799	10,792	10,420	2,397	2,401	429
Spain .. .. .	10,546	18,435	24,709	18,220	19,277	17,428
Sweden .. .. .	11	62	120	141	160	1,993
U.S.S.R. .. .. .	3,149	98	1,100	300	5,200	<i>n.a.</i>
Morocco .. .. .	—	272	8	—	—	—
South Africa .. .. .	<i>n.a.</i>	263	396	505	872	701
United States .. .. .	99,747	135,469	172,210	226,257	287,437	348,109
Argentina .. .. .	59	49	10	5	41	22
Brazil .. .. .	197	710	1,383	689	945	1,403
Japan .. .. .	2,998	2,736	2,790	1,018	1,743	2,665
Korea (South) .. .. .	13,626	13,170	20,073	28,016	25,942	<i>n.a.</i>
Turkey .. .. .	15	256	20	49	—	—

(a) Years ended March 31 following that stated.

## IMPORTS OF CHINA CLAY

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada .. .. .	155,141	151,557	173,184	175,693	169,921	160,979
Hong Kong .. .. .	(b) 98	(b) 197	(b) 16	131	51	148
India .. .. .	6,082	5,690	4,325	2,019	3,412	2,072
Malaysia (West) .. .. .	n.a.	n.a.	1,501	1,233	1,299	1,177
Pakistan .. .. .	1,416	2,916	n.a.	n.a.	n.a.	n.a.
Australia .. .. .	22,119	20,918	22,316	25,652	26,197	25,549
New Zealand (d) .. .. .	1,569	2,763	2,856	2,602	3,004	n.a.
<b>OTHER COUNTRIES</b>						
Austria .. .. .	9,312	12,773	18,775	21,805	27,955	31,264
Belgium-Luxemburg .. .. .						
E.U. .. .. .	51,494	57,491	63,541	92,017	93,897	128,714
Denmark .. .. .	31,093	34,788	30,799	37,793	30,877	35,232
Finland .. .. .	111,736	132,614	147,406	178,754	209,726	199,596
France .. .. .	181,302	201,772	206,291	236,064	225,048	252,368
Germany (Federal) .. .. .	333,271	358,831	375,447	420,637	391,800	498,025
Hungary .. .. .	61,854	59,483	67,371	65,878	63,939	67,073
Italy .. .. .	224,047	279,603	264,174	321,408	364,692	438,375
Netherlands .. .. .	110,399	128,128	126,030	142,551	131,439	150,327
Norway .. .. .	66,739	69,586	62,731	70,658	66,681	72,755
Poland .. .. .	79,700	76,500	70,844	76,567	70,187	77,799
Portugal .. .. .	277	252	268	446	970	2,253
Spain .. .. .	7,830	15,781	27,955	38,612	44,189	52,760
Sweden .. .. .	136,444	159,821	162,699	116,738	189,506	204,560
Yugoslavia .. .. .	20,486	25,461	27,127	23,001	26,096	29,233
Angola .. .. .	97	63	40	84	74	99
Morocco .. .. .	4,247	1,807	2,670	2,387	2,004	3,013
Mozambique .. .. .	87	125	108	94	n.a.	n.a.
South Africa (a) .. .. .	5,058	1,174	n.a.	n.a.	n.a.	n.a.
Costa Rica .. .. .	1,203	101	209	134	176	n.a.
Cuba .. .. .	2,987	182	n.a.	n.a.	n.a.	n.a.
Guatemala .. .. .	301	275	188	301	657	897
Mexico .. .. .	9,943	9,193	8,952	13,201	12,897	17,373
United States .. .. .	95,717	104,568	81,925	104,309	82,229	67,094
Argentina .. .. .	6,353	10,452	9,213	10,494	11,411	13,599
Brazil .. .. .	233	110	93	472	909	1,723
Chile .. .. .	290	241	256	n.a.	165	n.a.
Colombia .. .. .	3,368	3,180	1,964	4,579	2,219	3,144
Ecuador .. .. .	56	5	9	n.a.	n.a.	n.a.
Peru .. .. .	555	1,827	1,199	1,603	3,488	n.a.
Uruguay .. .. .	n.a.	n.a.	1,186	1,588	1,618	n.a.
Venezuela .. .. .	4,078	5,976	5,345	5,566	6,375	9,645
Iran (c) .. .. .	191	519	346	422	639	1,040
Japan .. .. .	48,291	52,920	59,119	78,928	102,286	122,157
Philippine Republic .. .. .	2,237	2,812	4,166	n.a.	3,888	n.a.
Turkey .. .. .	66	7	7	17	25	21

(a) Including Cornish or China stone.

(c) Years ended March 20 following that stated.

(b) Excess of re-exports.

(d) Years ended June 30 of that stated.

**CHROME ORE AND CHROMIUM  
PRODUCTION OF CHROME ORE**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968	Estimated Cr <sub>2</sub> O <sub>3</sub> content					
	1963	1964	1965	1966	1967	1968	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>												
Rhodesia ..	368,209	440,510	<i>f</i> 625,062	<i>e</i> 500,000	<i>n.a.</i>	<i>n.a.</i>	177,000	211,000	300,000	250,000	<i>n.a.</i>	<i>n.a.</i>
Sierra Leone ..	2,738	—	—	—	—	<i>n.a.</i>	1,000	—	—	—	<i>n.a.</i>	<i>n.a.</i>
Cyprus ( <i>a</i> ) ..	4,831	—	4,911	10,451	21,035	24,778	2,000	—	2,000	5,000	10,000	12,000
India ..	64,015	34,417	58,742	76,430	107,805	202,409	30,700	16,500	28,200	36,700	51,700	97,200
Pakistan ( <i>c</i> ) ..	14,306	13,290	14,261	26,718	25,956	25,610	7,000	6,000	7,000	13,000	15,000	13,000
Australia ..	160	72	23	—	—	—	72	32	10	—	—	—
<b>TOTAL</b> ..	<b>454,259</b>	<b>488,289</b>	<b>703,000</b>	<b>600,000</b>	<b>155,000</b>	<b>253,000</b>						
<b>OTHER COUNTRIES</b>												
Albania ..	288,980	301,976	<i>e</i> 305,000	<i>e</i> 308,000	<i>e</i> 312,000	<i>e</i> 321,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Greece ..	50,371	39,466	<i>r</i> 47,040	45,596	10,257	13,000	25,000	20,000	20,000	20,000	5,000	5,000
U.S.S.R. ( <i>e</i> ) ..	1,210,000	1,300,000	1,400,000	1,400,000	1,500,000	1,620,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Yugoslavia ..	92,289	86,963	78,590	53,355	46,417	44,546	27,100	24,500	22,520	18,400	14,700	13,000
Malagasy Republic ..	11,000	11,584	2,346	—	—	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South Africa ..	779,654	836,132	927,230	1,044,186	1,130,906	1,270,667	350,000	380,000	420,000	470,000	509,000	572,000
Sudan ..	17,000	( <i>b</i> ) 17,000	( <i>e</i> ) 30,000	17,000	18,000	22,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cuba ..	55,000	32,000	( <i>e</i> ) 29,000	( <i>e</i> ) 29,000	( <i>e</i> ) 29,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Brazil ..	43,344	25,384	31,543	23,856	14,788	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Colombia ..	108	394	260	—	—	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Iran ( <i>d</i> ) ..	96,000	<i>e</i> 120,000	130,000	140,000	147,000	157,000	46,000	58,000	60,000	70,000	73,000	78,000
Japan ..	43,040	43,261	41,173	32,314	44,497	27,450	15,100	15,000	14,000	11,000	15,000	10,000
Philippine Republic ..	451,870	460,696	545,764	551,264	413,124	431,768	154,000	157,000	185,000	188,000	149,000	150,000
Turkey ..	397,511	406,167	558,106	503,564	365,276	<i>b</i> 400,000	190,000	190,000	270,000	240,000	175,000	200,000
New Caledonia ..	—	—	—	—	1,795	—	—	—	—	—	933	—
<b>TOTAL</b> ..	<b>3,500,000</b>	<b>3,700,000</b>	<b>4,200,000</b>	<b>4,200,000</b>	<b>4,000,000</b>	<b>4,400,000</b>						
<b>World's TOTAL</b> ..	<b>4,000,000</b>	<b>4,200,000</b>	<b>4,900,000</b>	<b>4,800,000</b>	<b>4,200,000</b>	<b>4,700,000</b>						

Chrome ore is also produced in Bulgaria, Roumania and North Vietnam.

(*a*) Figures relate to saleable production.

(*d*) Years ended March 20 following that stated.

(*f*) Exports.

(*c*) West Pakistan.

(*e*) United States Bureau of Mines' estimate.

## EXPORTS OF CHROME ORE, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Chromium metal ..	442	616	595	1,527	639	1,054
Rhodesia (c)—						
Ore .. .. .	275,217	448,477	625,062	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-chrome .. ..	9,838	22,332	20,939	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sierra Leone—						
Ore .. .. .	8,700	—	—	—	—	—
Canada—						
Ferro-chrome .. ..	2,598	154	183	31	—	1
Cyprus—						
Ore and concentrates ..	400	9,150	2	2,501	26,948	23,591
India (a)—						
Ore .. .. .	11,469	30,468	25,025	68,717	65,980	108,327
Pakistan—						
Ore .. .. .	3,893	22,398	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Albania—						
Ore .. .. .	243,900	305,800	292,900	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Austria—						
Ore .. .. .	407	635	841	486	508	234
France—						
Chromium metal .. ..	273	182	312	321	225	210
Ferro-chrome .. ..	17,605	17,717	19,419	24,934	20,662	21,318
Germany (Federal)—						
Ore .. .. .	1,445	1,497	1,718	1,178	1,382	1,295
Chromium metal .. ..	54	52	39	79	97	19
Greece—						
Ore .. .. .	15,085	22,153	29,051	20,345	13,226	15,088
Italy—						
Ore .. .. .	1,476	2,038	—	14	47	114
Ferro-chrome .. ..	1,942	4,137	7,011	7,941	7,498	3,787
Netherlands—						
Ore .. .. .	1,453	1,252	986	1,686	3,268	3,727
Norway—						
Ferro-chrome .. ..	27,043	33,672	30,384	28,797	27,065	33,690
Ferro-silico-chrome ..	4,692	8,106	4,086	355	945	5,021
Sweden—						
Ore .. .. .	<i>n.a.</i>	—	—	—	—	84
Ferro-chrome .. ..	22,613	20,231	18,685	22,555	22,979	22,591
U.S.S.R.—						
Ore .. .. .	558,000	652,500	736,000	905,000	1,013,733	1,031,448
Ferro-chrome .. ..	3,100	15,200	24,400	29,300	31,000	32,800
Yugoslavia—						
Ore and concentrates ..	23,142	23,508	13,443	12,864	6,811	9,114
Ferro-chrome .. ..	7,184	6,906	9,948	9,090	8,028	8,303
Malagasy Republic—						
Ore .. .. .	12,795	6,892	7,677	1	—	—
South Africa—						
Ore .. .. .	595,090	628,122	690,143	812,628	690,054	772,755
Sudan—						
Ore .. .. .	303	11,000	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cuba—						
Ore .. .. .	499	17,730	30,201	36,000	<i>n.a.</i>	<i>n.a.</i>
United States—						
Ore .. .. .	8,684	5,684	6,292	16,614	6,780	11,201
Chromium metal .. ..	10	41	198	116	82	78
Ferro-chrome .. ..	2,354	8,957	10,716	6,828	12,012	24,221
Iran (b)—						
Ore .. .. .	89,804	122,512	157,325	129,743	87,368	61,147

(a) Years ended March 31 following that stated.

(b) Years ended March 20 following that stated.

(c) Figure for 1963 relates to Rhodesia and Nyasaland.

## EXPORTS OF CHROME ORE, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Japan—						
Ore and concentrates ..	<i>n.a.</i>	<i>n.a.</i>	1,513	<i>n.a.</i>	5	1
Ferro-chrome .. ..	7,838	3,800	23,358	21,904	6,228	5,515
Philippine Republic—						
Ore and concentrates ..	476,158	578,000	536,678	568,856	455,752	405,402
Turkey—						
Ore .. ..	209,305	338,700	r 450,258	500,687	309,346	380,806
Ferro-chrome .. ..	1,348	5,770	5,852	7,251	<i>n.a.</i>	<i>n.a.</i>
New Caledonia—						
Ore .. ..	17,672	5,899	—	—	1,216	<i>n.a.</i>



## IMPORTS OF CHROME ORE, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ore .. .. .	158,971	222,235	200,982	185,662	98,359	156,432
Ferro-chrome .. ..	34,458	47,254	60,894	50,065	44,627	58,464
Ferro-silicon-chrome ..	3,848	4,473	4,495	4,133	5,998	4,299
Zambia—						
Ore .. .. .	<i>n.a.</i>	395	279	513	848	801
Canada—						
Ore .. .. .	44,334	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
(Cr content) .. .. .	<i>n.a.</i>	18,566	31,614	18,643	30,790	20,002
Ferro-chrome .. .. .	<i>n.a.</i>	9,359	13,693	11,193	19,411	13,433
India—						
Ore .. .. .	—	—	1	1	5	—
Ferro-chrome (a) .. ..	477	1,280	861	519	1,185	459
Australia—						
Ore .. .. .	16,128	32,212	8,079	4,025	25,115	<i>n.a.</i>
Ferro-chrome .. .. .	2,713	2,993	5,864	2,420	3,430	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Austria—						
Ore .. .. .	46,413	49,480	40,572	47,310	36,405	53,678
Ferro-chrome .. .. .	12,073	15,037	15,240	16,053	14,420	17,640
Belgium-Luxemburg						
E.U.—						
Ore .. .. .	1,015	1,412	972	1,683	2,098	13,991
Chromium metal .. ..	71	28	14	12	27	51
Ferro-chrome and silico-						
chrome .. .. .	4,469	6,950	6,325	6,571	6,721	7,582
Czechoslovakia—						
Ore .. .. .	146,000	218,000	208,000	184,000	155,000	<i>n.a.</i>
Denmark—						
Ferro-chrome .. .. .	308	347	414	480	401	593
Finland—						
Ferro-chrome .. .. .	995	457	1,340	1,090	1,000	1,291
France—						
Ore .. .. .	151,235	190,339	220,747	233,614	244,920	258,963
Ferro-chrome .. .. .	889	2,252	2,627	2,782	1,150	4,311
Germany (Federal)—						
Ore .. .. .	171,740	232,954	300,734	303,459	280,164	355,622
Chromium metal .. ..	74	67	70	41	89	234
Germany (East)—						
Ore (b) .. .. .	16,250	29,791	29,607	29,123	34,959	28,693
Hungary—						
Ore .. .. .	35,373	29,213	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-chrome .. .. .	5,632	4,215	4,556	10,254	9,303	8,108
Italy—						
Ore .. .. .	44,031	79,112	98,684	110,486	93,326	62,093
Chromium metal .. ..	29	21	39	32	58	77
Ferro-chrome .. .. .	14,753	16,711	14,673	24,291	23,336	11,073
Netherlands—						
Ore .. .. .	2,657	2,728	4,491	3,690	5,858	3,236
Chromium metal .. ..	16	17	29	6	9	16
Ferro-chrome .. .. .	376	820	2,208	2,551	1,106	2,263
Norway—						
Ore .. .. .	31,755	107,660	75,383	68,786	62,021	68,517
Poland—						
Ore .. .. .	84,000	115,500	152,801	141,928	147,865	134,808
Spain—						
Ore .. .. .	14,889	18,001	29,108	28,694	15,736	29,030
Ferro-chrome .. .. .	1,873	2,143	1,899	2,342	1,485	2,420

(a) Years ended March 31 following that stated.

 (b)  $Cr_2O_3$  content.

## IMPORTS OF CHROME ORE, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Sweden—						
Ore .. .. .	113,336	149,654	139,237	156,276	138,496	147,077
Chromium metal .. .. .	105	162	105	150	226	174
Ferro-chrome .. .. .	4,075	7,516	23,407	16,889	13,744	18,651
Yugoslavia—						
Ore .. .. .	58,040	59,031	53,855	39,534	53,111	74,295
South Africa—						
Ore .. .. .	<i>n.a.</i>	47,795	77,931	96,379	29,401	22,744
Mexico—						
Ferro-chrome .. .. .	853	573	453	318	379	491
United States—						
Ore .. .. .	1,242,068	1,274,796	1,350,663	1,664,643	1,220,415	967,928
( <i>Cr<sub>2</sub>O<sub>3</sub> content</i> ) .. .. .	540,490	576,512	617,046	750,760	505,482	451,829
Ferro-chrome .. .. .	25,931	23,321	49,216	87,500	56,574	53,407
( <i>Cr content</i> ) .. .. .	17,808	15,800	33,001	59,151	34,351	31,946
Metal and alloys .. .. .	860	654	902	2,221	1,084	1,219
Brazil—						
Ore .. .. .	—	—	—	2,005	6,116	7,068
Ferro-chrome .. .. .	985	472	243	1,174	777	1,573
Chile—						
Ferro-chrome .. .. .	174	340	316	<i>n.a.</i>	269	<i>n.a.</i>
Formosa—						
Ore .. .. .	156	<i>n.a.</i>	266	866	49	<i>n.a.</i>
Japan—						
Ore .. .. .	222,938	390,166	354,609	415,210	586,285	625,817
Ferro-chrome .. .. .	2,008	5,581	492	197	6,247	3,430
Turkey—						
Ferro-chrome .. .. .	56	20	—	—	19	25

# COAL, COKE AND BY-PRODUCTS

## PRODUCTION OF COAL (Including Brown Coal and Lignite)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>Great Britain—</b>						
<b>Mined—</b>						
Anthracite .. ..	3,327,000	3,468,200	2,941,000	2,800,000	2,671,000	2,391,000
Bituminous .. ..	186,329,700	183,349,300	177,226,000	164,755,900	162,388,000	154,833,100
<b>Opencast—</b>						
Anthracite .. ..	832,200	1,129,900	1,262,000	1,612,500	1,375,800	1,507,000
Bituminous .. ..	5,305,700	5,679,600	6,070,300	5,413,700	5,708,900	5,305,600
<b>Northern Ireland—</b>						
Bituminous .. ..	9,115	6,831	4,542	3,630	2,024	<i>n.a.</i>
<b>Nigeria—</b>						
Sub-bituminous .. ..	586,130	663,816	728,336	630,125	200,000	<i>n.a.</i>
<b>Rhodesia—</b>						
Bituminous .. ..	2,697,222	2,720,646	a 2,989,692	a 3,008,812	a 2,695,712	2,917,000
<b>Swaziland—</b>						
Anthracite .. ..	—	4,009	29,493	65,705	76,730	87,398
<b>Tanzania—</b>						
Bituminous .. ..	2,051	746	2,358	2,488	1,688	3,310
<b>Zambia—</b>						
Bituminous .. ..	—	—	—	112,324	387,000	565,000
<b>Canada—</b>						
Bituminous .. ..	6,292,719	6,446,761	6,223,153	6,005,106	5,779,154	5,121,533
Sub-bituminous .. ..	1,477,047	1,879,386	2,281,029	2,310,433	2,369,015	2,650,396
Lignite .. ..	1,672,818	1,780,392	1,842,797	1,855,504	1,783,022	2,009,124
<b>India—</b>						
Bituminous .. ..	64,914,000	61,454,000	66,100,000	66,890,000	67,145,000	68,894,000
Lignite .. ..	983,449	1,544,392	2,263,962	2,528,000	2,882,000	4,061,000
<b>Pakistan—</b>						
Lignite .. ..	1,223,000	1,195,000	1,212,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Australia—</b>						
Semi-anthracite .. ..	60,603	78,947	70,342	46,000	38,000	30,000
Bituminous .. ..	22,268,206	24,477,232	28,227,762	30,081,000	31,299,000	36,755,000
Sub-bituminous .. ..	2,527,531	2,845,031	3,140,439	3,244,000	3,370,000	3,486,000
Brown coal .. ..	18,456,445	19,034,792	20,658,856	21,782,977	23,384,000	22,974,000
<b>New Zealand—</b>						
Anthracite .. ..	233	147	65	218	183	5
Bituminous .. ..	660,869	681,683	663,222	632,269	584,996	571,912
Sub-bituminous .. ..	1,919,892	2,038,253	1,837,884	1,796,643	1,617,410	1,483,467
Lignite .. ..	161,417	156,889	157,863	165,339	166,635	169,184
<b>TOTAL .. ..</b>	<b>321,707,000</b>	<b>320,636,000</b>	<b>325,934,000</b>	<b>317,000,000</b>	<b>317,000,000</b>	<b>317,000,000</b>
<b>Irish Republic—</b>						
Anthracite .. ..	—	—	—	—	—	—
including dust .. ..	146,751	150,665	130,296	138,250	113,675	101,110
Semi-bituminous .. ..	82,517	76,200	65,460	62,746	62,220	61,970
<b>OTHER COUNTRIES</b>						
<b>Albania—</b>						
Brown coal and lignite .. ..	248,178	287,020	295,000	344,000	335,000	<i>n.a.</i>
<b>Austria—</b>						
Bituminous .. ..	101,887	101,697	57,685	20,173	13,670	<i>n.a.</i>
Brown coal .. ..	5,957,434	5,669,741	5,364,275	5,199,547	4,531,252	4,111,000
<b>Belgium—</b>						
Anthracite .. ..	5,889,540	5,966,672	} 19,473,620	17,222,932	16,175,276	14,572,305
Bituminous .. ..	15,187,810	15,001,362				

(a) Sales for years ended August 31 of that stated.

## PRODUCTION OF COAL (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968		
<b>OTHER COUNTRIES</b>								
<i>(cont.)</i>								
Bulgaria—								
Anthracite and bituminous .. ..	646,000	589,000	543,000	483,000	460,000	432,000		
Brown coal and lignite..	20,918,000	23,346,000	24,082,000	24,264,000	c28,000,000	28,000,000		
Czechoslovakia—								
Bituminous .. ..	27,735,000	27,756,000	27,188,000	26,306,000	25,700,000	25,650,000		
Brown coal .. ..	68,231,000	70,343,000	67,952,000	68,752,000	} 69,600,000	73,100,000		
Lignite .. ..	3,914,000	4,068,000	4,108,000	4,186,000				
Denmark—								
Lignite .. ..	2,472,000	2,160,000	2,094,000	1,951,000	c 1,400,000	(c) 800,000		
France—								
Anthracite and bituminous .. ..	47,007,259	52,204,523	50,536,672	49,542,834	46,872,414	41,249,000		
Lignite .. ..	2,432,290	2,208,653	2,647,157	2,523,340	2,883,744	3,170,000		
Germany—								
Federal Republic (b)—								
Anthracite .. ..	8,822,263	9,342,760	9,110,385	8,798,791	} 110,273,000	110,243,000		
Bituminous (a) ..	131,099,458	130,659,149	123,872,700	115,209,704				
Pechkohle .. ..	1,812,180	1,839,293	1,707,818	1,141,435			876,272	820,836
Brown coal .. ..	104,975,646	109,190,748	100,297,899	96,540,870			95,239,053	99,917,801
East Germany—								
Bituminous .. ..	2,444,000	2,303,000	2,177,000	1,956,000	1,761,000	1,600,000		
Brown coal .. ..	250,204,000	252,868,000	246,877,000	245,107,000	238,205,000	243,210,000		
Greece—								
Lignite .. ..	3,470,089	3,797,808	5,000,059	4,889,844	5,151,497	5,638,000		
Hungary—								
Bituminous .. ..	3,651,202	4,060,242	4,293,000	4,291,000	3,989,000	4,175,000		
Brown coal .. ..	21,586,504	22,009,507	21,840,000	21,222,000	19,282,000	19,567,000		
Lignite .. ..	4,760,046	4,980,300	4,808,000	4,355,000	3,332,000	3,041,000		
Italy—								
Anthracite .. ..	13,800	9,336	5,504	84	—	—		
Bituminous .. ..	563,005	454,689	377,807	411,203	403,926	359,364		
Brown coal .. ..	1,343,971	1,184,023	994,833	1,049,395	2,166,464	1,701,153		
Netherlands—								
Bituminous and anthracite .. ..	11,327,000	11,299,000	11,265,000	9,893,000	7,938,000	6,557,000		
Poland—								
Bituminous .. ..	111,400,000	115,500,000	116,900,000	120,000,000	121,900,000	126,602,000		
Brown coal .. ..	15,102,000	19,960,000	22,269,000	24,121,000	23,544,000	26,453,000		
Portugal—								
Anthracite .. ..	409,000	437,000	420,809	411,585	435,735	391,000		
Brown coal .. ..	140,000	99,000	88,270	49,926	37,996	31,000		
Roumania—								
Anthracite and bituminous ..	390,000	(e)	(e)	(e)	(e)	(e)		
Lignite .. ..	3,990,000	4,588,000	5,375,000	6,400,000	7,526,000	9,002,000		
Brown coal .. ..	5,725,000	(f)6,359,000	(f)6,529,000	(f)6,838,000	(f)7,256,000	(f)7,749,000		
Spain—								
Anthracite .. ..	2,729,021	2,638,154	2,730,912	2,707,000	2,805,000	2,736,000		
Bituminous .. ..	9,975,270	9,365,202	10,007,734	10,029,000	9,650,000	9,301,000		
Lignite .. ..	2,550,084	2,562,745	2,729,071	2,643,000	2,608,000	2,756,000		
Spitzbergen—								
Bituminous—								
Norwegian mines ..	376,359	435,092	418,903	426,912	419,882	340,804		
Russian mines (d) ..	364,484	n.a.	n.a.	n.a.	n.a.	n.a.		

(a) Including Stockheim hard coal.

 (b) Excluding production from "small mines", reported as follows (long tons):  
 Hard coal: 1963—608,898; 1964—448,281; 1965—341,242; 1966—276,976; 1967—217,024;  
 1968—144,813;  
 Brown coal: 1963—13; 1964—96; 1965—nil; 1966—nil; 1967—20; 1968—nil.

(c) Estimated.

(d) Exports.

(e) Included with brown coal.

(f) Including anthracite and bituminous.

## PRODUCTION OF COAL (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Sweden—						
Bituminous .. ..	97,837	83,147	57,925	39,500	11,200	19,500
U.S.S.R.—						
Bituminous and						
anthracite .. ..	388,891,000	402,412,000	421,123,000	432,234,000	439,000,000	440,843,000
Lignite .. ..	134,433,000	142,835,000	147,483,000	144,121,000	149,000,000	135,764,000
Yugoslavia—						
Bituminous .. ..	r 1,265,000	r 1,242,000	r 1,151,000	r 1,115,000	895,000	822,000
Brown coal and lignite	r 25,723,000	r 27,803,000	28,333,000	r 27,715,000	25,154,000	25,488,000
Algeria (Sahara)—						
Bituminous and						
anthracite .. ..	39,000	45,000	44,000	44,000	17,000	—
Congo Republic—						
Bituminous .. ..	90,400	98,000	112,000	108,000	131,000	69,800
Egypt—						
Bituminous .. ..	—	—	20,000	(c) 20,000	n.a.	n.a.
Malagasy Republic—						
Bituminous .. ..	2,000	3,800	1,786	—	—	—
Morocco—						
Anthracite .. ..	397,800	400,000	411,900	444,000	474,000	444,000
Mozambique—						
Bituminous .. ..	278,341	241,000	233,748	267,000	278,000	309,000
South Africa—						
Anthracite .. ..	} 41,783,891	44,207,819	{ 1,226,985	1,059,838	1,259,387	1,343,760
Bituminous .. ..						
Greenland—						
Bituminous .. ..	39,000	24,000	20,000	33,000	31,000	n.a.
Mexico—						
Bituminous .. ..	2,038,000	2,093,000	1,974,000	2,068,000	2,125,000	2,500,000
United States—						
Anthracite .. ..	16,310,164	15,343,081	13,273,174	11,554,700	10,942,913	10,233,000
Bituminous .. ..	407,342,048	432,185,946	454,504,502	473,214,822	489,407,000	482,000,000
Lignite .. ..	2,415,251	2,633,654	2,717,161	3,464,829	4,009,000	4,370,000
Argentina—						
Lignite .. ..	246,400	326,800	368,083	350,971	398,396	464,678
Brazil—						
Bituminous and lignite	2,783,781	2,942,775	3,087,612	3,327,031	4,039,301	n.a.
Chile—						
Bituminous .. ..	1,757,760	1,754,349	1,700,000	1,626,124	1,472,434	1,586,000
Columbia—						
Bituminous .. ..	3,100,000	3,000,000	3,000,000	a 2,500,000	3,000,000	3,100,000
Peru—						
Anthracite .. ..	9,448	31,236	7,608	} 67,000	{ 5,000	n.a.
Bituminous .. ..	119,639	113,525	119,286			
Venezuela—						
Bituminous .. ..	41,679	36,011	30,803	33,536	33,914	28,459
Afghanistan (b)—						
Bituminous .. ..	96,000	111,000	144,000	r 159,000	150,000	(a) 180,000
Burma .. ..	3,000	10,000	10,000	(c) 10,000	15,000	15,000
China (c) .. ..	270,000,000	290,000,000	300,000,000	320,000,000	220,000,000	250,000,000
Formosa—						
Bituminous .. ..	4,734,072	4,948,248	4,974,635	4,935,335	4,998,000	4,935,134
Indonesia—						
Bituminous .. ..	582,016	439,000	384,000	314,778	205,969	172,827
Iran (b)—						
Bituminous .. ..	190,000	270,000	271,000	300,000	300,000	n.a.
Japan—						
Anthracite .. ..	1,770,000	1,682,000	1,604,000	1,588,000	1,492,000	} 45,833,000
Bituminous .. ..	49,459,000	48,443,000	47,148,000	48,948,000	45,733,000	
Lignite .. ..	899,910	680,139	564,000	445,000	359,000	
						328,725

(a) Estimated.

(b) Years ended March 20 following that stated.

(c) United States Bureau of Mines' estimate.

PRODUCTION OF COAL (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Korea (South)—						
Anthracite .. ..	8,718,200	9,469,600	10,086,400	11,429,900	12,239,800	11,614,000
Korea (North) .. ..	13,818,000	14,300,000	17,500,000	19,200,000	<i>a</i> 20,000,000	<i>n.a.</i>
Mongolia .. ..	834,000	613,000	970,000	<i>(b)</i> 1,000,000	<i>n.a.</i>	<i>n.a.</i>
Philippine Republic—						
Bituminous .. ..	154,063	113,121	93,048	88,195	68,396	36,860
Thailand—						
Lignite .. ..	134,910	101,996	122,996	168,429	330,000	300,000
Turkey—						
Bituminous .. ..	6,692,866	7,037,000	6,905,000	<i>(b)</i> 7,300,000	7,350,000	7,387,623
Lignite .. ..	4,912,924	5,812,000	6,197,000	<i>(b)</i> 6,200,000	6,471,000	7,951,115
Vietnam (North)—						
Anthracite .. ..	3,294,000	3,300,000	<i>(a)</i> 3,500,000	<i>(a)</i> 3,500,000	<i>(a)</i> 3,000,000	<i>(a)</i> 3,300,000
Vietnam (South)—						
Anthracite .. ..	102,455	71,621	—	—	—	<i>n.a.</i>
<b>TOTAL .. ..</b>	<b>2,290,000,000</b>	<b>2,390,000,000</b>	<b>2,430,000,000</b>	<b>2,470,000,000</b>	<b>2,360,000,000</b>	<b>2,380,000,000</b>
<b>WORLD'S TOTAL ..</b>	<b>2,610,000,000</b>	<b>2,710,000,000</b>	<b>2,760,000,000</b>	<b>2,790,000,000</b>	<b>2,677,000,000</b>	<b>2,702,000,000</b>

(a) Estimated.

(b) United States Bureau of Mines' estimate.

PRODUCTION OF COKE

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Great Britain—						
Gas-works—coke (a) ..	9,719,000	8,801,000	7,769,000	7,202,000	6,198,000	4,594,000
breeze (a) ..	2,358,000	2,169,000	1,988,000	1,800,000	1,591,000	1,191,000
Coke-ovens—coke ..	15,485,000	16,857,000	17,073,000	16,117,000	15,322,000	16,247,000
breeze ..	1,222,000	1,343,000	1,392,000	1,365,000	1,317,000	1,418,000
Rhodesia .. .. .	(e) 104,784	(e) 132,771	(f) 171,855	(f) 200,163	(f) 171,660	(f) 194,978
Canada (c) .. ..	3,822,140	3,877,662	3,900,706	3,951,831	3,955,624	4,741,752
Hong Kong—						
Gas-works (c) .. ..	14,719	13,000	13,000	10,000	9,000	n.a.
India—						
Gas-works .. .. .	106,370	68,215	63,288	64,434	65,974	n.a.
Hard .. .. .	8,240,000	7,202,827	7,850,000	8,030,645	7,470,000	n.a.
Soft .. .. .	2,255,024	2,171,662	2,570,000	2,834,721	2,756,000	n.a.
Australia (d)—						
Coke—gas-works ..	694,575	693,361	632,501	559,301	551,326	507,253
coke-ovens ..	2,759,060	2,915,005	3,118,262	3,178,856	3,365,000	3,677,673
Breeze .. .. .	379,183	417,949	471,787	492,801	521,426	607,099
New Zealand (b)—						
Gas-works .. .. .	79,000	68,000	66,000	55,000	n.a.	n.a.
Irish Republic—						
Gas-works (c) .. ..	126,228	128,758	124,567	103,585	88,748	50,748
<b>OTHER COUNTRIES</b>						
Austria—						
Gas-works .. .. .	337,662	307,792	281,203	220,000	210,000	195,000
Coke-ovens .. .. .	1,608,145	1,582,661	1,523,786	1,451,000	1,400,000	1,600,000
Belgium—						
Gas-works .. .. .	2,000	2,000	2,000	n.a.	n.a.	n.a.
Coke-ovens .. .. .	7,090,494	7,281,000	7,220,000	6,851,000	6,744,000	7,713,000
Bulgaria .. .. .	126,365	463,085	721,027	787,630	n.a.	n.a.
Czechoslovakia—						
Hard coke .. .. .	9,152,000	9,272,000	9,346,000	9,316,000	9,160,000	9,295,000
Brown-coal coke ..	2,081,000	1,899,000	1,666,000	1,745,000	1,792,000	1,619,000
Denmark (gas-works) ..	405,000	344,000	259,000	287,000	242,000	289,000
Finland .. .. .	154,813	n.a.	140,000	151,000	134,000	118,000
France—						
Gas-works (e) .. ..	136,000	60,000	20,000	14,200	8,700	8,400
Coke-ovens .. .. .	13,251,173	13,784,875	13,196,915	12,743,534	12,237,000	12,145,000
Semi-coke .. .. .	266,952	291,611	237,166	244,714	194,000	160,000
Germany (Federal)—						
Gas-works .. .. .	4,746,000	4,834,000	4,086,000	3,520,000	2,824,000	2,290,000
Coke-ovens—hard coke	41,233,000	42,664,000	42,610,000	39,260,000	34,688,000	35,671,000
do. brown-coal coke ..	591,000	587,000	569,000	534,000	388,000	n.a.
Germany (East)—						
Hard coke .. .. .	3,210,000	3,344,000	3,158,000	3,141,000	2,875,000	2,511,000
Brown-coal coke ..	7,448,000	7,488,000	7,226,000	7,207,000	6,848,000	6,687,000
Greece (gas-works) ..	21,000	17,886	16,966	17,341	n.a.	15,000
Hungary—						
Gas-works .. .. .	432,000	420,000	460,000	450,000	n.a.	430,000
Coke-ovens—hard coke	757,000	764,000	765,000	771,000	639,000	755,000
do. brown-coal coke	45,000	41,000	45,000	42,000	n.a.	n.a.
Italy—						
Gas-works .. .. .	713,377	533,067	379,618	334,236	312,278	264,491
Coke-ovens .. .. .	4,522,230	4,608,932	5,646,098	6,168,226	6,147,479	6,373,720
Luxemburg—						
Gas-works .. .. .	35,000	28,000	13,000	n.a.	n.a.	n.a.

(a) Excluding coke used for heating retorts.

(e) Sales.

(b) Sales for years ended March 31 of the year following that stated. (f) Years ended August 31

(c) Including coke-breeze.

of that stated.

(d) Years ended June 30 of that stated.

PRODUCTION OF COKE (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
Netherlands—						
Gas-works .. ..	174,000	107,000	96,000	59,000	17,322	3,000
Coke-ovens .. ..	4,203,000	4,443,000	4,218,100	3,767,500	3,261,700	2,889,000
Norway—						
Gas-works .. ..	57,314	127,820	21,115	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Coke-ovens .. ..	—	106,000	255,800	261,705	284,413	305,466
Poland—						
Gas-works .. ..	1,137,100	1,176,800	1,244,000	1,268,600	1,255,800	1,271,600
Coke-ovens .. ..	12,522,000	12,819,000	12,986,000	13,263,000	13,704,000	14,187,000
Portugal (gas-works) .. ..	24,941	9,658	13,000	10,000	<i>n.a.</i>	<i>n.a.</i>
Roumania—						
Coke-ovens .. ..	1,123,000	1,128,000	1,117,000	1,086,000	1,113,000	1,115,000
Spain—						
Gas-works .. ..	196,341	176,712	98,306	76,600	54,140	6,397
Coke-ovens .. ..	2,709,014	2,528,752	2,711,673	<i>r</i> 2,755,000	2,916,000	3,376,000
Sweden (a) .. ..	885,871	893,554	882,735	1,011,331	997,604	1,060,000
Switzerland—						
Gas-works .. ..	519,651	461,749	445,157	402,161	348,340	300,183
U.S.S.R. (a) .. ..	62,864,000	65,235,000	66,397,000	67,418,000	<i>d</i> 68,000,000	70,376,000
Yugoslavia—						
Gas-works .. ..	<i>r</i> 16,466	<i>r</i> 16,975	<i>r</i> 14,159	<i>r</i> 10,617	7,129	2,000
Coke-ovens .. ..	1,073,000	1,142,000	1,233,000	<i>r</i> 1,207,000	1,200,000	1,215,000
Libya—						
Gas-works (b) .. ..	5,000	5,000	5,000	5,000	5,000	5,000
South Africa—						
Gas-works .. ..	102,776	95,014	688,162	104,000	114,000	95,000
Coke-ovens .. ..	2,250,338	2,353,606	2,024,865	3,197,000	4,055,000	3,654,000
Mexico (coke-ovens) .. ..	753,067	773,716	811,123	851,757	1,014,177	1,135,000
United States—						
Coke-ovens—						
Coke .. ..	47,596,079	54,382,492	58,212,074	58,892,230	56,942,000	56,141,000
Breeze and screenings	3,222,148	3,483,971	3,604,700	3,582,464	3,593,000	3,638,000
Beehive—						
Coke .. ..	866,695	1,103,828	1,479,409	1,287,761	720,000	692,000
Breeze and screenings	26,434	19,985	38,607	32,317	19,000	22,000
Other coke .. ..	143,000	181,000	133,000	150,000	146,000	<i>n.a.</i>
Brazil—						
Gas works .. ..	( <i>d</i> )280,000	( <i>d</i> )280,000	216,000	220,000	202,000	<i>n.a.</i>
Coke-ovens .. ..	660,000	898,000	890,000	932,000	1,300,000	<i>n.a.</i>
Chile .. ..	304,959	324,067	299,848	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Colombia .. ..	393,683	452,681	<i>n.a.</i>	318,285	428,000	428,000
Peru .. ..	37,841	25,164	26,969	34,000	40,550	<i>n.a.</i>
Uruguay (gas-works)—						
Coke .. ..	20,825	20,521	19,254	20,648	20,946	19,343
Breeze .. ..	2,842	3,642	3,611	1,788	1,633	<i>n.a.</i>
China ( <i>d</i> ) .. ..	15,000,000	15,000,000	16,000,000	17,000,000	13,000,000	15,000,000
Formosa .. ..	229,801	241,755	252,448	253,180	248,336	251,623
Japan—						
Gas-works .. ..	3,320,990	3,662,204	3,612,000	3,654,000	4,100,000	} 30,123,000
Coke-ovens .. ..	9,108,116	10,369,434	} 14,764,000	16,763,000	21,000,000	
Beehive, etc. .. ..	2,767,438	3,110,941				
Korea (North) ( <i>d</i> ) .. ..	1,200,000	1,400,000	1,600,000	1,800,000	1,800,000	2,000,000
Turkey—						
Gas-works .. ..	166,000	170,000	114,000	175,000	178,000	<i>n.a.</i>
Coke-ovens .. ..	810,000	845,000	1,223,000	1,102,000	1,265,000	1,407,500
Semi-coke .. ..	78,000	78,000	71,000	71,000	71,000	<i>n.a.</i>

(a) Including coke-breeze.

(d) United States Bureau of Mines' estimate.

(b) Estimated.

(c) Years ended March 20 of year following that stated.



PRODUCTION OF BRIQUETTES

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Great Britain (d) ..	2,555,000	2,464,000	2,176,000	2,379,000	2,647,000	2,859,000
Canada .. .. .	65,000	53,494	62,000	51,375	37,050	39,510
Australia—						
Brown-coal briquettes ..	1,887,000	1,856,000	1,903,000	1,859,000	1,844,000	1,552,000
New Zealand .. .. .	12,645	14,690	17,764	18,520	19,369	n.a.
<b>OTHER COUNTRIES</b>						
Belgium .. .. .	2,257,983	1,397,094	1,057,322	946,073	854,926	810,029
Czechoslovakia—						
Brown-coal briquettes	766,000	772,000	779,000	782,000	899,000	1,083,000
Denmark—						
Brown-coal briquettes ..	53,390	58,474	23,911	n.a.	n.a.	n.a.
France .. .. .	7,887,216	6,532,907	5,720,445	4,981,534	4,776,505	4,476,000
Germany (Federal)—						
Coal briquettes .. .. .	6,268,739	5,326,113	4,472,387	3,941,825	3,521,689	3,470,644
Brown-coal briquettes ..	15,584,213	15,113,594	12,481,957	11,641,945	10,887,781	10,193,599
Germany (East)—						
Brown-coal briquettes ..	59,304,000	60,533,000	59,426,000	58,487,000	55,201,000	55,498,000
Hungary—						
Coal briquettes .. .. .	1,102,860	1,126,810	1,324,000	} 1,331,000	1,051,000	1,218,000
Brown coal semi-coke briquettes .. .. .	103,818	153,556	84,000			
Netherlands—						
Coal briquettes .. .. .	1,536,000	1,334,000	1,229,000	1,108,500	1,073,966	1,036,000
Brown-coal briquettes ..	62,000	65,000	45,000	42,000	28,000	20,000
Poland—						
Coal briquettes .. .. .	629,000	613,000	603,000	562,000	544,000	577,000
Brown-coal briquettes ..	350,000	370,000	330,000	359,000	343,000	341,000
Portugal .. .. .	44,050	40,517	33,652	37,518	36,754	29,501
Spain .. .. .	1,173,692	1,037,216	830,399	600,598	n.a.	n.a.
United States (c) ..	492,149	320,743	322,084	(b) 300,000	n.a.	n.a.

(a) Years ended June 30 of that stated.

(b) Estimated.

(c) In addition packaged fuel produced was as follows (long tons):

1963—12,692; 1964—8,323; 1965—7,447; 1966—(b) 8,000; 1967—n.a.; 1968—n.a.

(d) Production at manufactured fuel plants.

PRODUCTION OF COAL BY-PRODUCTS\*

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>Great Britain—</b>						
Tar (crude) distilled ..	2,583,000	2,564,000	2,401,000	2,341,000	2,152,000	} <i>n.a.</i>
Tar (refined) .. ..	574,000	632,000	564,000	563,000	580,000	
Pitch .. .. .	418,000	480,000	463,000	377,000	308,000	
Motor benzol .. ..	110,000	118,000	100,000	93,300	69,000	
Other motor spirits, etc.	6,000	6,000	—	—	—	
Other refined light oils ..	236,000	260,000	244,000	219,000	221,000	
Creosote-pitch mixture	1,008,000	829,000	796,000	846,000	737,000	
Creosote oil .. .. .	400,000	470,000	410,000	400,000	380,000	
Naphthalene (crude) ..	73,500	81,800	81,600	81,100	77,700	
Naphthalene (refined)	6,200	5,200	3,900	3,600	7,000	
Pyridine bases .. .. .	3,200	4,000	5,600	4,200	4,000	
Natural phenol .. .. .	16,600	19,400	18,400	18,200	17,300	
Refined cresylic acid ..	70,200	67,000	67,900	64,200	62,800	
Anthracene 40-50% ..	3,900	4,200	4,000	3,500	3,600	
<b>Rhodesia—</b>						
Tar (crude) .. .. .	(d) 3,999	(d) 2,945	(d) 3,009	(d) 3,342	(d) 4,540	(d) 4,637
Ammonia liquor .. .. .	(d) 788	(d) 670	(d) 967	(d) 621	(d) 860	(d) 1,003
<b>Canada—</b>						
Tar (refined) .. .. .	18,510	9,462	3,160	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Pitch .. .. .	78,000	89,000	78,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Creosote oils .. .. .	42,290	35,960	40,100	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>India (coke-ovens)—</b>						
Tar .. .. .	288,555	260,939	242,411	241,099	203,688	} <i>n.a.</i>
Benzol .. .. .	8,877	8,067	9,994	9,269	9,725	
Benzene .. .. .	19,363	16,894	20,394	18,081	9,717	
Toluol .. .. .	218	157	194	205	206	
Toluene .. .. .	2,139	1,998	2,159	1,976	1,652	
Xylene .. .. .	506	183	150	125	1,030	
Solvent naphtha .. ..	122	909	1,380	1,603	1,628	
Pitch .. .. .	53,384	72,004	69,383	67,219	88,577	
Naphthalene .. .. .	3,324	2,838	5,955	2,850	3,661	
Ammonium sulphate ..	72,902	73,867	62,139	228,985	59,307	
Light oil .. .. .	5,749	4,350	5,633	6,167	3,045	
Middle oil .. .. .	10,233	7,124	5,373	3,060	2,403	
Heavy oil (230-270°C.)	5,338	2,442	2,018	1,182	2,823	
Anthracene oil .. .. .	16,574	13,608	8,663	5,509	7,887	
<b>Australia—</b>						
Tar (crude) (a) .. ..	276,343	279,712	282,560	289,430	274,774	269,508
Tar (refined) (a) .. ..	197,512	213,882	225,790	228,290	183,021	202,514
Tar oils (crude) (a) ..	15,771	12,447	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>New Zealand (b)—</b>						
Tar (gas-works) .. ..	11,550	11,300	12,000	12,300	<i>n.a.</i>	<i>n.a.</i>
<b>Irish Republic (gas-works)—</b>						
Tar .. .. .	14,187	15,997	14,196	10,038	9,997	8,180
<b>OTHER COUNTRIES</b>						
<b>Belgium—</b>						
Tar (crude) .. .. .	272,463	278,163	277,557	251,530	250,098	257,951
Benzol (crude) .. .. .	62,839	64,603	67,169	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

\*Some of the products are derived from the crude products shown. Duplication, therefore, is unavoidable in many cases.

See page 86 for conversion rates.

See Nitrogen Compounds (pages 227-230) for total production of ammonium sulphate.

(a) Years ended June 30 of the year stated.

(b) Sales for years ended March 31 of the year following that stated

(c) Sales.

(d) Sales for years ended August 31 of that stated.

## PRODUCTION OF COAL BY-PRODUCTS (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Belgium (cont.)—</b>						
Benzene .. .. .	40,600	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Toluol and xylol .. .	14,964	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Solvent naphtha .. .						
<b>France—</b>						
Tar (crude) .. .. .	645,835	651,471	614,947	593,853	554,507	<i>n.a.</i>
Ammonium sulphate .. .	126,671	134,355	128,912	125,443	120,071	<i>n.a.</i>
Benzol (crude) .. .. .	160,000	168,000	162,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Pitch .. .. .	203,624	229,142	229,936	224,964	199,027	<i>n.a.</i>
Naphthalene (crude) .. .	24,572	24,507	31,156	9,954	6,647	<i>n.a.</i>
<b>Germany (Federal)—</b>						
Tar (crude) .. .. .	1,925,000	1,953,646	1,922,542	1,758,640	1,571,333	1,580,609
Pitch .. .. .	974,942	967,136	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tar oils .. .. .	720,055	744,142	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Naphthalene .. .. .	152,089	161,309	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Benzol (crude) .. .. .	542,754	570,706	561,361	505,202	448,841	456,702
Refined benzols .. .. .	561,786	567,974	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Phenol .. .. .	17,886	17,641	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cresol and xylol .. .. .	24,060	20,284	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Anthracene .. .. .	37,014	45,591	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Pyridine and bases .. .	954	1,393	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Hungary—</b>						
Brown coal tar .. .. .	27,263	28,316	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Pitch .. .. .	39,294	40,507	39,547	35,952	16,000	<i>n.a.</i>
Benzol .. .. .	6,153	6,258	6,094	6,793	7,506	<i>n.a.</i>
Creosote .. .. .	7,188	6,704	7,152	7,301	<i>n.a.</i>	<i>n.a.</i>
<b>Italy—</b>						
Tar .. .. .	217,063	202,033	241,584	249,582	239,967	247,300
Ammonium sulphate .. .	44,317	43,349	50,854	59,664	55,504	<i>n.a.</i>
Benzol (crude) .. .. .	44,317	43,010	56,538	58,685	58,062	59,704
Naphthalene (crude) .. .	10,146	10,492	11,335	11,459	10,572	13,987
Distillates .. .. .	74,423	64,926	65,515	63,089	70,868	78,055
Benzol (refined) .. .. .	24,450	23,366	20,303	27,531	20,305	23,246
Toluol and xylol .. .. .	6,183	6,056	5,086	8,468	8,167	8,716
Pitch .. .. .	92,231	80,990	83,587	80,605	81,816	91,890
Solvent naphtha .. .. .	1,306	1,176	1,074	1,167	1,286	1,102
<b>Norway—</b>						
Tar (gas-works) .. .. .	3,490	3,017	31,364	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Poland—</b>						
Tar (coke-ovens) .. .. .	540,600	547,900	556,600	578,900	590,800	612,100
Tar (gas-works) .. .. .	82,400	83,000	94,100	90,300	88,200	92,300
Ammonium sulphate (coke-ovens) .. .	132,000	140,000	144,000	148,100	150,600	155,300
Benzol (coke-ovens) .. .	164,900	168,800	173,100	180,200	181,900	192,500
<b>Portugal (gas-works)—</b>						
Creosote .. .. .	1,189	449	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Pitch .. .. .	1,043	465	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Spain—</b>						
Tar .. .. .	134,160	124,423	126,306	140,908	129,506	142,789
Pitch .. .. .	28,254	28,543	31,852	40,575	36,778	27,745
Benzol .. .. .	50,213	47,784	51,355	53,740	54,372	<i>n.a.</i>
Benzene .. .. .	14,165	13,274	15,118	14,992	15,096	<i>n.a.</i>
Toluol .. .. .	1,604	1,798	1,912	1,926	2,246	1,441
Toluene .. .. .	1,043	1,221	1,303	1,376	1,215	493
Xylene .. .. .	887	767	650	610	550	513
Solvent naphtha .. .. .	199	205	94	73	57	39
Anthracene .. .. .	6,266	5,819	7,003	6,325	10,611	4,065
Naphthalene .. .. .	9,069	6,869	6,718	6,589	<i>n.a.</i>	<i>n.a.</i>
<b>Sweden—</b>						
Tar (crude) .. .. .	38,717	39,506	37,174	43,235	43,284	<i>n.a.</i>
Pitch .. .. .	250	216	7	16	22	<i>n.a.</i>
Benzol, toluol, etc. .. .	12,319	12,149	10,410	10,525	9,118	<i>n.a.</i>
Distillates, etc. .. .						

## PRODUCTION OF COAL BY-PRODUCTS (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
Switzerland—						
Tar (crude) (gas-works)	28,903	26,064	25,393	23,965	19,683	n.a.
Yugoslavia—						
Benzol .. .. .	9,394	11,105	10,420	11,786	12,134	n.a.
Mexico—						
Benzol .. .. .	5,108	n.a.	5,092	5,420	6,762	n.a.
Ammonium sulphate ..	8,715	n.a.	9,514	9,388	9,481	n.a.
Creosote .. .. .	10,577	n.a.	9,592	9,950	10,415	n.a.
United States—						
Coke-ovens—						
Tar (crude) .. ..	2,871,263	3,260,331	3,430,503	3,426,783	3,334,000	3,248,530
Pitch .. .. .	921,985	970,099	1,040,858	932,449	892,000	n.a.
Sulphate equivalent of ammonia pro- duced (a) .. .. .	641,766	708,846	717,641	769,649	745,000	685,000
Benzol .. .. .	374,758	396,481	393,302	367,411	289,000	295,000
do. motor .. .. .	7,815	2,322	10,556	9,970	11,000	n.a.
Toluol and xylol ..	106,806	106,666	103,127	94,492	81,000	82,000
Solvent naphtha ..	11,413	14,371	17,373	10,130	12,000	12,000
Other light products	14,774	27,457	26,649	21,161	28,000	n.a.
All sources (c)—						
Tar (crude) .. ..	2,871,263	3,260,331	3,430,503	3,426,783	3,334,000	n.a.
Crude light oil ..	727,220	828,897	875,670	875,465	840,000	n.a.
Benzol (b) .. .. .	405,083	n.a.	n.a.	n.a.	n.a.	n.a.
Toluol .. .. .	94,765	n.a.	n.a.	n.a.	n.a.	n.a.
Xylol .. .. .	24,170	n.a.	n.a.	n.a.	n.a.	n.a.
Solvent naphtha ..	29,130	n.a.	n.a.	n.a.	n.a.	n.a.
Other light oil deriva- tives .. .. .	38,147	n.a.	n.a.	n.a.	n.a.	n.a.
Naphthalene (crude)	151,212	190,040	n.a.	n.a.	n.a.	n.a.
Creosote oil .. ..	389,330	449,492	n.a.	n.a.	n.a.	n.a.
Tar, road .. .. .	248,040	238,020	n.a.	n.a.	n.a.	n.a.
Tar for other uses (d)	77,897	85,333	n.a.	n.a.	n.a.	n.a.
Pitch of tar .. ..	1,596,000	1,676,000	n.a.	n.a.	n.a.	n.a.
Pitch of tar coke						
Uruguay (gas-works)—						
Tar .. .. .	2,007	1,944	1,770	1,943	2,078	n.a.
Benzol .. .. .	151	196	189	142	207	n.a.
Japan—						
Tar .. .. .	1,128,400	1,239,994	1,358,000	1,475,000	1,666,000	1,581,756
Benzol (crude) .. ..	268,593	311,586	364,781	395,915	459,475	n.a.
do. (other) .. .. .	247,372	302,922	375,177	520,876	642,211	848,538
Creosote oil .. .. .	264,622	279,234	303,458	324,651	349,985	380,763
Turkey—						
Road tar .. .. .	21,745	n.a.	n.a.	n.a.	n.a.	61,288
Pitch .. .. .	11,300	8,950	5,870	2,370	3,180	5,473
Benzol .. .. .	5,145	n.a.	n.a.	n.a.	n.a.	7,223
Toluol and xylol ..	657	n.a.	n.a.	n.a.	n.a.	1,291
Solvent naphtha ..	131	n.a.	n.a.	n.a.	n.a.	59
Creosote .. .. .	6,905	n.a.	n.a.	n.a.	n.a.	2,433
Anthracene .. .. .	94	n.a.	n.a.	n.a.	n.a.	n.a.
Ammonium sulphate ..	6,595	n.a.	n.a.	n.a.	n.a.	n.a.
Naphthalene .. .. .	866	570	540	840	1,205	n.a.

\*The following rates have been used for conversion of Imperial gallons to long tons : Tar, 195; Benzol, 250; Creosote, 210; Motor fuel, 310; Toluol, 255; Solvent naphtha, 260; Phenol, 210; Cresylic acid, 214.

(a) Actual ammonium sulphate produced was as follows (long tons):

1963—553,286; 1964—607,935; 1965—619,011; 1966—681,938; 1967—658,000; 1968—626,000

(b) Excluding motor benzol, included with "Other light oil derivatives".

(c) Including products obtained from coke-ovens except ammonium sulphate.

(d) Used for paints, etc.

## EXPORTS OF COAL, COKE AND BY-PRODUCTS\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
<b>Anthracite—</b>						
small and graded .. .. .	1,583,838	1,161,166	827,295	652,456	573,746	634,129
large .. .. .	180,938	133,088	87,840	24,401	11,415	26,661
other .. .. .	523,492	378,066	272,382	99,623	53,286	158,366
<b>Bituminous—</b>						
small and graded .. .. .	4,733,358	3,597,859	2,121,629	1,676,166	994,939	1,617,925
unscreened .. .. .	305,432	179,279	122,410	42,235	25,077	40,446
large .. .. .	204,335	152,894	153,983	118,587	109,053	109,445
other .. .. .	344,606	268,018	209,438	155,051	82,103	74,674
Coke, gas .. .. .	518,885	410,686	357,296	384,183	332,669	320,204
do. other .. .. .	1,500,718	1,056,819	636,247	584,182	426,818	519,001
Manufactured fuel .. .. .	135,335	50,632	32,412	14,318	14,450	56,483
Tar .. .. .	59,546	84,619	66,282	76,848	65,120	48,337
Pitch .. .. .	291,688	195,179	186,829	173,916	147,135	142,862
<b>Channel Islands (Jersey)</b>						
Coke .. .. .	14,332	13,560	16,301	13,274	953	—
Tar .. .. .	3,821	3,171	2,602	2,896	1,304	1,300
<b>Gibraltar—</b>						
Coal (bunkers) (b) .. .. .	494	410	20	5	—	22
<b>Kenya—</b>						
Coal (bunkers) (b) .. .. .	216	1,775	638	45	10	n.a.
<b>Nigeria—</b>						
Coal .. .. .	8,031	7,894	210	240	8	—
Coke .. .. .	8,125	14,300	15,036	869	—	—
Patent fuel .. .. .	26,125	37,525	—	1,720	—	—
<b>Rhodesia (e)—</b>						
Coal .. .. .	245,175	1,320,887	1,608,179	n.a.	n.a.	n.a.
Coke .. .. .	42,328	103,315	144,018	n.a.	n.a.	n.a.
<b>Canada—</b>						
Coal .. .. .	941,399	1,141,177	1,094,637	1,097,161	1,194,958	1,291,976
do. (bunkers) (c) .. .. .	13,559	12,069	436	n.a.	n.a.	n.a.
do. do. (a) .. .. .	236,357	n.a.	n.a.	n.a.	n.a.	n.a.
Coke .. .. .	121,711	88,853	63,867	69,600	58,296	128,367
Tar and pitch .. .. .	77,004	45,659	30,237	29,948	37,183	72,238
<b>Trinidad and Tobago—</b>						
Coal (bunkers) (b) .. .. .	12	—	11	14	4	—
<b>Ceylon—</b>						
Coal (bunkers) (b) .. .. .	171	339	279	126	—	—
<b>Hong Kong—</b>						
Coke .. .. .	49	30	150	62	180	40
<b>India (d)—</b>						
Coal .. .. .	1,486,736	1,250,108	687,706	353,305	278,185	418,449
Coke .. .. .	—	10,492	5,048	8,997	9,062	39,463
Tar and pitch .. .. .	1,525	1,212	184	4	7	3
<b>Singapore—</b>						
Coke .. .. .	1,302	434	693	507	942	966
<b>Australia (f)—</b>						
Coal .. .. .	2,676,522	3,805,747	6,051,147	7,654,070	8,804,802	10,199,608
do. (bunkers) .. .. .	1,703	86	23,978	41	457	345
Coke .. .. .	30,986	79,432	106,750	110,430	80,064	285,138
<b>New Zealand (f)—</b>						
Coal .. .. .	10	149	20	7	4	6
Coke .. .. .	15	221	437	12	18	29
Tar .. .. .	1	5	—	—	—	—

\*For Ammonium sulphate, etc. see Nitrogen Compounds, pages 231-232.

(a) Foreign coal, "ex-warehoused for ships' stores". (See imports.)

(b) Foreign coal. (See imports.)

(c) Domestic produce. Shipments from mines to ships' bunkers.

(d) Years ended March 31 following that stated.

(e) Figures for 1963 exclude exports to Malawi and Zambia.

(f) Years ended June 30 of that stated.

## EXPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968						
Irish Republic—												
Anthracite .. ..	14,635	6,469	5,974	6,293	4,334	3,766						
Other coal .. ..	142	101	725	1,514	2,200	3,631						
<b>OTHER COUNTRIES</b>												
Austria—												
Coal .. .. .	36	27	22	17	20	22						
Brown coal .. ..	19,780	16,280	9,809	9,274	15,120	9,044						
Coke .. .. .	81	24	28	10,433	47,518	122,961						
Tar .. .. .	407	400	76	62	1	—						
Pitch .. .. .	2,387	400	301	608	1,026	756						
Belgium-Luxemburg												
E.U.—												
Coal .. .. .	1,920,853	2,099,556	1,816,841	1,197,851	1,499,981	1,148,285						
do. (bunkers) (a) ..	2,971	590	263	—	—	—						
Coke .. .. .	477,277	397,437	503,379	411,957	407,867	321,755						
Briquettes .. .. .	692,851	434,587	129,778	102,034	92,628	98,624						
Tar .. .. .	10,322	28,145	50,248	50,670	41,821	31,549						
Pitch .. .. .	26,189	15,168	6,371	17,382	57,132	32,549						
Bulgaria—												
Coal .. .. .	35,303	—	—	—	—	n.a.						
Czechoslovakia—												
Coal .. .. .	2,296,000	2,547,000	2,340,000	2,044,000	2,291,000	2,380,000						
Brown coal .. .. .	1,764,000	1,388,000	1,166,000	1,125,000	1,210,000	1,229,000						
Coke .. .. .	1,730,000	1,858,000	1,806,000	2,359,000	2,136,000	2,240,000						
Denmark—												
Coal .. .. .	2,217	—	1	6	12	214						
Brown coal briquettes	48,996	43,567	9,605	49	1	—						
Coke .. .. .	52,306	43,828	50,240	38,858	44,425	78,377						
Tar and pitch .. ..	23,729	18,376	2,961	3,598	1,542	2,807						
France—												
Anthracite .. .. .	13,753	43,027	110,556	142,671	187,033	302,809						
Bituminous .. .. .	972,521	855,749	718,720	543,948	508,918	543,836						
Brown coal .. .. .	20	21,005	59,720	75,729	82,322	28,527						
Coke .. .. .	50,108	35,813	56,249	108,194	116,003	182,395						
Briquettes .. .. .	13,883	29,248	40,223	20,231	15,388	13,928						
Brown coal briquettes	597	224	489	383	180	7						
Tar and pitch .. ..	16,770	15,112	16,556	11,822	18,773	26,089						
Germany (Federal)—												
Coal .. .. .	16,093,365	13,502,765	13,078,608	15,545,381	17,165,557	19,928,831						
do. (bunkers) (a) ..							17,863	10,860	2,052	1,651	456	
Brown coal .. .. .							199,061	207,957	156,313	142,941	105,190	90,656
Coke .. .. .							11,881,974	10,752,600	9,575,755	8,173,301	7,501,993	9,119,930
Coal briquettes ..							447,634	379,560	272,880	214,126	169,514	156,183
Brown-coal briquettes							1,490,403	1,446,338	1,164,714	1,071,393	1,034,917	951,082
Tar and pitch .. ..	258,316	268,177	281,608	304,629	313,424	302,596						
Germany (East)—												
Coal .. .. .	571	467	—	—	—	—						
Coke .. .. .	112,000	120,000	123,000	73,000	66,000	n.a.						
Brown coal briquettes	6,871,000	6,692,000	5,868,000	5,172,000	3,886,000	3,894,000						
Hungary—												
Coal .. .. .	148,507	80,719	n.a.	n.a.	n.a.	n.a.						
Italy—												
Coal (incl. bunkers) ..	23,762	4,162	1,588	3,578	2,690	3,988						
Coke .. .. .	146,419	99,263	118,260	151,288	214,737	230,278						
Tar .. .. .	3,115	587	142	560	281	328						
Pitch .. .. .	43,592	29,444	20,704	21,116	34,120	24,583						
Netherlands—												
Coal .. .. .	2,530,659	2,123,830	2,058,757	1,820,550	1,904,918	1,944,222						
do. (bunkers) (a) ..	804	418	531	—	—	—						
Brown coal .. .. .	20	39	—	49	20	—						
Coke .. .. .	2,084,173	2,289,764	2,366,273	1,873,022	1,966,248	1,473,720						

(a) Bunkers for foreign ships only.

## EXPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Netherlands <i>(cont.)</i>						
Briquettes .. ..	756,901	763,330	821,530	812,383	730,807	787,960
Brown coal briquettes ..	33,698	39,685	23,180	20,373	11,815	9,698
Tar .. ..	20,669	25,859	27,654	27,044	26,535	26,712
Pitch .. ..	15,207	6,979	8,237	3,891	2,409	122
Norway—						
Coal .. ..	172,473	82,968	135,391	128,030	138,141	66,407
Coke .. ..	8,679	3,842	98,037	48,710	48,023	123,042
Tar .. ..	3,965	6,214	12,583	17,586	16,040	18,303
Pitch .. ..	27	19	22	76	17	15
Poland—						
Coal .. ..	16,624,900	18,963,600	20,713,000	22,053,000	23,649,000	25,591,000
Brown coal .. ..	5,645,000	5,295,900	5,117,000	4,980,000	3,647,000	3,939,000
Coke .. ..	2,314,500	2,213,500	2,287,000	2,321,000	2,318,000	2,372,000
Pitch .. ..	11,154	15,230	8,838	3,396	3,203	n.a.
Portugal—						
Coal .. ..	124	167	124	104	41	44
do. (bunkers) (a) ..	802	30	52	3	n.a.	n.a.
Tar and pitch .. ..	29	15	15	14	77	13
Spain—						
Anthracite .. ..	5,925	9	2,365	—	60	—
Bituminous (incl. bunkers) .. ..	1,639	2,279	127	1,416	1,635	1,520
Other coal .. ..	14,678	53,224	8,384	11,042	20,498	17,328
Coke .. ..	—	226	236	217	177	7,846
Tar and pitch .. ..	—	—	—	—	—	—
Spitzbergen—						
Coal (including bunkers)	642,422	n.a.	n.a.	n.a.	n.a.	n.a.
Sweden—						
Coal .. ..	22,556	6,849	2,766	852	716	792
Coke .. ..	7,147	11,983	9,271	7,610	8,369	8,466
Tar, pitch, etc. ..	13,855	8,636	11,042	17,463	30,621	19,291
Switzerland—						
Coal .. ..	296	787	—	—	—	—
Coke .. ..	131	59	141	204	22,676	34,996
Briquettes .. ..	838	93	9	3	3	4
Tar and pitch .. ..	271	264	68	58	161	152
U.S.S.R.—						
Anthracite .. ..	4,168,100	4,021,500	3,272,000	3,029,000	2,931,951	3,147,000
Other coal .. ..	16,519,900	18,926,300	18,534,000	18,295,000	18,778,000	20,914,000
Coke .. ..	3,736,000	3,935,800	3,693,000	3,945,000	3,635,000	3,763,000
Pitch .. ..	142,200	123,500	71,600	59,400	60,726	82,476
Yugoslavia—						
Bituminous .. ..	83,224	110,060	84,136	84,051	n.a.	n.a.
Brown coal .. ..	39,377	19,638	21,197	4,323	15,810	9,176
Lignite .. ..	25,100	31,208	23,138	23,475	29,882	21,549
Briquettes .. ..	—	39	—	—	—	—
Pitch .. ..	12,484	1,111	413	806	9,014	3,022
Tar .. ..	—	—	—	—	—	49
Ceuta—						
Coal (bunkers) (b) ..	n.a.	n.a.	114	39	40	305
Malagasy Republic—						
Coal (bunkers) .. ..	—	2	n.a.	n.a.	n.a.	n.a.
Morocco—						
Anthracite .. ..	172,935	133,517	97,486	26,700	65,542	55,997
Other coal .. ..	—	3	18	—	—	4
Briquettes .. ..	291	1,226	815	990	947	1,013
Mozambique—						
Coal (incl. bunkers) ..	64,197	34,113	86,664	84,555	72,200	n.a.
South Africa—						
Coal .. ..	1,375,289	1,362,767	1,321,241	1,095,644	1,236,675	1,215,129
Coke .. ..	3,388	711	902	1,211	1,305	30,399
Tar and pitch .. ..	3,073	520	1,027	193	53	n.a.

(a) Bunkers for foreign ships only.

(b) Foreign coal (see imports).

## EXPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Mexico—						
Coal and coke .. ..	—	—	29	4	8	2
United States—						
Anthracite .. ..	2,993,921	1,406,337	759,471	683,951	531,069	462,642
Bituminous .. ..	42,034,317	42,829,842	44,804,786	44,019,991	44,205,697	45,211,839
do. (bunkers) .. ..	199,234	225,701	216,815	191,531	<i>n.a.</i>	<i>n.a.</i>
Coke (inc. briquettes of coke) .. ..	402,894	467,585	744,346	984,077	634,268	707,096
Briquettes of coal .. ..	72,260	15,944	79,023	105,312	106,869	55,979
Tar and pitch .. ..	85,219	209,346	79,902	102,487	103,071	90,478
Chile—						
Coal (including bunkers)	1,033	99	836	<i>n.a.</i>	788	<i>n.a.</i>
Peru—						
Coal .. ..	6,889	9,639	15,659	<i>n.a.</i>	—	<i>n.a.</i>
Formosa—						
Coal (including bunkers)	89,302	94,833	1,907	15,236	12,168	<i>n.a.</i>
Indonesia—						
Coal .. ..	<i>n.a.</i>	—	—	—	8,169	6,200
Iran (a)—						
Coal .. ..	249	113	303	369	151	283
Japan—						
Coal .. ..	90,464	67,636	65,691	32,542	57,886	25,886
Coke .. ..	16,054	9,466	28,246	57,525	45,720	61,914
Tar and pitch .. ..	31,648	36,957	25,244	14,931	13,195	10,135
Korea (South)—						
Anthracite .. ..	258,801	247,560	201,724	159,898	169,350	<i>n.a.</i>
Lebanon—						
Coal and briquettes .. ..	2,142	2,195	1,261	932	922	<i>n.a.</i>
Coke .. ..	376	690	835	798	979	<i>n.a.</i>
Turkey—						
Coal .. ..	5,856	16,204	9,050	9,790	2,757	4,331

(a) Years ended March 20 following that stated.



## IMPORTS OF COAL, COKE AND BY-PRODUCTS\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Coal .. .. .	32,123	351	2,571	29,651	6,754	1,907
Coke .. .. .	788	—	17	2,906	246	<i>n.a.</i>
Manufactured fuel .. .. .	222	647	5,481	209	466	<i>n.a.</i>
Tar .. .. .	<i>n.a.</i>	3,309	16,840	10,893	18,126	1,917
Channel Islands—						
Anthracite .. .. .	84,204	62,971	49,279	30,393	} 56,685	} 63,182
Bituminous .. .. .	100,443	87,288	81,530	78,654		
Coke .. .. .	8,006	4,831	5,101	7,757		
Gibraltar—						
Coal (b) .. .. .	2,900	1,410	1,327	1,688	(a) 25	940
Malta—						
Coal (b) .. .. .	2,549	4,110	443	1,995	1,774	2,668
Coke .. .. .	267	387	165	673	—	401
Gambia—						
Coal, coke and patent fuel .. .. .	—	—	—	52	1	—
Tar .. .. .	3	4	243	13	16	2
Ghana—						
Coal .. .. .	41,033	44,581	26,886	51,117	28,661	<i>n.a.</i>
Coke and patent fuel .. .. .	588	314	428	1,417	677	302
Tar .. .. .	940	140	164	27	184	122
Kenya—						
Coal (b) .. .. .	40,053	32,652	52,729	46,658	48,126	39,651
Coke .. .. .	1,572	1,567	1,143	1,858	1,217	1,351
Tar .. .. .	(a) 1	5	12	<i>n.a.</i>	7	1
Malawi—						
Coal .. .. .	<i>n.a.</i>	61,472	66,649	78,027	52,732	46,817
Coke .. .. .	<i>n.a.</i>	114	88	<i>n.a.</i>	46	61
Mauritius—						
Coal .. .. .	2,085	1,966	1,703	2,891	301	994
Coke .. .. .	182	213	240	157	297	312
Tar .. .. .	134	21	22	15	11	—
Nigeria—						
Coal, coke and patent fuel .. .. .	1,399	4,285	2,618	12,097	75,434	2,272
Tar .. .. .	1,261	666	815	587	264	399
Rhodesia (c)—						
Coal .. .. .	59,129	} 12,285	9,830	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Coke .. .. .	35			<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tar .. .. .	171		264	253	<i>n.a.</i>	<i>n.a.</i>
St. Helena—						
Coal .. .. .	110	63	73	40	40	45
Sierra Leone—						
Coal, coke and briquettes .. .. .	4,452	80	4,070	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tar .. .. .	113	139	93	119	141	<i>n.a.</i>
Tanzania—						
Coal .. .. .	383	144	200	135	109	47
Coke .. .. .	500	419	315	160	196	905
Tar .. .. .	10	7	9	19	15	28
Uganda—						
Coal .. .. .	72	114	82	59	66	70
Coke .. .. .	456	430	122	17	359	348
Tar .. .. .	4	10	2	—	—	—
Zambia—						
Coal .. .. .	<i>n.a.</i>	962,396	1,142,052	892,149	967,452	682,458
Coke briquettes .. .. .	<i>n.a.</i>	64,711	59,178	69,841	73,095	84,350
Tar .. .. .	<i>n.a.</i>	642	563	500	138	27

\*For ammonium sulphate, etc., see Nitrogen Compounds, pages 233-239.

(a) Excess of re-exports.

(b) Includes coal imported for bunkering purposes. (See exports.)

(c) Figures for 1963 relate to Rhodesia and Nyasaland.

## IMPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES (cont.)						
Canada—						
Anthracite .. .. .	739,071	579,802	571,311	528,097	468,458	384,104
do. dust .. .. .	17,470	3,982	262	2,432	868	—
Bituminous .. .. .	10,936,295	12,798,206	14,242,996	14,144,344	13,918,238	14,799,102
do. (a) .. .. .	236,357					
Briquettes .. .. .	5,752	6,375	7,084	4,410	7,579	5,412
Coke .. .. .	209,473	281,931	508,844	522,290	345,579	228,040
Tar .. .. .	2,630	104,131	101,894	128,234	113,641	98,906
Pitch .. .. .	101,384					
Bahamas—						
Coal .. .. .	1	7	6	6	3	3
Barbados—						
Coal, coke and patent fuel .. .. .	319	330	332	540	619	86
Bermuda—						
Bituminous .. .. .	369	n.a.	38	54	14	—
British Honduras—						
Coal and coke .. .. .	14	18	27	21	6	21
Grenada—						
Coal .. .. .	2	2	—	1	—	2
Coke .. .. .	—	—	10	2	2	—
Jamaica—						
Coal .. .. .	154	87	61	47	31	27
Coke .. .. .	657	772	1,304	517	776	792
Tar .. .. .	33	42	29	32	21	27
St. Kitts—						
Coal, coke and patent fuel .. .. .	5	10	9	35	10	n.a.
St. Lucia—						
Coal .. .. .	10	12	15	8	1	1
Tar .. .. .	—	6	6	3	3	5
St. Vincent—						
Coal .. .. .	—	n.a.	3	2	—	n.a.
Trinidad and Tobago—						
Coal (b) .. .. .	399	796	516	(c) 276	316	67
Coke .. .. .	94	221	120	(c) 23	20	71
Falkland Islands—						
Coal .. .. .	123	115	166	113	156	126
Coke .. .. .	200	—	2	45	49	19
Guyana—						
Coal .. .. .	n.a.	(c) 145	88	68	70	24
Coke .. .. .	n.a.	3	16	21	36	48
Patent fuel .. .. .	n.a.	103	80	60	60	56
Tar .. .. .	n.a.	138	99	145	73	121
Ceylon—						
Coal (b) .. .. .	142,847	172,534	136,395	30,509	136,289	41,553
Coke .. .. .	598	1,925	268	553	965	1,294
Tar .. .. .	54	2	4,269	61	640	42
Cyprus—						
Coal .. .. .	283	401	201	514	174	195
Coke .. .. .	232	215	372	344	206	908
Tar and pitch .. .. .	1	8	5	—	12	n.a.
Hong Kong—						
Coal .. .. .	184,958	168,979	167,361	144,328	113,925	76,559
Coke .. .. .	4,002	6,191	5,500	4,930	5,387	9,472
India—						
Coal .. .. .	2,718	1,784	2,451	2,856	1,040	237
Coke .. .. .	100	422	579	1,375	111	591
Tar and pitch (d) .. .. .	59	18	23	34	292	13

(a) "Ex-warehoused for ships' stores." (See exports.) (c) Excess of re-exports.

(b) Including imports for bunkering purposes.

(d) Years ending March 31 following that stated.

(See exports.)

## IMPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
Malaysia (West)—						
Anthracite .. .. .	<i>n.a.</i>	<i>n.a.</i>	16,845	17,660	10,871	11,959
Coke .. .. .	<i>n.a.</i>	<i>n.a.</i>	5,418	5,492	6,387	5,526
Pakistan—						
Coal .. .. .	1,231,145	710,125	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Coke .. .. .	—	488	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tar and pitch .. .. .	267	3,699	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Singapore—						
Anthracite .. .. .	3,554	10	2,462	1,018	78	—
Other coal .. .. .	—	4,856	—	2,816	—	3,791
Coke .. .. .	5,333	3,187	3,741	3,309	4,287	5,069
Australia (a)—						
Coal .. .. .	7,929	12,816	(b) 2,700	8,476	8,276	8,491
Coke .. .. .	29,052	37,284	51,490	(b) 10,846	(b) 2,968	(b) 1,868
Tar and pitch .. .. .	8,343	7,553	12,064	9,570	10,882	6,092
Fiji—						
Coal .. .. .	6,324	4,008	3,029	2,003	5,601	2,025
Coke .. .. .	224	336	314	265	171	269
Tar .. .. .	35	21	29	—	28	28
New Zealand (a)—						
Coal .. .. .	2,906	588	6	17,505	38,618	<i>n.a.</i>
Coke .. .. .	88	92	67	64	60	<i>n.a.</i>
Sabah—						
Coal and coke .. .. .	69	63	75	38	30	26
Sarawak—						
Coal and coke .. .. .	20	21	(c) 12	(c) 21	(c) 11	(c) 10
Tar .. .. .	95	557	219	1,101	94	25
Western Samoa—						
Coal and coke .. .. .	3	31	12	20	7	12
Irish Republic—						
Anthracite .. .. .	56,359	51,683	46,108	65,534	66,012	71,783
Bituminous .. .. .	1,378,503	1,285,898	1,222,375	1,247,298	1,171,566	1,129,451
Coke .. .. .	12,058	12,384	11,914	15,076	17,011	21,505
Patent fuel .. .. .	3,779	3,400	5,991	2,906	2,511	2,234
Tar .. .. .	3,588	4,337	2,587	2,751	3,215	3,655
<b>OTHER COUNTRIES</b>						
Albania—						
Coke .. .. .	5,399	10,228	17,206	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Austria—						
Coal .. .. .	3,888,509	3,748,377	3,539,692	3,319,308	3,074,538	3,311,965
Brown coal .. .. .	85,697	118,087	113,915	39,458	41,375	33,063
Coke .. .. .	948,141	894,393	950,536	974,006	947,789	1,001,738
Briquettes .. .. .	684,744	631,190	601,447	522,296	564,040	495,636
Tar, pitch, etc. .. .. .	19,336	17,830	17,182	15,557	24,081	3,820
Belgium-Luxemburg E.U.—						
Coal .. .. .	7,223,635	6,904,132	6,799,998	6,121,098	5,794,867	6,630,804
do. coke .. .. .	3,830,069	4,243,848	3,998,881	3,570,153	3,643,976	4,400,253
do. briquettes .. .. .	191,788	236,608	328,512	340,097	325,344	349,637
Brown coal .. .. .	—	—	—	25	—	—
do. do. coke .. .. .	93	<i>n.a.</i>	1,071	521	312	428
do. do. briquettes .. .. .	246,536	223,453	195,423	171,462	134,765	96,314
Tar .. .. .	26,227	34,372	37,641	37,478	41,030	41,169
Pitch .. .. .	102,267	93,506	17,273	2,647	461	252

(a) Years ended June 30 of that stated.

(c) Coke only

(b) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Bulgaria—</b>						
Coal .. .. .	1,161,000	1,763,000	2,218,000	3,100,250	1,950,697	<i>n.a.</i>
Coke .. .. .	312,322	346,785	259,679	295,262	320,107	<i>n.a.</i>
<b>Czechoslovakia—</b>						
Coal .. .. .	4,277,000	4,964,000	4,466,000	3,966,000	4,096,000	<i>n.a.</i>
<b>Denmark—</b>						
Coal .. .. .	3,904,546	3,718,425	3,382,984	3,620,785	3,571,807	4,096,132
Coke .. .. .	1,394,703	1,127,848	843,074	810,592	577,626	438,691
Coal briquettes	8,031	2,590	2,307	1,876	8,575	1,306
Brown coal briquettes	189,954	156,788	148,084	135,513	103,669	92,692
Coke briquettes	3,433	20,937	31,314	8,318	1,710	<i>n.a.</i>
Tar .. .. .	74	95	73	134	2,393	576
Pitch .. .. .	234	195	329	325	357	147
<b>Faroe Islands—</b>						
Coal .. .. .	3,584	2,275	2,280	2,534	2,357	<i>n.a.</i>
<b>Finland—</b>						
Anthracite .. .. .	277,987	255,752	184,201	204,504	127,382	103,748
Other coal .. .. .	1,870,165	2,119,791	2,293,196	1,805,928	1,896,170	1,955,408
Briquettes .. .. .	8,169	5,990	2,606	4,839	2,840	1,936
Coke .. .. .	346,291	873,339	818,746	715,053	724,855	651,430
Tar .. .. .	29	13	53	73	45	89
<b>France—</b>						
Anthracite .. .. .	3,794,565	4,008,663	3,314,916	3,160,056	3,012,629	2,846,683
Bituminous .. .. .	11,882,693	9,932,549	8,425,965	7,756,467	8,251,636	8,535,310
Lignite .. .. .	1,724	1,826	3,998	4,643	14,795	12,226
Coke .. .. .	5,442,467	4,860,499	4,391,403	3,675,090	3,273,349	3,463,964
Coal briquettes ..	797,734	762,762	408,080	327,579	318,649	329,081
Brown-coal briquettes	493,147	535,745	374,355	357,271	336,775	340,284
Tar and pitch .. ..	431,329	473,642	307,538	244,119	288,522	254,814
<b>Germany (Federal)—</b>						
Coal .. .. .	7,639,393	6,946,361	7,052,934	6,675,104	6,473,250	5,499,294
Brown coal .. .. .	1,143,996	1,011,539	915,330	1,037,210	1,106,851	1,137,806
Coke .. .. .	426,052	358,683	526,238	499,090	557,451	347,293
Coal briquettes ..	643,118	366,969	300,623	281,134	270,437	306,443
Brown-coal briquettes	401,915	196,801	47,950	28,546	20,697	23,087
Tar and pitch .. ..	97,737	112,208	94,410	51,131	37,127	42,585
<b>Germany (East)—</b>						
Coal .. .. .	8,709,000	10,247,000	9,315,000	9,023,000	8,143,000	6,185,000
Brown coal .. .. .	5,696,000	5,363,000	5,136,000	4,986,000	3,673,000	<i>n.a.</i>
Coke .. .. .	3,179,000	3,257,000	3,154,000	3,181,000	2,833,000	2,798,000
<b>Greece—</b>						
Anthracite .. .. .	12,032	9,117	8,740	6,479	6,449	6,975
Other coal .. .. .	157,009	121,349	187,679	108,701	107,238	64,675
Coke .. .. .	108,879	167,066	203,163	248,799	121,015	208,377
Tar and pitch .. ..	444	699	463	4,052	7,123	6,685
<b>Hungary—</b>						
Coal .. .. .	2,473,615	3,227,785	2,663,000	2,346,000	1,714,488	1,634,767
Coke .. .. .	1,058,855	1,137,482	2,102,000	1,181,000	2,171,160	2,134,743
Pitch .. .. .	363	98	—	—	—	<i>n.a.</i>
<b>Iceland—</b>						
Coal .. .. .	10,555	12,494	7,895	4,928	5,038	2,965
Coke .. .. .	1,109	860	925	742	354	1,164
Tar .. .. .	19	35	20	18	18	16
<b>Italy—</b>						
Anthracite .. .. .	10,500,222	9,894,769	{ 9,350,245	} 10,522,042	11,625,991	10,375,199
Bituminous .. .. .			797,262			
Lignite .. .. .	39,037	31,403	47,811	24,663	49,547	22,156
Coke .. .. .	663,851	359,405	265,710	336,377	346,566	309,475
Briquettes .. .. .	386,161	469,183	290,594	290,923	300,538	238,191
Tar .. .. .	82	69	1,402	2,582	6,696	1,594
Pitch .. .. .	2,123	6,314	2,921	4,854	4,513	2,719

## IMPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Netherlands—</b>						
Coal .. .. .	9,791,606	9,152,089	6,994,381	6,573,537	6,928,287	7,295,080
Brown coal .. .. .	187,806	200,508	146,412	132,447	89,109	74,331
Coke .. .. .	515,303	305,220	276,313	205,221	184,631	390,372
Briquettes .. .. .	196,544	91,661	53,925	44,139	24,347	18,720
Brown-coal briquettes	260,484	157,358	143,413	111,484	83,763	67,622
Tar .. .. .	56,980	81,235	74,165	70,230	67,792	77,497
Pitch .. .. .	48,515	53,168	32,231	57,586	54,341	84,045
<b>Norway—</b>						
Coal (a) .. .. .	220,957	272,238	358,969	366,190	414,917	529,042
Coke .. .. .	813,909	754,848	670,000	730,198	620,966	681,421
Briquettes .. .. .	191	—	11	24	1	—
Tar and pitch .. .. .	52,300	54,235	61,876	65,834	77,739	88,045
<b>Poland—</b>						
Anthracite .. .. .	18,700	19,400	34,000	23,000	30,000	32,000
Other coal .. .. .	1,245,000	1,259,100	1,191,000	1,123,000	1,194,000	1,236,000
Brown-coal briquettes	511,900	620,900	627,000	427,000	219,000	134,000
<b>Portugal—</b>						
Anthracite .. .. .	11,926	10,118	10,099	4,847	7,164	8,692
Other coal .. .. .	438,593	389,180	410,334	457,744	374,539	376,601
Coke .. .. .	205,693	241,806	213,143	285,203	293,336	227,110
Briquettes .. .. .	712	761	681	123	71	295
Tar and pitch .. .. .	2,036	2,468	6,396	3,727	3,578	2,740
<b>Roumania—</b>						
Coal .. .. .	686,900	706,500	695,100	685,200	780,672	661,091
Coke .. .. .	903,500	930,700	915,100	1,074,200	1,071,899	1,545,105
<b>Spain—</b>						
Anthracite .. .. .	<i>n.a.</i>	40,586	83,082	64,035	33,596	25,521
Bituminous .. .. .	1,656,395	1,779,888	1,605,027	1,369,614	1,283,675	2,086,421
Coke .. .. .	125,716	99,826	65,664	65,468	124,390	99,740
Tar and pitch .. .. .	71,645	53,163	52,136	36,807	24,502	24,992
<b>Sweden—</b>						
Anthracite .. .. .	69,614	79,443	95,511	91,535	97,342	91,193
Other coal .. .. .	1,679,055	1,882,835	1,581,449	1,739,239	1,554,097	1,616,475
Coke .. .. .	1,586,513	1,620,546	1,381,425	1,266,157	997,294	1,057,004
Briquettes .. .. .	16,012	5,575	2,643	7,144	5,828	8,432
Tar, pitch, etc. .. .. .	10,240	6,394	303	237	175	195
<b>Switzerland—</b>						
Coal .. .. .	1,969,973	1,356,028	1,097,145	874,297	633,566	561,463
Lignite .. .. .	338	319	276	396	667	95
Coke .. .. .	680,885	483,024	468,173	361,090	278,267	291,055
Briquettes .. .. .	266,082	217,696	176,602	139,608	123,102	118,129
Tar and pitch .. .. .	20,837	23,079	21,355	12,075	16,941	22,108
<b>U.S.S.R.—</b>						
Coal .. .. .	5,000,000	5,000,000	6,700,000	7,200,000	7,700,000	6,791,000
Coke .. .. .	643,700	650,600	652,000	644,000	674,181	647,600
<b>Yugoslavia—</b>						
Anthracite .. .. .	118,559	136,773	149,548	132,228	141,684	135,204
Other coal .. .. .	1,319,178	1,858,798	2,001,488	1,661,901	1,280,094	1,579,510
Coke .. .. .	225,451	188,584	109,256	169,017	112,579	108,452
Coke dust .. .. .	797	—	—	61	—	—
Tar and pitch .. .. .	673	76	62	25	68	15
<b>Algeria—</b>						
Coal .. .. .		<i>n.a.</i>	12,655	10,523	41,087	<i>n.a.</i>
Coke .. .. .	15,100	<i>n.a.</i>	9,403	11,033	4,633	<i>n.a.</i>
Briquettes .. .. .		<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Angola—</b>						
Coal .. .. .	4,120	21,202	19,912	31,643	19,546	37,202
Coke .. .. .	5,328	9,583	750	620	543	457
Tar and pitch .. .. .	262	160	243	225	181	239
<b>Cameroun—</b>						
Coal, coke, etc. . . . .	469	377	440	450	850	<i>n.a.</i>

(a) Excluding coal imported from Spitzbergen.

## IMPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Canary Islands—						
Coal .. .. .	<i>n.a.</i>	<i>n.a.</i>	965	37	25	24
Egypt—						
Coal .. .. .	28,724	296,594	402,462	287,294	472,452	497,238
Coke .. .. .	263,767	212,589	32,000	5,000	<i>n.a.</i>	<i>n.a.</i>
Tar and pitch .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Equatorial African Community—						
Coal, coke, briquettes ..	<i>n.a.</i>	143	219	136	108	<i>n.a.</i>
Ethiopia (a)—						
Coal .. .. .	9,089	1,800	<i>n.a.</i>	<i>n.a.</i>	752	4,747
French Somaliland—						
Coal .. .. .	61	—	—	—	—	<i>n.a.</i>
Ivory Coast—						
Coal and briquettes ..	55	52	108	78	5	<i>n.a.</i>
Coke .. .. .	25	236	151	129	185	<i>n.a.</i>
Libya—						
Coal, coke, briquettes ..	8,426	2,271	6,644	97	2,215	3,549
Malagasy Republic—						
Coal and briquettes ..	14,295	13,113	14,634	14,962	16,943	20,802
Coke .. .. .	42	88	71	71	69	166
Tar and pitch .. .. .	72	55	163	93	95	64
Melilla—						
Coal .. .. .	<i>n.a.</i>	<i>n.a.</i>	92	—	—	—
Morocco—						
Coal .. .. .	92,487	105,007	33,383	18,940	42,007	59,681
Coke .. .. .	8,862	14,187	9,707	13,130	13,888	16,324
Tar .. .. .	—	26	—	—	—	—
Pitch .. .. .	505	1,044	1,544	1,547	1,861	1,471
Mozambique—						
Coal .. .. .	287,191	316,592	337,338	225,314	205,000	<i>n.a.</i>
Coke .. .. .	1,202	1,402	1,317	1,385	<i>n.a.</i>	<i>n.a.</i>
Tar, pitch and asphalt. .	4,303	8,014	6,435	3,999	<i>n.a.</i>	<i>n.a.</i>
Senegal—						
Coal and briquettes ..	182	685	622	205	143	<i>n.a.</i>
Coke .. .. .	131	131	261	67	151	<i>n.a.</i>
South Africa—						
Coal .. .. .	48,728	96,489	23,763	641	733	20,661
Coke .. .. .	5	13	32,696	25,483	3,749	6,112
Sudan—						
Coal .. .. .	17,630	—	6,262	—	—	—
Coke .. .. .	591	295	895	295	—	—
Togo—						
Coal and briquettes ..	73	104	25	53	13	<i>n.a.</i>
Tunisia—						
Coal .. .. .	28,187	33,709	30,053	29,146	37,042	28,210
Coke .. .. .	8,752	6,510	20,670	54,985	106,476	98,983
Tar and pitch .. .. .	21	15	78	42	15	<i>n.a.</i>
Costa Rica—						
Coal .. .. .	36	45	35	81	46	<i>n.a.</i>
Coke .. .. .	149	137	78	161	70	<i>n.a.</i>
Cuba—						
Coke .. .. .	27,871	18,861	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Bituminous .. .. .	—	28,218	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Anthracite .. .. .	47,430	60,672	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Greenland—						
Coal .. .. .	16,893	9,763	8,672	5,872	14,247	<i>n.a.</i>
Guatemala—						
Coal .. .. .	63	32	60	48	91	20
Coke .. .. .	215	139	202	253	94	79
Honduras—						
Coal .. .. .	94	186	76	148	121	186
Coke .. .. .	3	10	10	29	2	16

(a) Years ended September 10 of that stated.

## IMPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Mexico—</b>						
Coal .. .. .	44,055	48,890	53,586	61,614	59,228	65,054
Coke .. .. .	20,910	27,168	55,362	122,836	144,994	298,917
Tar .. .. .	2,615	3,536	1,907	2,426	663	326
<b>Nicaragua—</b>						
Coal .. .. .	14	14	15	24	—	10
Coke .. .. .	69	41	67	82	58	105
<b>Panama Republic—</b>						
Coal .. .. .	33	20	45	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Salvador—</b>						
Coal .. .. .	57	97	101	90	98	151
Coke .. .. .	204	259	255	235	181	150
Tar .. .. .	71	61	55	58	63	67
<b>St. Pierre and Miquelon—</b>						
Coal .. .. .	10,032	8,409	6,898	7,486	8,159	<i>n.a.</i>
<b>United States—</b>						
Anthracite .. .. .	4,129	} 272,011	175,911	168,329	218,536	138,803
Bituminous .. .. .	236,896					
Lignite .. .. .	<i>n.a.</i>					
Slack and culm .. .. .	<i>n.a.</i>					
Coke .. .. .	136,246	92,220	80,018	85,501	82,144	84,004
Briquettes .. .. .	4,125	10,351	11,244	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tar and pitch .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Argentina—</b>						
Coal .. .. .	756,796	680,345	646,400	686,901	793,257	511,751
Coke .. .. .	1,886	68,243	80,583	50,843	38,633	30,926
Tar and pitch .. .. .	68	293	73	55	33	393
<b>Bolivia—</b>						
Coal and coke .. .. .	1,265	1,229	761	784	371	<i>n.a.</i>
<b>Brazil—</b>						
Coal .. .. .	852,622	1,330,639	1,031,260	1,716,875	1,513,181	1,386,037
Coke .. .. .	38,606	150,166	122,837	56,926	42,813	61,544
<b>Chile—</b>						
Coal .. .. .	101,765	430,307	31,856	<i>n.a.</i>	278,919	<i>n.a.</i>
Coke .. .. .	342	103	541	<i>n.a.</i>	3	<i>n.a.</i>
Tar and pitch .. .. .	26,776	18,001	19,656	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Colombia—</b>						
Coal .. .. .	14	263	13	—	—	30
Coke .. .. .	11	—	—	—	—	—
<b>Peru—</b>						
Coal .. .. .	1,065	51	1,108	10	—	<i>n.a.</i>
Coke .. .. .	8,400	2,678	7,987	4,440	12,431	<i>n.a.</i>
Tar .. .. .	44	37	11	9	27	<i>n.a.</i>
<b>Uruguay—</b>						
Coal .. .. .	<i>n.a.</i>	<i>n.a.</i>	32,434	13,980	14,825	<i>n.a.</i>
Coke .. .. .	<i>n.a.</i>	<i>n.a.</i>	1,903	1,922	2,116	<i>n.a.</i>
<b>Venezuela—</b>						
Coal .. .. .	14,704	694	9,930	3,810	4,380	17,914
Coke .. .. .	124,895	179,064	190,500	153,858	205,582	354,597
<b>Burma—</b>						
Coal .. .. .	205,921	205,911	118,262	} 69,527	{ <i>n.a.</i>	<i>n.a.</i>
Coke .. .. .	5,531	1,080	5			
<b>Formosa—</b>						
Coke .. .. .	7,095	5,622	17,307	10,390	15,976	<i>n.a.</i>
<b>Iraq—</b>						
Coal .. .. .	500	290	<i>n.a.</i>	548	465	<i>n.a.</i>
Coke .. .. .	876	841	579	635	603	<i>n.a.</i>
Tar and pitch .. .. .	107	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Israel—</b>						
Anthracite .. .. .	} 12,730	18,269	2,600	1,356	262	3,468
Other coal .. .. .						
Coke .. .. .	7,517	8,548	6,337	6,377	6,205	5,928

## IMPORTS OF COAL, COKE AND BY-PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968		
<b>OTHER COUNTRIES</b>								
<i>(cont.)</i>								
Japan—								
Anthracite .. .. .	} 10,966,639	13,023,813	16,810,362	19,201,248	{ 1,413,248	1,433,704		
Other coal .. .. .							23,651,317	30,478,212
Coke .. .. .							48,633	231,699
Tar and pitch .. .. .							219,721	25
Tar and pitch .. .. .	129	113	5,208	31	28	25		
Jordan—								
Coal and briquettes .. .. .	496	607	545	466	<i>n.a.</i>	461		
Korea (South)—								
Coal .. .. .	128,152	158,549	98,015	62,315	55,914	<i>n.a.</i>		
Coke .. .. .	3,585	4,474	16,900	26,821	31,101	<i>n.a.</i>		
Lebanon—								
Coal and briquettes .. .. .	2,072	4,457	1,875	1,722	2,165	<i>n.a.</i>		
Coke .. .. .	8,485	9,955	10,089	3,608	2,244	<i>n.a.</i>		
Philippine Republic—								
Coal .. .. .	231	39	64	<i>n.a.</i>	130	<i>n.a.</i>		
Coke .. .. .	14,373	11,339	20,372	<i>n.a.</i>	14,569	<i>n.a.</i>		
Tar .. .. .	837	59	19	<i>n.a.</i>	12	<i>n.a.</i>		
Syria—								
Coal and briquettes .. .. .	1,901	2,290	2,221	605	1,213	2,285		
Coke .. .. .	1,057	1,995	3,116	<i>n.a.</i>	1,071	3,112		
Thailand—								
Coal .. .. .	—	—	1,355	1,337	59	3		
Coke .. .. .	3,177	1,996	3,566	4,153	4,453	9,789		
Tar .. .. .	38	4	78	77	—	—		
Turkey—								
Coal .. .. .	<i>n.a.</i>	295	130	328	326	<i>n.a.</i>		
Coke .. .. .	4,078	4,019	4,134	7,807	11,662	15,837		
Pitch .. .. .	<i>n.a.</i>	49	98	74	—	—		
Vietnam (South)—								
Coal, coke and briquettes	9,000	23,000	14,760	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>		
French Polynesia—								
Coal .. .. .	16	16	21	—	<i>n.a.</i>	<i>n.a.</i>		
New Caledonia—								
Coal .. .. .	79,676	182,726	246,382	215,880	243,653	<i>n.a.</i>		
Coke .. .. .	91,091	100,405	52,822	137,638	82,897	<i>n.a.</i>		



**COBALT**  
**PRODUCTION OF COBALT ORE**  
*(Metal content)*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Zambia (a) .. ..	959	1,394	1,510	1,490	1,430	1,178
Canada (c) .. ..	1,350	1,422	1,629	1,567	1,609	1,557
Australia (d) .. ..	17	17	18	17	17	13
<b>OTHER COUNTRIES</b>						
Congo Republic (b) ..	7,260	7,555	8,256	11,119	9,565	10,374
Morocco .. ..	1,349	1,545	1,644	1,788	1,725	1,494
Cuba (e) .. ..	460	690	790	901	1,027	1,071
<b>TOTAL*</b> .. ..	<b>13,000</b>	<b>14,000</b>	<b>16,000</b>	<b>20,000</b>	<b>19,000</b>	<b>19,000</b>

\*An allowance has been made for cobalt contained in ores produced in Uganda, Finland and the United States.

Ores containing cobalt are also known to have been produced in Cyprus, Greece, Norway, Spain, Sweden, the U.S.S.R., China and Korea.

- (a) Refined metal plus estimated cobalt content of cobalt alloy and other cobalt.
- (b) Electrolytic cobalt plus recoverable cobalt in cobalt alloy.
- (c) Metal recovered from smelter products plus cobalt contained in cobalt ores and residues exported.
- (d) Estimated cobalt content of cobalt oxide.
- (e) Recoverable cobalt in sulphide. United States Bureau of Mines estimate.

**METAL PRODUCTION OF COBALT**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Zambia .. ..	671	1,341	1,510	1,490	1,430	1,178
<b>OTHER COUNTRIES</b>						
France .. ..	740	737	875	827	1,017	927
Germany (Federal) (a) ..	1,484	1,422	1,335	1,091	869	796
Norway (b) .. ..	615	698	810	786	501	633
Congo Republic .. ..	6,715	7,057	8,231	11,119	9,565	10,000

Cobalt and its compounds are also known to have been produced in the United Kingdom, Canada, Belgium, the U.S.S.R. and the United States. In addition, the following amounts of cobalt oxide hydrate, salts and driers were produced in the United States (in terms of cobalt content):

Year	Long tons	Year	Long tons
1963 ..	696	1966 ..	899
1964 ..	772	1967 ..	917
1965 ..	880	1968 ..	984

- (a) Obtained chiefly from pyrite sinter imported from Cyprus, Finland, Norway, Spain, Sweden and other countries. Including secondary metal.
- (b) Obtained from copper-nickel matte imported from Canada.

## EXPORTS OF COBALT, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Cobalt (a) .. ..	110	90	157	186	370	253
Cobalt oxide .. ..	359	462	368	460	192	92
Zambia (e)—						
Cobalt .. .. .	529	1,443	1,411	1,602	2,058	1,208
Cobalt alloy .. ..	—	31	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	—
Canada—						
Cobalt .. .. .	330	265	130	280	669	541
Cobalt oxides and salts ..	490	739	631	584	863	735
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Cobalt (b) (c) .. ..	671	951	2,373	3,225	2,213	2,112
France—						
Ingots and scrap (a) .. ..	451	564	639	595	598	717
Cobalt salts .. .. .	11	10	31	17	—	5
Germany (Federal)—						
Cobalt (c) .. .. .	872	776	626	441	189	178
Cobalt oxide .. .. .	30	24	456	56	39	38
Norway—						
Cobalt .. .. .	629	559	872	797	427	503
Sweden—						
Cobalt .. .. .	4	9	2	3	5	3
U.S.S.R.—						
Cobalt .. .. .	197	197	200	100	100	<i>n.a.</i>
Congo Republic (d)—						
Cobalt .. .. .	6,310	7,940	8,240	10,880	7,750	<i>n.a.</i>
Cobalt-copper ingots .. ..	1,300	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Morocco—						
Ore .. .. .	6,988	28,647	6,151	19,226	15,319	17,991
United States—						
Ore and metal (c) .. ..	958	573	555	456	669	972
Japan—						
Cobalt oxide .. .. .	3	4	21	3	2	—

(a) Including alloys.

(b) Exports of cobalt metal are not separately recorded. Figures relate to imports into the United States and Japan from Belgium.

(c) Including alloys and scrap.

(d) Estimated.

(e) Figures for 1963 relate to Rhodesia and Nyasaland.

## IMPORTS OF COBALT, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Cobalt .. .. .	} 378	1,528	1,803	1,549	1,608	1,559
Cobalt alloys .. .. .						
Cobalt oxide .. .. .						
Canada—	<i>n.a.</i>	990	859	1,101	657	810
Cobalt oxide .. .. .	13	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Hong Kong—						
Cobalt oxide .. .. .	45	35	37	46	51	30
India—						
Cobalt oxide .. .. .	32	34	33	18	25	10
Australia (a)—						
Cobalt ingots, etc. .. .. .	68	62	50	(d) 52	(d) 77	(d) 71
Cobalt oxide .. .. .	10	23	30	22	38	29
Cobalt salts .. .. .	2	11	6	3	—	—
New Zealand (a)—						
Cobalt salts .. .. .	1	—	1	<i>n.a.</i>	1	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Denmark—						
Cobalt .. .. .	10	26	21	20	22	24
France—						
Ore .. .. .	10,356	10,228	11,488	11,933	11,736	11,417
Ingots and scrap (c) .. .. .	266	227	308	430	392	269
Cobalt oxide .. .. .	80	88	129	134	131	112
Germany (Federal)—						
Cobalt (b) .. .. .	459	667	775	722	561	1,175
Cobalt oxide .. .. .	212	257	259	315	306	414
Italy—						
Cobalt (b) .. .. .	371	313	271	384	327	339
Cobalt oxide .. .. .	276	243	216	206	211	225
Netherlands—						
Cobalt .. .. .	120	161	244	160	234	174
Portugal—						
Cobalt oxide .. .. .	4	3	2	3	4	—
Sweden—						
Cobalt .. .. .	130	233	188	256	187	166
Yugoslavia—						
Cobalt .. .. .	43	50	25	29	28	44
Mexico—						
Cobalt oxide .. .. .	32	45	50	67	68	97
United States—						
Ore .. .. .	13	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>Co content</i> .. .. .	12	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cobalt metal .. .. .	4,608	5,077	6,628	7,978	3,547	4,115
Cobalt oxide .. .. .	209	676	422	571	466	530
Cobalt salts .. .. .	42	42	49	67	75	48
Argentina—						
Cobalt metal .. .. .	22	46	46	44	59	70
Cobalt salts .. .. .	12	23	15	10	10	10
Brazil—						
Cobalt oxide .. .. .	36	31	30	42	36	54
Japan—						
Ingots, slabs and grains	853	1,603	1,270	2,005	2,604	1,934
Cobalt oxide .. .. .	247	314	278	329	453	434

(a) Years ended June 30 of that stated.

(d) Owing to reclassification not strictly comparable with earlier years.

(b) Including alloys and scrap.

(c) Including alloys.

**COPPER**  
**PRODUCTION OF COPPER ORE**  
*(Metal content)*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Kenya (f) .. ..	1,500	1,400	1,400	500	10	<i>n.a.</i>
Rhodesia .. ..	16,508	16,376	17,678	(c) 16,900	17,678	(c) 18,000
Uganda (h) .. ..	15,960	17,971	16,870	15,844	14,198	15,383
Zambia .. ..	578,784	622,362	684,753	613,594	652,500	654,384
Canada (g) .. ..	404,070	434,732	453,461	448,702	547,602	553,639
Cyprus (e) .. ..	25,893	16,530	18,960	24,347	15,200	21,570
India .. ..	10,170	10,048	10,000	10,000	9,000	9,000
Australia .. ..	112,967	104,050	90,388	109,537	90,361	106,870
New Zealand .. ..	20	70	10	—	150	50
<b>TOTAL .. ..</b>	<b>1,166,000</b>	<b>1,223,000</b>	<b>1,294,000</b>	<b>1,239,000</b>	<b>1,327,000</b>	<b>1,379,000</b>
Irish Republic .. ..	—	—	—	1,115	3,425	6,420
<b>OTHER COUNTRIES</b>						
Albania (c) .. ..	2,500	2,500	r 4,130	r 4,910	5,900	5,900
Austria .. ..	1,902	1,588	1,551	1,872	1,930	2,079
Bulgaria .. ..	18,000	18,000	24,000	29,000	35,000	35,000
Finland .. ..	33,400	31,800	29,300	25,970	28,377	29,500
France (d) .. ..	270	263	279	427	399	385
Germany—						
Federal Republic .. ..	2,246	1,557	960	1,153	1,171	1,317
East (b) .. ..	20,000	20,000	20,000	20,000	20,000	20,000
Italy .. ..	2,500	1,800	1,700	2,200	2,500	2,500
Norway .. ..	14,040	14,737	14,534	14,581	14,225	16,511
Poland .. ..	13,000	14,200	15,000	15,000	15,000	15,000
Portugal .. ..	3,238	4,296	3,801	3,676	3,605	4,450
Spain (i) .. ..	6,727	9,716	8,637	8,030	8,200	<i>n.a.</i>
Sweden .. ..	16,428	15,934	15,538	15,036	15,044	17,925
U.S.S.R. (b) .. ..	600,000	675,000	700,000	750,000	850,000	850,000
Yugoslavia .. ..	61,112	62,186	61,562	61,239	62,154	69,373
Algeria .. ..	(b) 1,000	1,023	956	1,045	1,033	1,030
Angola .. ..	63	—	—	—	—	<i>n.a.</i>
Congo Republic (h) .. ..	266,692	272,623	284,047	310,679	313,938	319,375
Congo, Republic of .. ..	286	—	(c) 60	<i>n.a.</i>	—	<i>n.a.</i>
Morocco .. ..	1,777	1,720	1,784	2,292	2,180	2,634
South Africa .. ..	54,279	58,552	59,500	122,692	125,521	126,206
South West Africa .. ..	32,000	34,000	39,000	38,000	33,000	30,000
Cuba (b) .. ..	6,000	6,000	6,000	6,000	6,300	6,700
Haiti .. ..	5,791	4,950	3,897	2,687	2,313	1,572
Mexico (d) .. ..	54,979	51,676	68,070	73,221	61,633	64,000
Nicaragua .. ..	7,168	9,094	10,025	9,610	9,188	11,516
United States (d) .. ..	1,083,184	1,113,196	1,206,905	1,276,029	851,843	1,075,554
Argentina .. ..	349	340	510	332	404	<i>n.a.</i>
Bolivia (a) .. ..	2,946	4,607	4,656	5,612	6,229	6,790
Brazil (c) .. ..	1,500	2,000	2,000	2,000	2,900	(b) 3,500
Chile (d) .. ..	592,028	623,541	570,000	650,000	650,000	648,000

(a) Exports of ore (metal content) and metal.

(b) Estimated.

(c) United States Bureau of Mines' estimate.

(d) Amount estimated as recoverable.

(e) Estimated copper content of concentrates, cement copper and cupreous pyrites exported. The copper content of copper concentrates and cement copper produced was as follows (long tons) 1963—22,000; 1964—11,300; 1965—18,000; 1966—16,000; 1967—15,500; 1968—14,500.

(f) Copper content of cement copper.

(g) Blister copper plus recoverable copper in ores and matte exported.

(h) Smelter.

(i) Excluding copper contained in iron pyrites, estimated at about 10,000 tons per annum in recent years. This may or may not be recovered.

PRODUCTION OF COPPER ORE (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
Ecuador .. .. .	279	181	127	220	408	548
Peru (d) .. .. .	174,650	173,658	177,488	173,606	178,275	210,139
Burma (c) .. .. .	170	120	140	100	130	40
China (a) (b) .. .. .	75,000	75,000	75,000	85,000	80,000	85,000
Formosa .. .. .	1,593	1,711	1,522	1,962	2,207	2,200
Israel .. .. .	7,598	(c) 8,000	(c) 8,000	(c) 8,500	10,000	10,100
Japan .. .. .	105,524	104,497	105,376	109,522	115,986	118,038
Korea (South) .. .. .	600	600	1,100	1,000	770	n.a.
Korea (North) (c) .. .. .	7,900	10,000	12,000	12,000	12,000	12,000
Philippine Republic .. .. .	62,680	59,503	61,749	72,592	84,800	108,533
Turkey (a) .. .. .	24,398	25,571	25,885	26,197	24,989	24,935
<b>TOTAL .. .. .</b>	<b>3,400,000</b>	<b>3,500,000</b>	<b>3,600,000</b>	<b>3,900,000</b>	<b>3,600,000</b>	<b>3,900,000</b>
<b>WORLD'S TOTAL .. .. .</b>	<b>4,500,000</b>	<b>4,700,000</b>	<b>4,900,000</b>	<b>5,100,000</b>	<b>5,000,000</b>	<b>5,300,000</b>

Ores containing copper are also known to have been produced in Fiji, Czechoslovakia, Hungary, Malaysia (West) and Iran.

- (a) Smelter.
- (b) Estimated.
- (c) United States Bureau of Mines' estimate.
- (d) Amount estimated as recoverable.

## METAL PRODUCTION OF COPPER

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Rhodesia .. .. .	14,453	14,998	17,000	(g) 17,000	(g) 17,000	<i>n.a.</i>
Uganda .. .. .	15,960	17,971	16,870	15,844	14,198	15,346
Zambia .. .. .	567,888	633,368	674,282	577,077	606,486	654,600
Canada (a) .. .. .	322,754	355,314	376,777	379,000	446,291	468,712
India .. .. .	9,431	9,325	9,212	9,362	8,763	9,139
Australia .. .. .	88,492	80,589	73,414	90,487	70,826	91,536
<b>TOTAL .. .. .</b>	<b>1,018,978</b>	<b>1,111,565</b>	<b>1,168,000</b>	<b>1,089,000</b>	<b>1,138,000</b>	<b>1,256,000</b>
<b>OTHER COUNTRIES</b>						
Albania .. .. .	2,010	2,169	(g) 4,000	(g) 4,000	(g) 4,000	(g) 4,000
Austria (b) .. .. .	12,844	14,411	15,950	16,756	17,168	17,734
Bulgaria .. .. .	20,198	20,769	24,849	(g) 26,000	27,000	27,500
Finland .. .. .	35,600	31,500	31,900	31,900	33,400	35,900
Germany—						
Federal Republic .. .. .	65,800	67,200	73,000	69,100	72,100	94,200
East (e) .. .. .	20,000	20,000	20,000	20,000	20,000	20,000
Italy .. .. .	363	266	235	438	163	<i>n.a.</i>
Norway .. .. .	17,910	17,233	19,768	19,607	19,588	23,103
Poland .. .. .	29,100	36,000	36,800	39,200	41,500	42,900
Spain .. .. .	23,142	21,067	30,533	r 23,662	28,545	47,636
Sweden .. .. .	28,616	28,246	29,359	28,418	31,689	27,400
U.S.S.R. (e) .. .. .	600,000	675,000	700,000	750,000	800,000	800,000
Yugoslavia .. .. .	49,977	50,899	r 47,743	r 57,317	60,384	<i>n.a.</i>
Angola .. .. .	100	—	—	—	—	<i>n.a.</i>
Congo Republic .. .. .	266,692	272,623	284,047	310,679	313,938	319,375
South Africa .. .. .	53,647	53,652	53,591	113,214	125,520	126,206
South-West Africa .. .. .	20,485	28,061	29,237	32,511	31,160	29,700
Mexico .. .. .	53,479	50,054	66,451	54,366	53,582	58,825
United States (d) .. .. .	1,157,768	1,195,029	1,280,402	1,309,318	769,946	1,130,784
Chile .. .. .	548,379	577,292	531,279	623,384	621,101	511,639
Peru .. .. .	152,757	150,323	156,641	150,000	154,236	18,310
China (e) .. .. .	75,000	75,000	75,000	85,000	77,000	85,000
Formosa .. .. .	1,458	1,857	2,154	2,373	2,954	2,502
Japan (f) .. .. .	248,076	277,734	295,461	313,902	389,062	469,734
Korea (South) .. .. .	2,341	2,766	2,243	2,854	3,195	4,000
Korea (North) (g) .. .. .	10,000	10,000	12,000	12,000	12,000	12,000
Turkey .. .. .	24,398	25,571	25,885	26,197	24,989	23,243
<b>TOTAL .. .. .</b>	<b>3,500,000</b>	<b>3,700,000</b>	<b>3,900,000</b>	<b>4,300,000</b>	<b>3,700,000</b>	<b>4,000,000</b>
<b>WORLD'S TOTAL .. .. .</b>	<b>4,500,000</b>	<b>4,800,000</b>	<b>5,100,000</b>	<b>5,400,000</b>	<b>4,800,000</b>	<b>5,300,000</b>

(a) Copper content of blister and anode copper.

(b) Including secondary metal.

(c) Exports.

(d) In addition, secondary metal was recovered as follows (long tons):

1963—870,023; 1964—975,912; 1965—1,118,973; 1966—1,191,294; 1967—1,035,631;  
1968—1,087,777.

(e) Estimated.

(f) In addition, secondary metal was recovered as follows (long tons):

1963—42,463; 1964—58,569; 1965—64,442; 1966—84,547; 1967—73,557; 1968—70,011.

(g) United States Bureau of Mines' estimate.

## EXPORTS OF COPPER, ETC.\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Unwrought—Refined ..	45,836	37,814	43,026	49,533	57,943	52,425
Alloys ..	39,652	35,385	33,954	42,960	57,168	48,484
Scrap (a) ..	6,276	3,227	12,536	10,379	2,817	1,586
Semi-manufactures ..	29,971	35,260	51,939	53,922	46,716	73,580
do. alloys ..	25,994	24,972	24,758	27,105	24,175	
Sulphate ..	17,805	18,122	15,627	13,284	12,457	10,539
Kenya—						
Unwrought (a) ..	3,041	3,358	3,665	1,564	—	—
Rhodesia (e)—						
Ore and concentrates ..	13,854	7,022	6,868	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Unwrought Refined ..	<i>n.a.</i>	15,160	16,467	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Bar and rod ..	<i>n.a.</i>	3,699	1,487	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Uganda—						
Unwrought (a) ..	15,320	18,214	17,283	15,550	14,738	15,385
Zambia (e)—						
Matte ..	806	1,437	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Unwrought—						
Blister ..	132,612	151,175	150,389	84,305	77,562	89,199
Electrolytic ..	432,929	519,778	522,310	505,404	512,433	537,207
Other ..	12,561	<i>n.a.</i>	3	3	497	5,264
Semi-manufactures	946	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	84	<i>n.a.</i>
Canada—						
Ore, matte, etc. (Cu content) ..	82,973	93,348	77,679	84,721	115,157	144,495
Unwrought ..	191,952	200,244	178,420	170,260	246,356	246,981
Scrap ..	9,450	11,739	17,534	26,255	27,822	58,199
Scrap alloys ..	7,798	7,810	8,810	12,005	16,382	25,528
Semi-manufactures ..	30,590	39,954	41,317	44,133	33,343	51,790
do. alloys (c) ..	4,044	5,700	5,064	8,090	10,844	9,898
Cyprus—						
Ore and concentrates ..	108,456	61,139	69,649	57,755	44,625	61,922
Cupreous pyrites ..	103,848	86,128	173,513	161,653	183,673	148,021
Copper cement ..	3,096	3,873	4,915	14,545	8,773	11,398
Hong Kong—						
Scrap (a) ..	6,325	5,719	6,043	6,041	7,904	9,481
Semi-manufactures (a) ..	—	34	3	4	1	29
India—						
Semi-manufactures(a)(b) ..	641	845	1,053	474	305	2,688
Malaysia (West)—						
Ore ..	<i>n.a.</i>	<i>n.a.</i>	1,750	750	1,000	1,256
Singapore—						
Semi-manufactures (a) ..	928	408	434	484	713	690
Sulphate ..	51	40	59	89	45	62
Australia—						
Ores, concentrates and dross (Cu content) ..	11,881	18,982	13,928	15,379	14,173	13,988
Unwrought—						
Blister ..	464	40	2,115	6,538	6,893	7,063
Refined ..	24,485	13,817	11,703	7,484	9,325	16,518
Alloys ..	83	149	133	291	5	7
Scrap (a) ..	7,504	8,172	4,573	4,430	223	(d) 32
Semi-manufactures (a) ..	7,986	7,955	14,152	18,640	9,454	10,621

\*In these tables the description "unwrought" copper corresponds to item 682.1 of the Standard International Trade Classification and includes both blister and refined copper. "Semi-manufactures" corresponds to S.I.T.C. 682.2 and includes foil and powder as well as rods, wire, sheets, strip, tubes, pipes, etc.

(a) Including alloys.

(b) Years ended March 31 following that stated.

(c) Including refinery shapes.

(d) Copper-base alloys only.

(e) Figures for 1963 relate to Rhodesia and Nyasaland.

## EXPORTS OF COPPER, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
Fiji—						
Ore .. .. .	20	—	22	1	1	3,240
New Zealand (c)—						
Unwrought (a) .. .. .	—	—	726	533	2,285	3,529
Scrap (a) .. .. .	616	1,451	1,045	1,471	1,536	1,175
Semi-manufactures (a)	1,529	1,826	914	907	575	317
Irish Republic—						
Ore and concentrates .. .. .	—	124	—	—	—	11,046
Scrap (a) .. .. .	2,918	2,804	3,465	4,284	3,930	2,881
<b>OTHER COUNTRIES</b>						
Albania—						
Unwrought .. .. .	1,904	2,300	3,625	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Austria—						
Unwrought .. .. .	1,369	2,708	4,402	4,401	3,921	4,256
do. alloys .. .. .	1,155	938	381	228	549	739
Scrap (a) .. .. .	595	306	177	393	297	233
Semi-manufactures (a)	6,789	8,017	5,153	5,223	4,703	4,057
Sulphate .. .. .	373	517	758	258	537	208
Belgium-Luxemburg						
E.U.—						
Unwrought (a) (b) .. .. .	244,379	245,872	259,003	258,830	281,884	304,933
Scrap .. .. .	9,739	12,499	16,004	17,651	14,112	15,750
Semi-manufactures (a)	59,419	81,077	88,745	80,003	71,853	91,022
Sulphate .. .. .	11,624	5,517	8,310	7,509	5,208	8,522
Denmark—						
Unwrought .. .. .	—	477	99	3	36	—
do. alloys .. .. .	416	215	368	748	448	1,281
Scrap (a) .. .. .	5,116	3,304	4,458	3,492	4,312	4,853
Semi-manufactures (a)	784	1,561	1,740	1,844	1,994	2,538
Finland—						
Unwrought (a) .. .. .	8,776	6,740	4,973	13,294	11,946	10,813
Semi-manufactures (a)	5,640	1,927	8,780	10,208	10,228	12,940
France—						
Ore .. .. .	—	—	—	—	169	—
Matte .. .. .	880	795	1,637	681	219	611
Unwrought—						
Unrefined .. .. .	9,791	11,663	13,165	15,650	12,256	12,487
Refined .. .. .	2,619	3,330	10,439	8,988	9,197	10,447
Alloys .. .. .	4,674	4,655	5,143	6,205	4,512	1,962
Scrap .. .. .	5,583	8,011	7,677	8,027	8,781	6,116
do. alloys .. .. .	27,475	34,963	33,012	30,880	34,012	26,393
Semi-manufactures (a)	18,399	20,467	33,748	30,826	28,989	32,445
Sulphate .. .. .	4,155	3,234	3,506	5,157	6,646	4,904
Germany (Federal)—						
Ore .. .. .	—	—	3,941	2,209	574	—
Unwrought—						
Unrefined .. .. .	251	367	858	2,145	2,988	3,954
Refined .. .. .	71,903	75,501	101,251	147,633	156,082	136,854
Alloys .. .. .	1,012	1,147	1,678	2,499	2,932	2,044
Scrap (a) .. .. .	20,338	18,312	31,422	43,364	34,782	31,221
Semi-manufactures (a)	71,641	76,820	69,749	91,830	98,201	92,751
Sulphate .. .. .	5,058	3,871	3,611	3,402	3,814	3,024
Greece—						
Semi-manufactures .. .. .	63	420	1,316	1,142	1,317	1,468
Italy—						
Ore .. .. .	2,158	2,442	999	2,366	6,008	7,959
Unwrought (a) .. .. .	21	10,693	16,864	5,774	6,100	9,264
Scrap (a) .. .. .	245	2,864	465	325	272	857

(a) Including alloys.

(b) Including matte.

(c) Year ended June 30 of that stated.



## EXPORTS OF COPPER, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Italy (cont.)—</b>						
Semi-manufactures (a)	9,695	27,038	35,614	23,564	18,096	22,188
Sulphate .. ..	4,681	1,491	17	2	13	128
<b>Netherlands—</b>						
Unwrought .. ..	601	1,402	826	1,114	876	3,075
do. alloys .. ..	4,852	6,050	4,819	7,830	4,610	6,350
Scrap (a) .. ..	19,684	24,087	31,912	34,243	33,674	30,154
Semi-manufactures (a)	9,314	13,484	15,917	15,803	13,304	18,079
Sulphate .. ..	26	61	147	36	41	32
<b>Norway—</b>						
Ore .. ..	9,889	14,091	10,559	15,106	12,955	19,723
Matte .. ..	1,107	—	—	—	—	—
<b>Unwrought—</b>						
Unrefined .. ..	4,488	4,821	4,831	5,022	6,456	5,363
Refined .. ..	10,667	9,361	11,914	13,642	13,964	16,709
Alloys .. ..	1,740	1,714	2,939	3,057	3,267	3,326
Scrap (a) .. ..	2,022	2,269	1,998	1,892	1,973	1,495
Semi-manufactures (a)	2,625	1,968	2,940	4,947	2,936	2,478
<b>Portugal—</b>						
Ore .. ..	2,153	180	18	—	32	31
Unwrought .. ..	256	1,091	742	1,351	861	850
Semi-manufactures (a)	68	71	341	343	148	280
Sulphate .. ..	183	211	755	311	341	685
<b>Spain—</b>						
Unwrought (a) .. ..	388	6,384	13,975	19,895	35,343	33,547
Scrap .. ..	—	86	191	210	178	163
Semi-manufactures (a)	185	13	12	26	348	1,129
<b>Sweden—</b>						
Unwrought .. ..	15,128	10,387	17,930	28,754	31,773	27,019
do. alloys .. ..	2,568	1,454	1,849	5,106	5,547	3,988
Scrap (a) .. ..	656	977	1,406	959	999	919
Semi-manufactures (a)	31,523	45,507	36,030	35,637	27,088	36,509
Sulphate .. ..	3	69	409	463	873	422
<b>Switzerland—</b>						
Unwrought (a) .. ..	2,050	2,808	3,784	4,089	4,543	6,359
Scrap (a) .. ..	6,901	9,897	12,047	11,026	10,286	12,580
Semi-manufactures (a)	8,482	10,198	8,110	10,836	9,809	9,754
Sulphate .. ..	106	147	753	1,059	1,260	1,354
<b>U. S. S. R.—</b>						
Unwrought (d) .. ..	70,900	88,100	91,600	118,200	92,510	107,574
Semi-manufactures .. ..	5,413	4,921	5,400	5,200	5,708	7,775
Sulphate .. ..	10,300	11,800	10,400	19,200	18,500	12,401
<b>Yugoslavia—</b>						
Matte .. ..	1,229	1,033	n.a.	—	n.a.	n.a.
Unwrought (a) .. ..	—	—	—	176	1,397	9,210
Semi-manufactures (a)	17,523	21,845	22,134	31,356	23,260	33,679
Sulphate .. ..	2,180	9,241	1,571	5,197	n.a.	2,657
<b>Algeria—</b>						
Ore .. ..	3,291	4,018	3,868	1,527	241	n.a.
<b>Angola—</b>						
Unwrought— .. ..	190	9	50	300	53	—
<b>Congo Republic—</b>						
Unwrought .. ..	233,600	271,950	277,080	305,710	273,940	306,300
<b>Morocco—</b>						
Ore .. ..	6,516	4,507	5,689	7,531	7,438	6,418
Scrap (a) .. ..	743	928	760	1,075	1,031	916
<b>South Africa—</b>						
Concentrates (Cu content) (c)	583	3,287	4,259	n.a.	n.a.	n.a.
Unwrought .. ..	68,495	81,128	82,208	119,822	145,328	136,369
do. alloys .. ..	n.a.	88	3			
Semi-manufactures .. ..	n.a.	1,012	1,528	3,359	5,341	7,875

(a) Including alloys.

(b) Estimated.

(c) Including matte.

(d) Including wire.

## EXPORTS OF COPPER, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
South West Africa—						
Ore ( <i>Cu content</i> ) ..	—	312	668	8,889	<i>n.a.</i>	<i>n.a.</i>
Lead concentrates ( <i>Cu content</i> ) ..	11,492	5,834	7,895	4,372	<i>n.a.</i>	<i>n.a.</i>
Tunisia—						
Unwrought and scrap ..	520	459	1,259	967	548	300
Cuba—						
Ore .. .. .	2,746	22,016	20,982	13,000	<i>n.a.</i>	<i>n.a.</i>
Mexico—						
Ore, concentrates, etc. . .	2,085	7,178	6,635	5,651	2,055	1,180
Unwrought—						
Unrefined .. .. .	22,061	15,686	7,821	7,163	6,272	} 8,304
Refined .. .. .	2,735	620	824	246	—	
Semi-manufactures ( <i>a</i> )	1,985	1,606	4,136	5,213	825	4,156
United States—						
Ores, matte, blister, etc. ( <i>Cu content</i> ) ..	1,080	4,817	9,532	1,261	34,562	58,027
Unwrought .. .. .	278,107	282,349	290,147	243,814	142,280	214,951
do. alloys .. .. .	529	1,774	1,356	1,287	1,082	689
Scrap .. .. .	12,223	39,062	28,357	16,043	15,729	30,455
do. alloys .. .. .	30,997	61,313	58,326	38,991	57,926	76,731
Semi-manufactures .. ..	9,337	5,626	9,921	} 17,820	19,380	14,014
do. alloys .. .. .	5,771	5,917	10,918			
Sulphate .. .. .	759	971	1,906	3,181	964	<i>n.a.</i>
Argentina—						
Ores .. .. .	2,121	1,292	184	263	138	277
Matte .. .. .	17	349	—	—	—	—
Bolivia—						
Ore, etc. ( <i>Cu content</i> ) ..	2,946	4,607	4,656	5,612	6,229	6,200
Chile—						
Ores and concentrates	33,976	24,950	} 27,640	30,525	29,790	<i>n.a.</i>
Precipitate .. .. .	8,365	6,796				
Copper cement .. .. .	9,329	8,679	12,047	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Unwrought—						
Blister .. .. .	278,132	304,787	255,770	231,371	236,924	<i>n.a.</i>
Refined .. .. .	78,157	70,886	67,199	94,339	83,668	<i>n.a.</i>
Electrolytic	166,138	136,216	148,355	218,024	271,874	<i>n.a.</i>
<i>Cu content</i> ( <i>b</i> ) ..	577,316	555,251	513,910	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Semi-manufactures .. ..	2,107	44,703	64,169	33,014	8,799	<i>n.a.</i>
Peru—						
Ore ( <i>Cu content</i> ) .. .. .	15,648	22,022	23,488	22,763	25,078	<i>n.a.</i>
Matte, etc. ( <i>do.</i> ) .. .. .	2,156	551	} 726	543	753	<i>n.a.</i>
Precipitate ( <i>do.</i> ) .. .. .	1,057	914				
Unwrought ( <i>do.</i> ) .. .. .	144,205	152,979	152,793	150,051	164,230	<i>n.a.</i>
Burma—						
Matte .. .. .	235	450	398	200	<i>n.a.</i>	<i>n.a.</i>
Formosa—						
Ore .. .. .	9,252	14,256	12,638	15,164	15,421	<i>n.a.</i>
Unwrought .. .. .	—	3	252	—	—	<i>n.a.</i>
Japan—						
Unwrought .. .. .	1,458	1,541	2,627	1,538	1,386	1,823
Semi-manufactures ( <i>a</i> )	18,018	26,232	49,643	39,116	33,103	31,411
Sulphate .. .. .	23	33	9	987	1,402	5,531
Korea (South)—						
Unwrought .. .. .	—	2,057	2,879	716	308	<i>n.a.</i>
Philippine Republic—						
Ore and concentrates ..	278,714	243,524	253,662	299,300	389,400	<i>n.a.</i>
Copper-gold-silver concentrates ..	1,462	6,245	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Scrap .. .. .	878	1,189	1,196	<i>n.a.</i>	1,926	<i>n.a.</i>
Turkey—						
Ore .. .. .	—	8,297	7,972	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Unwrought .. .. .	9,885	12,779	20,035	19,604	15,514	14,900

(a) Including alloys.

 (b) Total metal content of above items (*not* additional) and of complex ores not shown.

## IMPORTS OF COPPER, ETC.\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ore and matte .. ..	115	1,394	798	456	51	1,252
Unwrought—						
Electrolytic .. ..	345,098	376,638	436,230	429,249	384,727	382,058
Other refined .. ..	36,616	42,639	62,577	31,798	24,798	26,890
Blister .. ..	99,163	98,901	75,010	37,316	31,060	39,404
Alloys .. ..	608	308	121	134	53	151
Scrap .. ..	496	768	2,887	1,413	842	2,390
do. alloys .. ..	1,643	2,619	2,768	3,495	1,142	5,540
Semi-manufactures (a)	4,435	10,090	7,164	6,285	7,062	11,546
Malta—						
Semi-manufactures ..	(£25,387)	(£40,665)	(£46,934)	(£113,543)	(£55,001)	(£87,889)
Ghana—						
Semi-manufactures (a)	760	471	993	447	391	440
Kenya—						
Unwrought (a) .. ..	62	31	74	61	43	25
Semi-manufactures (a)	202	147	275	317	544	551
Sulphate .. ..	38	63	53	76	21	—
Mauritius—						
Semi-manufactures (a)	88	107	81	45	26	50
Nigeria—						
Unwrought and semi-manufactures (a) ..	2,215	1,864	1,562	2,680	2,193	1,190
Rhodesia (c)—						
Semi-manufactures (a)	690	6,282	4,174	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sierra Leone—						
Semi-manufactures (a)	49	70	56	680	28	<i>n.a.</i>
Tanzania—						
Unwrought (a) .. ..	2	1	4	1	1	—
Semi-manufactures (a)	140	64	57	103	111	145
Sulphate .. ..	4	1	1	3	17	—
Uganda—						
Semi-manufactures (a)	65	80	122	155	146	159
Zambia—						
Unwrought (a) .. ..	<i>n.a.</i>	39	131	11	19	42
Semi-manufactures (a)	<i>n.a.</i>	349	710	466	383	481
Sulphate .. ..	<i>n.a.</i>	35	12	30	223	128
Canada—						
Unwrought .. ..	5,846	6,045	5,131	9,368	4,740	5,201
Scrap (a) .. ..	2,995	<i>n.a.</i>	<i>n.a.</i>	(d) 302	(d) 9,503	(d) 15,668
Semi-manufactures ..	1,511	1,523	4,075	2,092	1,925	1,919
do. alloys .. ..	3,459	3,294	8,670	3,509	3,682	4,111
Sulphate .. ..	327	194	435	225	416	372
Barbados—						
Semi-manufactures (a)	77	207	75	53	38	31
Jamaica—						
Semi-manufactures (a)	116	160	151	223	209	348
Sulphate .. ..	(b) 50	2	1	—	10	—
Trinidad and Tobago—						
Semi-manufactures (a)	157	189	281	199	111	107
Sulphate .. ..	37	15	21	20	22	28
Guyana—						
Semi-manufactures (a)	<i>n.a.</i>	36	69	22	66	51
Ceylon—						
Unwrought (a) .. ..	32	29	43	52	123	45
Semi-manufactures (a)	471	753	596	564	1,061	783
Cyprus—						
Semi-manufactures (a)	68	57	25	107	76	132

\*See footnote on p.105 concerning the descriptions "unwrought" copper and "semi-manufactures" used in these tables.

(a) Including alloys.

(c) Figure for 1963 relates to Rhodesia and Nyasaland.

(b) Excess of re-exports.

(d) Copper alloys scrap only.

## IMPORTS OF COPPER, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<i>(cont.)</i>						
<b>Hong Kong—</b>						
Unwrought (a) .. ..	204	508	3	121	115	199
Scrap (a) .. ..	734	354	12	611	2,548	4,075
Semi-manufactures (a)	8,355	11,881	8,831	7,626	9,450	12,969
Copper sulphate .. ..	27	29	10	10	82	20
<b>India (d)—</b>						
Unwrought .. ..	68,312	51,824	42,471	19,698	22,461	33,790
do. alloys .. ..	10	58	196	98	141	34
Scrap (a) .. ..	1,457	1,954	1,042	590	1,013	521
Semi-manufactures (a)	4,958	5,580	14,748	14,237	15,719	8,517
<b>Malaysia (West)—</b>						
Unwrought (a) .. ..	<i>n.a.</i>	<i>n.a.</i>	33	18	23	32
Semi-manufactures (a)	<i>n.a.</i>	<i>n.a.</i>	2,219	2,390	1,806	2,622
Sulphate .. ..	<i>n.a.</i>	<i>n.a.</i>	114	160	182	150
<b>Pakistan—</b>						
Unwrought .. ..	2,473	322	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Scrap .. ..	124	124	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Semi-manufactures .. ..	5,144	702	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sulphate .. ..	285	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Sabah—</b>						
Semi-manufactures (a)	105	95	84	61	30	49
<b>Sarawak—</b>						
Semi-manufactures (a)	86	153	160	167	82	57
<b>Singapore—</b>						
Semi-manufactures (a)	1,437	1,066	1,767	1,954	2,186	2,520
Sulphate .. ..	141	132	127	77	85	102
<b>Australia (c)—</b>						
Unwrought .. ..	1,238	5,038	32,654	943	3,078	4,844
do. alloys .. ..	289	1,090	—	192	46	79
Scrap (a) .. ..	205	535	526	374	1,190	2,052
Semi-manufactures (a)	2,638	1,818	4,136	2,110	1,737	1,725
Sulphate .. ..	2,077	1,223	2,586	1,276	1,675	1,505
<b>Fiji—</b>						
Semi-manufactures (a)	64	61	68	59	47	75
<b>New Zealand (c)—</b>						
Unwrought (a) .. ..	133	184	120	258	173	190
Semi-manufactures (a)	12,130	12,934	13,447	15,370	12,739	10,172
<b>Irish Republic—</b>						
Unwrought (a) .. ..	126	98	129	156	146	180
Semi-manufactures (a)	5,348	5,002	7,172	7,046	6,213	8,263
Sulphate .. ..	1,913	1,481	850	894	630	1,287
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Ore .. ..	298	271	681	726	—	—
<b>Unwrought—</b>						
Unrefined .. ..	5,011	5,945	5,299	4,996	4,720	5,186
Refined .. ..	15,844	18,053	17,188	13,907	15,507	16,251
Alloys .. ..	334	425	625	678	167	567
Scrap .. ..	3,248	1,736	979	870	397	995
do. alloys .. ..	1,227	2,784	4,250	4,492	4,355	5,608
Semi-manufactures (a)	3,469	4,113	3,607	4,087	3,973	3,700
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Ore .. ..	3,960	2,141	2,192	11,954	10,608	14,204
Unwrought (a) (b) .. ..	275,956	316,844	312,370	338,520	307,634	371,514
Scrap .. ..	35,926	48,172	66,606	55,954	48,569	85,747
Semi-manufactures (a)	6,936	8,300	8,881	8,173	8,584	8,312
Sulphate .. ..	126	344	206	236	276	162

(a) Including alloys.

(b) Including matte.

(c) Years ended June 30 of that stated.

(d) Years ended March 31 following that stated.

## IMPORTS OF COPPER, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Bulgaria—						
Sulphate .. ..	6,655	7,991	6,595	<i>n.a.</i>	7,824	<i>n.a.</i>
Denmark—						
Unwrought .. ..	3,786	4,372	3,526	3,924	3,595	3,974
do. alloys .. ..	113	103	181	54	51	153
Scrap (a) .. ..	17	80	283	287	397	302
Semi-manufactures (a)	21,356	23,711	29,530	20,847	22,222	24,850
Sulphate .. ..	2,599	3,767	2,969	2,847	2,206	2,396
Finland—						
Unwrought (a) ..	2,696	5,643	12,059	11,546	6,524	8,026
Semi-manufactures (a)	2,079	1,995	3,766	4,403	4,258	3,614
Sulphate .. ..	710	794	1,328	1,697	989	636
France—						
Unwrought—						
Unrefined .. ..	6,109	9,648	4,643	6,776	11,426	14,877
Refined .. ..	208,907	244,863	257,864	297,171	231,575	253,820
Alloys .. ..	1,925	963	1,849	1,385	1,601	1,691
Scrap .. ..	1,789	2,075	2,898	2,323	1,711	2,372
do. alloys .. ..	6,750	4,988	8,786	16,099	9,603	12,201
Semi-manufactures (a)	10,564	14,854	15,504	20,715	23,258	27,697
Sulphate .. ..	1,906	1,320	60	281	127	555
Germany (Federal)—						
Ore .. ..	156,041	146,971	142,583	134,604	130,251	202,857
Burnt cupreous pyrites	979,785	1,112,599	1,253,434	1,245,012	1,231,635	1,315,544
Matte .. ..	2,320	2,259	1,430	1,609	351	1,189
Unwrought—						
Unrefined .. ..	120,171	133,717	139,832	144,029	162,164	144,072
Refined .. ..	251,181	304,991	294,510	261,062	267,909	318,726
Alloys .. ..	38,831	42,089	43,099	35,851	42,806	51,954
Scrap (a) .. ..	36,278	78,178	107,380	77,069	82,021	108,877
Semi-manufactures (a)	26,078	42,227	71,525	55,918	32,919	56,768
Sulphate .. ..	541	929	1,597	2,047	2,176	2,314
Greece—						
Unwrought—						
Unrefined .. ..	1,080	1,584	—	592	} 8,309	8,637
Refined .. ..	5,542	4,376	6,268	4,794		
Scrap .. ..	406	31	4	6	17	19
Semi-manufactures	650	581	719	380	414	430
Sulphate .. ..	3,994	4,608	232	3,764	2,614	2,792
Hungary—						
Unwrought .. ..	17,279	22,363	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sulphate .. ..	3,809	4,368	4,427	9,047	11,590	4,769
Iceland—						
Semi-manufactures (a)	210	187	225	192	177	103
Italy—						
Unwrought—						
Unrefined .. ..	9,837	5,422	2,027	2,743	4,352	1,505
Refined (a) .. ..	210,798	189,206	199,378	212,183	226,351	217,622
Scrap (a) .. ..	21,524	13,682	35,034	38,941	32,947	41,464
Semi-manufactures (a)	12,207	8,930	8,238	10,600	10,259	10,265
Sulphate .. ..	1,246	5,855	5,160	2,728	2,643	1,287
Netherlands—						
Unwrought .. ..	25,798	34,034	31,746	28,601	30,510	7,268
do. alloys .. ..	1,508	1,979	2,788	2,102	2,245	3,482
Scrap (a) .. ..	8,231	8,566	10,275	8,574	10,615	7,577
Semi-manufactures (a)	40,207	57,690	67,505	60,034	49,289	61,648
Sulphate .. ..	2,413	2,628	2,984	2,636	2,729	2,669
Norway—						
Copper-nickel matte	55,559	50,009	59,760	60,405	52,673	76,488
Unwrought .. ..	4,587	4,970	4,576	4,643	3,502	3,092
do. alloys .. ..	415	228	284	365	554	499
Scrap (a) .. ..	—	66	157	5	3	54
Semi-manufactures (a)	18,288	19,975	21,367	23,298	22,786	20,240
Sulphate .. ..	269	566	1,561	1,397	1,148	578

(a) Including alloys.

## IMPORTS OF COPPER, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Poland—</b>						
Concentrates .. ..	12,137	18,798	16,177	20,552	18,337	17,057
Unwrought .. ..	34,592	27,485	28,550	35,887	37,098	34,886
Sulphate .. ..	1,754	1,566	1,371	2,917	3,012	2,051
<b>Portugal—</b>						
Ore and concentrates ..	10	—	—	—	—	26
Matte .. ..	22	—	—	—	3,912	—
Unwrought (a) .. ..	5,294	5,294	6,607	6,321	3,833	2,939
Scrap .. ..	235	353	134	117	78	19
Semi-manufactures (a)	4,578	5,137	5,473	6,727	5,954	6,756
Sulphate .. ..	4,210	4,542	2,472	74	644	395
<b>Spain—</b>						
Ore .. ..	17,602	19,569	22,503	22,462	33,271	65,666
Unwrought (a) .. ..	28,475	41,372	33,637	53,082	59,285	61,147
Scrap (a) .. ..	10,217	10,040	17,230	19,372	11,002	25,133
Semi-manufactures (a)	9,679	9,919	17,725	16,970	6,208	5,736
Sulphate .. ..	51	70	42	128	31	6
<b>Sweden—</b>						
Ore .. ..	77,555	65,908	75,694	73,755	61,734	45,532
Matte .. ..	7,231	10,653	8,298	9,114	17,471	18,587
<b>Unwrought—</b>						
Unrefined .. ..	1,973	1,465	307	54,791	63,261	8,755
Refined .. ..	63,131	56,278	62,344			
Alloys .. ..	2,312	3,614	5,827	2,738	2,636	3,022
Scrap (a) .. ..	3,297	4,617	10,230	9,518	6,729	9,421
Semi-manufactures (a)	12,357	17,764	34,736	32,081	18,306	18,459
Sulphate .. ..	214	96	95	42	106	356
<b>Switzerland—</b>						
Unwrought .. ..	37,291	37,220	40,585	41,330	40,408	36,820
do. alloys .. ..	1,010	637	1,043	1,165	1,409	1,104
Scrap (a) .. ..	222	296	421	538	550	628
Semi-manufactures (a)	16,394	20,444	24,126	23,193	20,865	21,972
Sulphate (cu. content) ..	298	394	21	412	445	218
<b>U.S.S.R.—</b>						
Unwrought .. ..	86,600	9,400	700	7,300	13,779	9,252
Sulphate .. ..	8,661	8,858	—	—	—	—
<b>Yugoslavia—</b>						
Unwrought .. ..	5,911	9,347	6,179	3,536	15,546	20,901
Semi-manufactures (a)	591	2,551	2,151	4,838	5,283	6,701
Scrap .. ..	4,434	3,091	10,962	9,354	1,148	1,050
<b>Angola—</b>						
Semi-manufactures (a)	298	396	514	770	558	556
Sulphate .. ..	26	163	25	25	18	17
<b>Egypt—</b>						
Unwrought and scrap ..	10,131	5,222	3,348	4,133	618	1,228
Semi-manufactures (a)	n.a.	379	n.a.	n.a.	n.a.	n.a.
<b>Malagasy Republic—</b>						
Semi-manufactures (a)	114	179	140	96	89	165
<b>Morocco—</b>						
Semi-manufactures (a)	3,006	2,571	2,074	2,236	2,245	2,483
Sulphate .. ..	10	1	—	—	—	—
<b>Mozambique—</b>						
Semi-manufactures (a)	681	408	508	701	n.a.	n.a.
<b>South Africa—</b>						
Ore and concentrates ..	n.a.	4,947	6,021	6,143	8,279	58,150
Unwrought .. ..	25,614	30,809	32,479	38,495	32,119	9,994
do. alloys .. ..	66		37			
Semi-manufactures (a)	1,344	4,308	3,746	3,973	4,191	2,367
<b>Sudan—</b>						
Unwrought .. ..	125	3	222	—	—	—
Semi-manufactures ..	271	242	—	59	18	155
Sulphate .. ..	1	2	396	3	353	382

(a) Including alloys.

## IMPORTS OF COPPER, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Tunisia—						
Semi-manufactures (a)	399	640	523	538	1,161	n.a.
Sulphate .. ..	346	131	147	94	123	n.a.
Costa Rica—						
Semi-manufactures (a)	241	163	312	280	237	n.a.
Sulphate .. ..	11	26	30	26	28	n.a.
Cuba—						
Ore .. ..	—	20	—	—	n.a.	n.a.
Semi-manufactures ..	3,272	2,866	n.a.	n.a.	n.a.	n.a.
Guatemala—						
Semi-manufactures (a)	85	183	200	104	151	94
Sulphate .. ..	12	16	31	8	53	35
Honduras—						
Sulphate .. ..	34	33	55	45	99	106
Mexico—						
Unwrought (a) .. ..	21	19	55	12	10	13
Semi-manufactures (a)	735	451	1,177	633	582	731
Sulphate .. ..	—	1	—	—	—	—
Nicaragua—						
Semi-manufactures ..	71	154	126	129	174	118
Salvador—						
Semi-manufactures ..	8	586	975	1,712	1,621	1,525
United States (b)—						
Cu content of—						
Ore and concentrates	10,266	38,616	10,130	10,358	31,851	64,183
Matte, precipitate, etc.	2,500	96	378	331	71	n.a.
Unwrought—						
Blister .. ..	106,456	360,605	290,549	398,418	241,722	267,037
Refined .. ..	109,954	100,620	104,793	145,637	294,722	360,420
Scrap .. ..	1,960	4,638	12,222	21,346	14,926	10,331
do. alloys .. ..	844	883	2,738	6,571	3,450	2,698
Semi-manufactures ..	n.a.	n.a.	57,398	109,141	83,658	107,276
do. alloys .. ..	n.a.	n.a.				
Sulphate .. ..	n.a.	n.a.	485	n.a.	n.a.	n.a.
Argentina—						
Unwrought .. ..	15,647	20,861	22,873	13,941	12,102	15,274
Brazil—						
Unwrought (a) .. ..	47,448	27,371	22,417	42,229	35,861	42,141
Semi-manufactures (a)	231	337	315	494	264	514
Sulphate .. ..	4,081	3,335	2,713	3,115	1,970	2,370
Colombia—						
Unwrought .. ..	365	633	953	547	535	1,090
Semi-manufactures (a)	4,403	5,833	3,428	5,060	3,566	3,132
Sulphate .. ..	50	7	1	45	3	7
Peru—						
Semi-manufactures (a)	773	609	3,837	887	6,774	n.a.
Sulphate .. ..	225	554	165	104	42	n.a.
Uruguay—						
Unwrought .. ..	n.a.	n.a.	1,029	600	792	n.a.
Venezuela—						
Semi-manufactures (a)	5,857	6,376	6,634	7,767	6,774	7,337
Sulphate .. ..	223	55	2,068	46	22	63

(a) Including alloys.

(b) The figures shown are imports for consumption. According to the U.S. Bureau of Mines, general imports, which also include material entering the country under bond, were as follows (long tons Cu content):

	1963	1964	1965	1966	1967	1968
Ore and concentrates	43,427	45,924	32,522	37,117	32,372	24,152
Matte .. ..	666	537	458	331	79	454
Unwrought—						
Blister .. ..	329,519	347,838	296,929	319,495	265,068	241,712
Refined .. ..	106,397	123,213	122,683	145,180	295,152	357,391
Scrap .. ..	2,610	3,994	13,699	25,934	14,610	10,196

## IMPORTS OF COPPER, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Burma—						
Semi-manufactures (a)	374	134	264	499	<i>n.a.</i>	<i>n.a.</i>
Formosa—						
Unwrought (a) ..	2,250	1,996	1,450	975	1,183	<i>n.a.</i>
Semi-manufactures (a)	917	2,766	4,031	3,829	2,372	<i>n.a.</i>
Iran (b)—						
Unwrought (a) ..	1,201	499	1,010	421	4,923	3,071
Scrap .. .. .	1,233	784	108	44	71	41
Semi-manufactures (a)	2,451	3,179	3,403	3,660	6,761	6,601
Iraq—						
Semi-manufactures (a)	1,086	1,156	<i>n.a.</i>	2,934	1,190	<i>n.a.</i>
Japan—						
Ore and concentrates ..	556,140	586,470	575,070	680,196	1,006,011	1,044,331
Matte .. .. .	34,542	24,113	33,781	25,706	24,522	23,594
Unwrought .. .. .	55,321	117,853	110,573	133,090	258,380	279,925
do. alloys .. .. .	165	2,631	2,648	14,211	13,379	7,001
Scrap .. .. .	17,079	28,829	12,531	9,699	13,023	7,381
do. alloys .. .. .	64,463	77,373	51,392	65,827	62,873	49,711
Semi-manufactures (a)	1,255	5,884	11,345	7,682	1,730	1,984
Sulphate .. .. .	—	—	—	520	—	—
Jordan—						
Semi-manufactures (a)	188	216	94	127	236	187
Korea (South)—						
Unwrought and						
Semi-manufactures ..	97,099	233	112	351	2,084	<i>n.a.</i>
Lebanon—						
Semi-manufactures (a)	501	668	529	480	587	<i>n.a.</i>
Philippine Republic—						
Semi-manufactures (a)	3,427	4,580	4,898	<i>n.a.</i>	5,082	<i>n.a.</i>
Sulphate .. .. .	109	—	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Thailand—						
Unwrought (a) ..	155	336	354	388	361	219
Semi-manufactures (a)	2,173	2,914	3,502	3,568	5,082	5,122
Turkey—						
Semi-manufactures (a)	418	363	196	507	401	373
Sulphate .. .. .	34	3,152	4,687	90	—	—

(a) Including alloys.

(b) Years ended March 20 of year following that stated.



**DIAMONDS**  
**PRODUCTION OF DIAMONDS†**

Metric carats

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Ghana (b) .. ..	2,681,700	2,668,000	2,273,000	2,815,500	2,537,500	(c)2,575,000
Lesotho .. ..	<i>n.a.</i>	(a) 2,472	5,492	(a) 12,506	(a) 21,737	(a) 11,914
Sierra Leone .. ..	a)1,738,547	a) 1,649,847	1,461,145	1,436,722	1,160,102	2,432,770
Tanzania .. ..	590,949	650,461	756,969	946,656	926,757	702,395
Guyana .. ..	99,748	109,682	112,873	98,887	97,351	66,311
India .. ..	1,432	2,260	4,466	2,113	7,626	8,658
<b>TOTAL .. ..</b>	<b>5,112,000</b>	<b>5,083,000</b>	<b>4,614,000</b>	<b>5,312,000</b>	<b>4,751,000</b>	<b>5,797,000</b>
<b>OTHER COUNTRIES</b>						
Angola—						
Gem .. ..	788,406	874,096	886,788	967,972	982,868	1,316,411
Industrial .. ..	295,165	274,972	268,937	300,169	305,632	350,776
Congo Republic—						
Gem .. ..	296,000	295,000	14,106	11,483	263,000	550,768
Industrial .. ..	14,468,000	14,457,000	12,489,768	12,417,000	13,153,602	11,352,733
Central African Republic	402,186	442,281	536,810	539,935	520,628	609,360
Ivory Coast .. ..	179,660	200,270	198,179	183,435	175,825	187,009
Guinea .. ..	54,000	(c) 50,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South Africa .. ..	4,375,572	4,449,978	5,025,598	6,036,677	6,667,607	7,433,318
South West Africa .. ..	1,194,630	1,541,544	1,656,234	1,758,956	1,700,000	1,722,000
Venezuela .. ..	69,674	115,604	88,800	84,695	69,630	111,720
<b>TOTAL* .. ..</b>	<b>22,000,000</b>	<b>23,000,000</b>	<b>21,000,000</b>	<b>23,000,000</b>	<b>24,000,000</b>	<b>24,000,000</b>
<b>WORLD'S TOTAL* ..</b>	<b>28,000,000</b>	<b>28,000,000</b>	<b>26,000,000</b>	<b>28,000,000</b>	<b>29,000,000</b>	<b>30,000,000</b>

†For values see next page.

\*Including an estimate for diamonds produced in Brazil but excluding diamonds produced in the U.S.S.R., Liberia and Indonesia.

Note—Estimated production of synthetic diamond in the United States was as follows (metric carats): 1963—5,000,000; 1964—5,200,000; 1965—5,400,000; 1966—6,000,000; 1967—8,000,000; 1968—11,000,000.

(a) Exports.

(b) Production was shared by Companies and African diggers as follows:

		Companies	African diggers
1963	..	2,119,400	562,300
1964	..	2,290,000	378,000
1965	..	2,222,000	51,000
1966	..	2,772,000	47,000
1967	..	2,519,000	18,800
1968	..	<i>n.a.</i>	<i>n.a.</i>

(c) Estimated.

PRODUCTION OF DIAMONDS†

sterling

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Ghana (b) .. ..	5,895,000	6,355,000	4,981,000	7,637,000	6,303,000	6,116,000
Lesotho .. .. .	<i>n.a.</i>	(a) 56,266	265,938	(a) 348,603	(a) 508,328	219,585
Sierra Leone .. ..	a16,163,671	a19,911,496	b17,701,000	b17,038,000	b14,870,785	23,466,517
Tanzania (b) .. ..	5,040,000	6,646,000	6,623,000	9,439,000	11,147,000	8,129,449
Guyana .. .. .	(c) 800,000	(b) 966,000	(b)1,290,000	(b)1,110,000	b 1,701,000	(b) 920,748
India .. .. .	38,900	91,350	185,300	86,000	158,000	(c) 182,000
<b>TOTAL</b> .. .. .	<b>28,000,000</b>	<b>34,026,000</b>	<b>31,046,000</b>	<b>35,659,000</b>	<b>34,688,000</b>	<b>39,034,000</b>
<b>OTHER COUNTRIES</b>						
Angola .. .. .	(b)8,020,000	(b)9,786,000	b11,260,000	14,537,610	b14,856,400	c19,000,000
Congo Republic—						
Gem .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Industrial .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Central African Republic	3,600,000	(b)4,700,000	(b)5,379,000	(b)5,698,000	5,361,000	7,542,000
Ivory Coast (b) .. ..	477,000	564,000	660,000	649,000	(c)1,310,000	1,576,000
Guinea .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South Africa (c) .. ..	18,636,000	22,149,000	25,686,000	32,727,000	29,355,000	44,700,000
South West Africa (c) ..	18,417,000	30,411,000	36,729,000	43,952,000	<i>n.a.</i>	<i>n.a.</i>
Venezuela (b) .. ..	953,000	1,581,000	1,214,000	1,158,000	952,000	1,528,000
<b>TOTAL*</b> .. .. .	<b>63,000,000</b>	<b>83,000,000</b>	<b>94,000,000</b>	<b>112,000,000</b>	<b>109,000,000</b>	<b>120,000,000</b>
<b>WORLD'S TOTAL*</b> ..	<b>91,000,000</b>	<b>117,000,000</b>	<b>125,000,000</b>	<b>147,000,000</b>	<b>144,000,000</b>	<b>160,000,000</b>

†For quantities in metric carats see previous page.

\*Including an estimate for diamonds produced in Brazil.

(a) Exports.

(b) Estimated on export value (f.o.b.).

(c) Estimated.

SALES OF DIAMONDS

Sales effected through the Central Selling Organisation of the Diamond Corporation Ltd. were as follows:

			(£ sterling)
			<i>Gem and Industrial</i>
1963 .. .. .	..	..	115,978,441
1964 .. .. .	..	..	133,186,049
1965 .. .. .	..	..	148,316,941
1966 .. .. .	..	..	177,845,823
1967 .. .. .	..	..	178,763,764
1968 .. .. .	..	..	250,129,109
1969 .. .. .	..	..	288,538,255

EXPORTS OF DIAMONDS

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Diamonds .. £	<i>n.a.</i>	151,239,797	158,384,070	196,109,871	188,297,234	271,674,457
Ghana—						
Industrial diamonds Ct.	1,513,740	2,569,376	3,084,365	1,998,683	1,989,890	2,996,511
£	3,327,307	6,120,369	6,758,903	5,421,633	4,944,000	7,117,217
Sierra Leone .. Ct.	1,738,547	1,649,847	1,525,437	1,319,326	1,161,063	2,342,846
£	16,163,671	19,911,496	18,479,519	15,645,912	14,878,774	22,212,630
Tanzania .. .. .						
Gem diamonds .. Ct.	275,958	337,711	417,097	452,988	Ct. 987,605	Ct. 682,651
£	4,173,247	5,795,763	6,185,707	7,698,478		
Industrial diamonds Ct.	312,753	326,059	410,675	451,414	£11,146,500	£7,900,930
£	848,698	985,391	1,069,662	1,301,550		
Guyana .. .. .						
Gem diamonds Ct.	<i>n.a.</i>	106,607	105,355	r 92,085	72,948	70,724
£	<i>n.a.</i>	938,842	1,203,704	1,062,063	1,282,182	982,024
India (b)—						
Gem diamonds £	2,243,441	2,017,175	3,546,137	5,352,306	7,874,865	16,525,311
Malaysia (West)—						
Cut and polished £	<i>n.a.</i>	<i>n.a.</i>	20,238	1,804	—	—
Australia (a)—						
Gem diamonds Ct.	7	80	118	81	122	56
£	2,764	4,826	5,423	3,061	12,000	1,314
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Cut and polished Ct.	1,347,032	1,520,733	1,561,285	1,646,844	1,643,915	1,765,745
£	56,868,240	69,582,566	74,649,405	89,378,579	91,188,586	114,424,741
Industrial, rough and bort .. .. .						
Ct.	9,018,333	8,943,065	9,373,860	12,075,495	11,887,839	13,129,084
£	24,042,133	29,477,700	29,255,142	37,762,590	41,479,746	56,527,741
France—						
Uncut .. .. .						
£	514,358	618,313	643,337	682,941	586,514	802,012
Cut .. .. .						
£	1,083,090	1,605,013	1,205,007	1,553,013	1,283,526	2,230,242
Industrial diamonds £	35,277	32,885	34,812	3,644	74	144
Dust .. .. .						
£	41,108	40,851	40,505	62,158	149,570	157,736
Netherlands .. .. .						
Ct.	1,463,794	1,078,097	965,766	1,309,679	1,513,823	1,220,263
£	9,233,929	10,412,728	10,102,000	12,944,895	10,482,423	12,609,576
Dust .. .. .						
Ct.	671,432	695,156	879,989	1,078,617	1,118,363	1,272,792
£	668,948	671,168	829,210	1,014,840	1,055,440	1,293,854
Sweden—						
Industrial diamonds £	64,938	68,136	64,300	109,700	20,786	242,105
Angola .. .. .						
Ct.	1,293,243	1,094,541	1,157,411	1,264,020	1,315,890	<i>n.a.</i>
£	9,571,554	9,321,830	11,275,960	13,992,259	15,178,147	<i>n.a.</i>
Central African Republic .. .. .						
Ct.	395,542	421,040	509,445	552,451	479,025	<i>n.a.</i>
£	3,827,354	4,474,569	5,105,142	5,829,775	4,929,308	<i>n.a.</i>
Congo (Republic of) Ct.	5,683,603	5,264,891	5,303,706	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
£	6,885,700	7,041,400	7,127,500	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ivory Coast .. .. .						
Ct.	213,515	235,975	199,015	181,090	191,285	189,753
£	567,055	664,398	663,000	640,700	595,800	<i>n.a.</i>
Liberia .. .. .						
Ct.	748,000	571,868	540,000	555,000	1,025,625	792,985
£	<i>n.a.</i>	1,392,000	1,479,000	1,954,000	5,379,000	3,780,503
South Africa (c)—						
Uncut .. .. .						
Ct.	2,043,307	1,809,284	2,203,752	2,630,320	2,776,500	3,170,853
£	32,816,417	37,027,602	47,814,596	60,848,827	58,926,628	81,624,810
Cut and polished Ct.	124,118	111,429	146,209	174,701	184,670	224,325
£	10,207,231	10,444,073	14,510,333	18,132,667	19,749,624	28,964,079

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

(c) In addition synthetic diamonds were exported as follows:

	1963	1964	1965	1966	1967	1968
Ct. .. .. .	1,475,231	2,638,598	775,197	2,487,050	1,971,751	2,798,985
£ .. .. .	1,156,355	810,418	194,200	621,479	1,115,288	2,083,037

EXPORTS OF DIAMONDS (cont.)

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>United States—</b>						
Uncut .. .. Ct.	28,663	39,335	60,573	85,897	58,832	122,306
£	791,556	927,795	1,102,237	1,495,184	1,056,717	2,344,352
Cut .. .. Ct.	68,939	112,975	98,870	114,941	128,077	156,201
£	11,791,063	13,907,174	14,329,631	19,520,407	20,948,620	37,163,524
Industrial diamonds Ct.	1,068,239	1,324,195	2,003,218	1,097,346	147,564	299,945
£	1,179,434	1,686,715	2,616,860	1,600,202	335,300	1,153,148
Dust .. .. Ct.	1,095,737	1,892,097	1,147,838	2,403,000	4,317,410	6,014,657
£	1,065,309	1,467,212	1,168,736	2,472,158	4,543,983	6,923,297
Brazil .. .. Ct.	n.a.	5,345	30,585	35,515	4,245	n.a.
£	n.a.	30,978	227,916	378,863	89,000	n.a.
Venezuela .. Ct.	49,583	88,960	n.a.	n.a.	n.a.	n.a.
£	678,000	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Israel—</b>						
Polished.. .. Ct.	1,152,787	1,240,737	1,332,728	1,450,017	1,448,627	1,701,000
£	41,421,821	49,161,000	54,966,168	67,856,000	70,025,500	95,522,083
<b>Japan—</b>						
Industrial diamonds Ct.	56,910	64,380	109,455	361,085	473,315	76,760
£	56,291	63,806	108,371	356,803	563,708	187,242
Cut and polished Ct.	15,530	2,005,685	676,465	587,105	647,920	3,015
£	294,857	250,495	306,044	233,554	391,420	40,677

## IMPORTS OF DIAMONDS

Importing Country and Description		1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>							
United Kingdom	£	<i>n.a.</i>	149,220,456	177,306,790	187,340,191	213,397,699	291,531,536
Malta—							
Rough diamonds	£	69,968	2,901	7,546	3,399	1,836	1,519
Cut and polished	£	2,283	3,804	6,204	6,421	6,733	7,080
Zambia—							
Industrial diamonds	Ct.	<i>n.a.</i>	144,323	9,857	17,505	11,750	<i>n.a.</i>
	£	<i>n.a.</i>	227,974	13,919	26,261	20,015	<i>n.a.</i>
Canada—							
Unset .. .. .	Ct.	57,166	(b) 59,330	(b) 69,924	(b) 68,147	(b) 72,754	(b) 79,802
	£	2,642,916	b 3,189,162	(b)4,090,331	(b)4,065,008	b)4,514,245	b)5,577,353
Dust, bort, etc. . .	Ct.	999,454	894,208	1,285,945	1,398,853	1,383,487	1,413,789
	£	1,704,873	1,472,208	2,168,271	2,443,118	2,479,746	2,668,619
Hong Kong—							
Gem diamonds . .	Ct.	332,925	136,284	254,894	310,798	286,568	377,317
	£	12,678,209	4,790,550	9,133,870	14,971,776	15,315,089	24,624,231
Industrial diamonds	£	(a) 1,695	4,772	(a) 462	(a) 6,649	(a) 1,197	2,238
India (c)—							
Gem diamonds . .	£	116,315	8,696	149,695	669,572	2,210,007	12,482,539
Industrial and bort	£	39,516	192,683	139,552	379,549	603,128	393,717
Malaysia (West)—							
Gem diamonds	£	<i>n.a.</i>	<i>n.a.</i>	1,276,317	615,844	491,269	528,600
Australia (d)—							
Industrial diamonds	Ct.	260,400	470,928	370,697	405,453	490,794	541,389
	£	375,285	593,615	571,405	595,000	736,400	945,318
Other diamonds	Ct.	20,370	28,506	32,349	29,494	25,841	25,449
	£	903,575	1,046,208	1,315,222	1,404,000	1,574,000	1,692,198
New Zealand (d)—							
Industrial diamonds	£	11,651	10,417	13,170	11,406	16,830	<i>n.a.</i>
Other diamonds	£	212,841	195,028	167,099	213,766	202,626	<i>n.a.</i>
<b>OTHER COUNTRIES</b>							
Belgium-Luxemburg							
E.U.—							
Rough diamonds	Ct.	4,652,817	5,080,413	5,764,017	7,134,069	6,971,660	9,347,950
	£	40,490,058	50,393,320	52,376,176	65,232,682	58,994,400	97,963,075
Cut diamonds . .	Ct.	404,554	428,975	484,589	566,405	597,876	833,335
	£	23,868,326	27,962,424	29,984,182	40,872,859	41,189,797	63,767,650
Industrial, rough and bort . . . .	Ct.	8,706,554	9,440,154	8,827,020	10,297,150	9,530,780	10,582,335
	£	14,763,283	16,659,322	16,821,049	20,602,264	18,982,312	24,312,050
France—							
Uncut . . . . .	Ct.	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	767,780	1,030,380
	£	2,273,907	2,346,682	2,389,651	2,868,688	2,893,358	3,736,706
Cut and polished	Ct.	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	82,675	99,165
	£	4,115,598	5,337,109	4,638,958	6,379,727	6,136,175	13,710,425
Industrial diamonds	Ct.	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	153,195	40,265
	£	3,790	5,408	32,769	8,161	9,695	23,800
Dust . . . . .	Ct.	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	1,330,045	1,287,545
	£	904,300	950,599	1,086,192	1,148,510	1,239,787	1,448,231
Netherlands . .	Ct.	1,826,812	1,438,384	1,183,579	1,544,472	1,647,356	1,275,966
	£	8,398,214	10,275,512	10,747,441	12,257,024	11,063,001	12,383,978
Dust . . . . .	Ct.	539,315	597,020	950,459	1,177,370	764,936	1,416,527
	£	485,913	541,998	835,370	1,152,454	671,437	1,336,901
Norway . . . . .	Ct.	4,980	5,000	95,000	5,000	40,000	15,000
	£	1,085	1,952	2,451	2,954	3,159	589
Sweden—							
Industrial diamonds	£	389,982	284,224	452,200	462,800	379,354	277,706

(a) Excess of re-exports.

(b) Excluding uncut.

(c) Years ended March 31 following that stated.

(d) Years ended June 30 of that stated.

## IMPORTS OF DIAMONDS (cont.)

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Yugoslavia—</b>						
Industrial diamonds Ct.	30,120	646,300	116,945	252,150	372,285	51,800
£	22,638	42,393	11,278	102,265	78,211	37,400
<b>South Africa—</b>						
Rough diamonds	(a)	(a)	(a)	(a)	(a)	(a)
Cut and polished Ct.	1,163	1,423	7,182	1,477	1,868	4,265
£	31,881	60,807	360,869	51,620	104,919	245,508
<b>Mexico—</b>						
Uncut .. .. Ct.	3,040	2,125	n.a.	n.a.	5,815	11,580
£	51,311	29,410	n.a.	n.a.	n.a.	n.a.
Industrial diamonds Ct.	102,585	131,225	n.a.	n.a.	35,000	50,000
£	116,147	92,918	n.a.	n.a.	n.a.	n.a.
<b>United States—</b>						
Uncut .. .. Ct.	1,749,641	1,547,955	1,900,936	2,032,432	2,505,763	2,514,362
£	46,382,143	53,474,506	62,663,214	74,480,654	77,231,000	105,272,230
Cut and polished Ct.	1,017,620	1,096,795	1,258,745	1,451,596	1,454,992	1,833,935
£	33,563,214	38,858,883	47,081,428	59,335,818	63,326,000	92,699,401
Industrial diamonds Ct.	9,551,542	6,529,209	5,412,395	7,408,160	6,043,063	4,237,929
£	15,646,013	13,775,968	12,355,677	14,293,492	12,735,000	15,328,327
Dust .. .. Ct.	2,295,486	2,752,382	4,259,995	5,453,374	4,752,930	5,643,130
£	2,164,991	2,371,582	3,772,443	4,639,805	3,910,000	5,220,266
Bort, manufactured Ct.	n.a.	3,901,982	2,612,309	3,336,252	4,254,996	685,639
£	n.a.	3,492,697	2,458,557	2,892,237	3,651,000	640,408
<b>Argentina—</b>						
Industrial diamonds Ct.	1,430,000	905,000	19,922	60,000	1,290,000	400,000
£	14,400	n.a.	n.a.	n.a.	20,200	n.a.
Dust .. .. Ct.	2,775	12,060	2,007	3,000	5,000	56,000
£	700	1,200	n.a.	n.a.	n.a.	n.a.
<b>Israel—</b>						
Rough diamonds Ct.	2,962,000	2,972,000	2,708,000	3,125,000	3,090,000	3,873,000
£	35,782,000	41,875,000	39,599,000	49,712,000	50,028,000	75,220,000
Industrial diamonds Ct.	213,000	442,000	590,000	624,000	588,000	549,000
£	620,000	1,231,000	2,043,000	2,091,000	1,763,000	2,034,000
Bort .. .. Ct.	440,000	542,000	504,000	699,000	765,000	674,000
£	376,000	426,000	387,000	490,000	576,000	563,000
<b>Japan—</b>						
Industrial diamonds Ct.	341,720	382,825	390,220	524,055	734,010	753,000
£	1,407,000	1,819,000	1,857,999	2,420,110	3,381,502	4,973,408
Uncut .. .. Ct.	29,490	34,300	44,815	32,705	24,195	3,330
£	205,445	198,246	189,730	213,270	223,055	87,396
Cut and polished Ct.	531,140	664,395	285,115	247,495	469,055	315,155
£	4,097,030	5,867,651	9,253,027	13,775,084	15,175,187	22,347,244
Dust .. .. Ct.	b 1,411,705	b 1,570,160	1,431,260	1,741,990	1,983,410	1,877,565
£	b 1,403,914	b 1,614,088	1,487,665	1,789,325	1,925,186	2,127,989

(a) Total imports and re-exports were as follows:

	Total imports		Re-exports	
	Carats	£	Carats	£
1963	17,042,298	13,245,064	15,731,598	29,360,073
1964	15,737,300	13,818,406	18,389,917	30,567,203
1965	19,102,532	19,096,236	n.a.	n.a.
1966	13,286,020	14,757,100	19,850,338	23,549,404
1967	19,140,474	18,639,679	19,683,575	25,096,779
1968	3,705,161	9,832,317	7,410,048	16,478,269

(b) Includes synthetic dust.

**DIATOMACEOUS EARTH**  
**PRODUCTION OF DIATOMACEOUS EARTH**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	14,237	13,717	15,079	14,697	12,484	14,701
Kenya .. .. .	3,283	3,007	2,183	1,744	1,856	2,022
Canada (a) .. .. .	712	1,021	73	62	—	—
Australia .. .. .	5,133	8,732	6,958	7,148	3,822	2,280
New Zealand .. .. .	1,603	1,679	1,729	4,660	1,408	2,033
<b>OTHER COUNTRIES</b>						
Austria .. .. .	3,874	3,771	3,970	3,695	3,599	2,932
Denmark—						
Diatomaceous earth (b)	6,000	5,000	4,000	6,862	9,267	11,938
Moler (b) .. .. .	150,000	150,000	180,000	92,747	(c) 94,352	86,454
Finland .. .. .	2,300	2,136	935	1,181	1,594	1,948
France (f) .. .. .	130,629	130,981	148,256	139,027	157,103	n.a.
Germany (Federal) .. .. .	42,250	47,086	51,790	50,525	55,595	54,638
Italy .. .. .	58,490	68,255	62,267	61,725	59,007	59,100
Portugal (f) .. .. .	1,845	1,970	2,586	3,433	4,038	3,444
Spain (f) .. .. .	10,026	11,167	11,724	n.a.	n.a.	n.a.
Sweden .. .. .	357	214	392	473	509	500
Yugoslavia (e) .. .. .	10,000	10,000	10,000	10,000	n.a.	n.a.
Algeria .. .. .	17,369	20,080	15,500	15,579	17,975	17,716
Egypt .. .. .	818	n.a.	n.a.	n.a.	n.a.	n.a.
Mozambique .. .. .	—	—	—	32	27	n.a.
South Africa .. .. .	196	487	961	214	576	614
Costa Rica .. .. .	(e) 1,900	(e) 3,500	2,953	(e) 2,900	(e) 10,000	(e) 10,000
Nicaragua .. .. .	(e) 1,600	—	—	—	n.a.	n.a.
United States .. .. .	(d) 518,105	(d) 518,105	(d) 518,105	(g) 560,000	(g) 560,000	(g) 560,000
Argentina .. .. .	5,585	7,649	5,999	10,770	8,017	n.a.
Colombia .. .. .	2,200	227	200	—	n.a.	n.a.
Peru .. .. .	2,440	2,552	2,432	1,540	3,676	n.a.
Korea (South) .. .. .	1,667	36,635	570	252	2,203	2,179

Diatomaceous earth is known to have been produced in Hungary, Norway, Roumania, U.S.S.R., Brazil and Japan.

(a) Shipments.

(b) Estimated.

(c) Exports.

(d) Average annual production 1963-1965.

(e) United States Bureau of Mines' estimate.

(f) Including tripoli.

(g) Estimated average annual production 1966-1968.

## EXPORTS OF DIATOMACEOUS EARTH

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Kenya .. .. .	1,929	1,646	1,161	763	723	525
<b>OTHER COUNTRIES</b>						
Austria .. .. .	161	133	136	253	239	251
Belgium-Luxemburg E.U. .. .. .	797	951	926	839	856	288
Denmark— Diatomaceous earth ..	9,413	8,711	9,065	7,966	10,290	9,419
Moler .. .. .	81,648	80,950	102,041	92,747	94,352	86,513
Moler bricks .. .. .	33,740	35,944	41,036	38,811	34,712	33,186
Finland .. .. .	99	117	2,139	134	96	27
France .. .. .	12,001	14,360	16,302	19,471	16,865	17,685
Germany (Federal) ..	3,582	4,501	5,869	4,984	3,559	5,230
Italy .. .. .	1,311	818	4,060	1,503	1,616	3,426
Netherlands .. .. .	111	93	142	131	267	1,288
Norway .. .. .	1	—	2	25	—	2
Portugal .. .. .	275	532	459	334	280	249
Spain .. .. .	197	523	780	949	1,038	2,072
Sweden .. .. .	32	90	106	101	217	102
Yugoslavia .. .. .	5,108	5,459	3,572	3,504	1,651	1,398
Algeria .. .. .	12,951	14,387	10,028	7,051	6,682	<i>n.a.</i>
South Africa .. .. .	<i>n.a.</i>	654	851	244	414	<i>n.a.</i>
United States .. .. .	<i>n.a.</i>	114,287	101,632	128,313	132,571	149,580
Japan .. .. .	153	449	436	429	647	761



## IMPORTS OF DIATOMACEOUS EARTH

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (a)	53,620	56,238	45,848	42,363	46,467	42,640
Canada .. .. .	23,761	22,401	22,401	26,089	29,758	27,393
India (d) .. .. .	1,067	1,528	1,753	1,247	1,929	1,230
Malaysia (West) .. .. .	<i>n.a.</i>	<i>n.a.</i>	238	273	337	294
Australia (b) .. .. .	4,259	4,579	5,789	5,028	5,082	4,733
New Zealand (b) .. .. .	895	650	706	785	819	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Austria .. .. .	1,422	1,642	2,156	2,721	2,318	2,112
Belgium-Luxemburg						
E.U. .. .. .	6,353	7,589	8,391	7,541	6,943	5,846
Denmark .. .. .	1,321	1,732	1,748	2,352	2,488	4,081
Finland .. .. .	1,245	1,010	752	905	1,119	1,065
France .. .. .	8,822	13,793	7,860	8,987	6,994	6,898
Germany (Federal) .. .. .	61,656	61,732	85,876	75,217	68,017	62,415
Greece .. .. .	149	886	453	1,407	1,367	905
Iceland .. .. .	828	604	511	968	1,554	650
Italy .. .. .	1,637	6,975	7,959	9,468	6,112	7,740
Netherlands .. .. .	6,544	8,051	8,397	8,050	7,383	7,914
Norway .. .. .	3,789	3,983	3,878	4,313	4,963	4,167
Portugal .. .. .	848	1,197	1,493	1,572	2,022	2,285
Spain .. .. .	1,649	1,696	1,528	1,755	1,412	7,875
Sweden .. .. .	7,291	8,369	8,634	8,636	9,311	8,582
Switzerland .. .. .	2,340	1,903	1,568	2,013	1,918	1,997
Yugoslavia .. .. .	147	247	140	325	585	641
Angola .. .. .	87	82	145	129	177	153
Egypt .. .. .	2,275	397	2,305	1,381	<i>n.a.</i>	<i>n.a.</i>
Morocco .. .. .	730	751	763	735	921	718
South Africa .. .. .	2,618	4,107	3,041	3,228	3,529	3,823
Costa Rica .. .. .	379	1,275	1,085	457	428	<i>n.a.</i>
Guatemala .. .. .	141	186	292	307	754	507
Honduras .. .. .	75	85	106	82	64	198
Mexico .. .. .	(c) 1,208	(c) 1,108	270	78	48	224
Salvador .. .. .	332	430	361	405	562	588
Brazil .. .. .	1,653	1,187	1,667	1,993	1,365	673
Chile (c) .. .. .	799	492	315	<i>n.a.</i>	254	<i>n.a.</i>
Colombia .. .. .	856	1,166	1,124	912	906	1,184
Peru (c) .. .. .	908	1,675	3,395	3,447	3,373	<i>n.a.</i>
Uruguay .. .. .	<i>n.a.</i>	<i>n.a.</i>	245	300	305	<i>n.a.</i>
Venezuela .. .. .	1,931	2,602	1,958	2,085	1,897	2,826
Israel .. .. .	527	190	193	343	349	540
Japan .. .. .	637	839	763	806	1,276	949
Lebanon .. .. .	746	652	1,533	1,188	130	<i>n.a.</i>
Philippine Republic .. .. .	2,223	269	2,230	<i>n.a.</i>	1,409	<i>n.a.</i>
Thailand .. .. .	5	7	30	7	—	—
Turkey .. .. .	28	56	r 13	20	53	106

(a) Chiefly moler from Denmark.

(b) Years ended June 30 of that stated.

(c) Including tripoli, etc.

(d) Years ended March 31 following that stated.

**FELDSPAR**  
(see also Nepheline Syenite)  
**PRODUCTION OF FELDSPAR**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
China stone .. ..	50,000	57,000	29,456	29,631	29,720	30,384
Kenya .. .. .	—	—	—	161	396	527
Canada .. .. .	7,686	8,169	9,736	9,754	9,280	9,561
Ceylon .. .. .	109	4	613	412	292	577
Hong Kong .. ..	1,680	1,556	1,119	1,343	1,135	1,582
India .. .. .	20,901	23,997	25,232	27,530	25,375	33,000
Pakistan .. .. .	1,220	48	—	—	<i>n.a.</i>	<i>n.a.</i>
Australia (a) .. ..	8,842	9,021	8,726	7,259	4,450	4,473
<b>OTHER COUNTRIES</b>						
Austria .. .. .	2,077	1,603	1,397	1,507	2,441	2,140
Finland .. .. .	12,620	10,560	11,685	25,901	34,472	(c) 50,000
France .. .. .	180,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Germany (Federal) (b) ..	273,664	299,989	313,280	285,796	261,464	283,258
Italy .. .. .	100,486	109,851	95,467	143,199	145,133	165,722
<b>Norway—</b>						
Unground .. .. .	55,599	47,475	40,918	52,291	96,391	130,590
Ground .. .. .	20,506	22,547	22,067	34,457	16,707	26,451
Poland .. .. .	26,300	(c) 26,300	(c) 26,300	(c) 27,600	(c) 28,000	(c) 28,000
Portugal .. .. .	396	10,895	8,165	1,603	<i>n.a.</i>	<i>n.a.</i>
Spain .. .. .	12,477	16,466	25,166	49,819	<i>n.a.</i>	<i>n.a.</i>
<b>Sweden (d)—</b>						
Unground .. .. .	17,409	21,606	18,295	12,396	9,883	5,100
Ground .. .. .	27,512	29,353	27,909	24,205	25,127	21,800
U.S.S.R. (c) .. .. .	205,000	215,000	225,000	235,000	235,000	235,000
Yugoslavia .. .. .	29,413	33,260	55,052	40,914	36,412	<i>n.a.</i>
Angola .. .. .	796	493	—	—	—	<i>n.a.</i>
Egypt .. .. .	—	4,653	(c) 4,000	3,444	<i>n.a.</i>	1,691
Eritrea .. .. .	(c) 490	(c) 9,800	—	1,526	<i>n.a.</i>	<i>n.a.</i>
Malagasy Republic .. ..	—	1	—	—	—	<i>n.a.</i>
South Africa .. .. .	41,372	35,525	41,636	33,996	24,498	19,574
South West Africa .. ..	2,196	1,893	2,281	1,179	<i>n.a.</i>	<i>n.a.</i>
Mexico .. .. .	<i>n.a.</i>	31,400	46,900	81,400	62,600	<i>n.a.</i>
United States (d) .. ..	548,954	587,194	624,598	655,452	615,397	667,679
Argentina .. .. .	12,599	6,390	19,822	21,071	20,029	<i>n.a.</i>
Chile .. .. .	417	814	408	1,099	857	920
Colombia .. .. .	12,500	11,426	10,600	18,779	19,700	20,700
Peru .. .. .	217	837	926	470	2,460	<i>n.a.</i>
Uruguay .. .. .	282	883	1,227	1,722	1,242	434
Japan .. .. .	53,339	61,445	57,244	r 50,845	49,906	65,101
Korea (South) .. .. .	11,392	13,468	15,595	15,053	16,551	20,661
Philippine Republic .. ..	6,564	7,924	12,095	8,479	<i>n.a.</i>	<i>n.a.</i>
Turkey .. .. .	<i>n.a.</i>	2,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>TOTAL*</b> .. .. .	<b>1,700,000</b>	<b>1,900,000</b>	<b>1,900,000</b>	<b>2,000,000</b>	<b>1,900,000</b>	<b>2,200,000</b>

\*Excluding feldspar known to have been produced in Czechoslovakia, Roumania, Brazil, China and Vietnam.

(a) Including china stone.

(b) Including feldspathic sand obtained as a by-product of china clay washing.

(c) United States Bureau of Mines' estimate.

(d) Sold or used by producers.

## EXPORTS OF FELDSPAR

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada .. .. .	2,930	3,023	3,345	3,057	<i>n.a.</i>	<i>n.a.</i>
India (b) .. .. .	2,076	5,282	4,960	4,587	8,140	11,326
<b>OTHER COUNTRIES</b>						
Austria (a) .. .. .	553	645	1,725	2,131	404	286
Belgium-Luxemburg						
E.U. .. .. .	222	84	41	73	61	461
Finland .. .. .	7,821	5,443	8,845	21,739	36,063	44,540
France (a) .. .. .	19,172	26,476	24,938	23,096	19,609	21,311
Germany (Federal) (a) ..	11,759	11,926	11,576	11,697	11,891	12,714
Italy .. .. .	19,126	21,440	22,809	23,213	24,176	24,772
Netherlands (a) .. .. .	4,201	5,033	2,048	534	473	1,031
Norway—						
Crude .. .. .	35,282	43,158	31,339	31,614	30,924	35,417
Ground .. .. .	15,345	22,077	18,621	18,087	12,370	14,958
Sweden (a) .. .. .	25,816	26,807	19,617	16,148	13,660	14,050
Yugoslavia .. .. .	16,336	20,901	24,779	20,058	20,305	15,237
South Africa .. .. .	10,298	6,255	9,966	10,677	5,958	6,142
South-West Africa .. .. .	874	2,476	1,410	816	<i>n.a.</i>	<i>n.a.</i>
Japan .. .. .	1,729	1,711	2,339	2,694	3,552	3,349
Korea (South) .. .. .	4,008	11,094	21,437	13,245	28,072	<i>n.a.</i>

(a) May include some leucite and nephelite.

(b) Years ended March 31 following that stated.

## IMPORTS OF FELDSPAR

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	36,298	58,101	61,476	80,655	72,840	84,654
Canada .. .. .	2,322	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
New Zealand (c) .. .. .	(a) 2,854	(a) 1,399	(a) 1,349	(a) 1,198	(a) 1,656	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Austria (b) .. .. .	5,952	7,285	8,366	8,010	7,507	6,117
Belgium-Luxemburg						
E.U. (b) .. .. .	25,406	30,422	29,920	33,160	34,246	39,814
Denmark (b) .. .. .	6,193	4,192	5,307	6,157	4,741	4,894
Finland (b) .. .. .	1,064	727	891	1,023	1,245	1,173
France (b) .. .. .	9,237	10,968	15,688	15,278	11,757	15,575
Germany (Federal) (b) ..	37,265	43,057	50,397	52,140	47,984	56,737
Italy .. .. .	11,260	10,808	14,481	10,212	16,916	19,820
Netherlands (b) .. .. .	28,456	28,489	26,540	25,638	26,112	31,550
Poland .. .. .	7,366	11,654	13,955	11,281	11,746	12,899
Sweden (b) .. .. .	313	307	2,870	4,895	5,570	5,004
Morocco (b) .. .. .	69	—	—	<i>n.a.</i>	39	42
South Africa (b) .. .. .	<i>n.a.</i>	104	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cuba .. .. .	862	7,509	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Mexico .. .. .	1,346	1,413	1,041	1,439	1,925	2,675
United States .. .. .	3,074	3,180	3,455	3,243	3,063	3,377
Colombia .. .. .	(a) 509	(a) 202	84	19	17	<i>n.a.</i>
Venezuela .. .. .	4,927	7,864	7,827	8,399	8,187	9,646
Israel .. .. .	1,639	2,048	2,658	1,946	1,624	2,232
Japan .. .. .	2,666	5,880	4,251	4,339	4,635	8,063
Vietnam (South) .. .. .	105	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Turkey .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	263	65

(a) Including fluor spar.

(b) May include some leucite and nephelite.

(c) Years ended June 30 of that stated.

**FLUORSPAR**  
PRODUCTION OF FLUORSPAR

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (a) ..	87,099	107,765	128,933	152,211	151,940	193,000
Rhodesia .. ..	306	69	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada (e) .. ..	£654,285	£749,683	£888,365	£728,289	£807,584	£953,658
India .. .. .	697	383	641	2,130	1,588	1,165
Australia .. ..	15	—	—	—	—	—
<b>OTHER COUNTRIES</b>						
France .. .. .	210,353	261,400	299,935	331,975	385,872	394,000
Germany—						
Federal Republic ..	102,921	88,357	81,609	83,210	85,554	86,358
East (b) .. .. .	70,000	70,000	80,000	80,000	80,000	80,000
Italy .. .. .	132,507	122,725	150,911	192,137	201,955	221,379
Spain .. .. .	150,977	147,317	217,186	r 219,035	239,360	252,222
Sweden (c) .. ..	2,904	—	—	—	—	—
U.S.S.R. (b) .. ..	270,000	300,000	350,000	350,000	375,000	375,000
Morocco .. .. .	6,250	6,466	3,000	—	—	—
South Africa .. ..	51,572	59,313	64,747	80,595	93,802	106,845
South West Africa ..	429	—	—	—	<i>n.a.</i>	<i>n.a.</i>
Tunisia .. .. .	—	—	3,000	2,584	2,461	5,364
Mexico .. .. .	474,012	632,719	723,766	714,925	772,714	911,000
United States (d) ..	178,525	193,872	215,118	225,954	263,967	225,367
Argentina .. .. .	9,608	9,816	11,736	15,834	18,951	<i>n.a.</i>
China (b) .. .. .	200,000	200,000	220,000	225,000	250,000	250,000
Japan .. .. .	20,569	18,820	16,254	r 13,814	15,063	15,478
Korea (South) .. ..	39,157	55,506	38,548	31,502	56,068	45,868
Mongolia .. .. .	(b) 48,000	(b) 56,100	(b) 73,800	(b) 50,000	(b) 50,000	(b) 60,000
Thailand .. .. .	28,768	62,535	51,013	47,268	131,049	241,226
Turkey .. .. .	642	1,282	1,060	1,725	425	<i>n.a.</i>
<b>TOTAL .. .. .</b>	<b>2,200,000</b>	<b>2,500,000</b>	<b>2,800,000</b>	<b>2,900,000</b>	<b>3,200,000</b>	<b>3,500,000</b>

Fluorspar is also known to have been produced in Belgium, Bulgaria, Burma and North Korea.

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

(b) United States Bureau of Mines' estimate.

(c) Sales.

(d) Shipments from mine.

(e) Official figures available by value only. Company figures of shipments, which exclude small amounts produced in British Columbia, are as follows (long tons): 1963—76,000; 1964—86,000; 1965—100,000; 1966—*n.a.*; 1967—*n.a.*; 1968—*n.a.*

EXPORTS OF FLUORSPAR

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada .. ..	2,688	<i>n.a.</i>	<i>n.a.</i>	11	<i>n.a.</i>	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Finland .. ..	—	592	19	2,371	—	—
France .. ..	45,836	57,699	84,968	87,001	107,381	115,409
Germany (Federal) .. ..	11,415	12,146	10,431	11,045	9,254	9,194
Italy .. ..	37,664	46,413	51,636	54,403	83,930	107,289
Spain .. ..	85,238	135,149	152,128	128,314	168,515	136,878
Sweden .. ..	148	58	—	348	430	589
Morocco .. ..	1,499	8,905	1,422	<i>n.a.</i>	<i>n.a.</i>	5
South Africa .. ..	52,602	50,503	41,954	56,621	87,323	83,934
Mexico .. ..	492,368	618,761	670,380	731,456	744,335	918,020
United States .. ..	1,073	3,305	8,419	5,118	9,236	11,272
Argentina .. ..	549	667	504	867	339	965
Bolivia .. ..	<i>n.a.</i>	9	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Japan .. ..	44	37	238	268	459	112
Korea (South) .. ..	31,392	31,760	32,013	38,599	47,422	<i>n.a.</i>
Thailand .. ..	15,624	38,055	47,140	72,507	124,120	201,636

IMPORTS OF FLUORSPAR

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada .. ..	59,625	62,487	62,364	67,254	84,146	103,094
India (c) .. ..	10,377	4,226	3,111	5,545	8,221	4,068
Australia (a) .. ..	7,585	5,915	8,430	15,529	17,983	20,797
<b>OTHER COUNTRIES</b>						
Austria .. ..	8,307	14,362	13,794	13,591	13,337	15,182
Belgium-Luxemburg E.U. .. ..	6,328	8,005	7,059	6,487	9,775	13,032
Denmark .. ..	456	472	597	1,668	1,678	3,570
Finland .. ..	2,905	3,162	6,282	4,840	4,287	6,182
France .. ..	76	—	324	3,060	3,421	359
Germany (Federal) .. ..	46,642	59,773	109,095	118,441	116,572	151,062
Italy .. ..	9,778	14,559	5,587	14,612	32,346	21,273
Netherlands .. ..	8,702	14,243	18,672	15,558	19,556	22,250
Norway .. ..	1,534	1,859	3,094	2,738	2,383	2,774
Poland .. ..	22,000	26,400	29,784	39,579	29,961	32,822
Sweden .. ..	10,698	11,020	20,553	20,858	10,498	13,900
U.S.S.R. .. ..	89,500	130,400	114,500	93,400	83,067	100,389
Yugoslavia .. ..	3,026	3,972	3,429	7,010	1,174	1,839
Mexico .. ..	50	11	8	70	2	13
United States .. ..	495,646	614,226	729,059	784,416	814,170	937,596
Brazil .. ..	443	—	—	—	25	<i>n.a.</i>
Chile .. ..	418	<i>n.a.</i>	742	<i>n.a.</i>	2,184	<i>n.a.</i>
Colombia .. ..	(b) 509	(b) 202	186	147	26	<i>n.a.</i>
Venezuela .. ..	382	475	164	3,744	1,968	198
Israel .. ..	756	513	915	318	516	655
Japan .. ..	126,856	203,573	168,851	220,710	353,207	486,247
Turkey .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	3,469	1,180

(a) Years ended June 30 of that stated. (c) Years ended March 31 following that stated.

(b) Including feldspar.

**FULLER'S EARTH**  
(see also Bentonite)  
**PRODUCTION OF FULLER'S EARTH**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
India .. .. .	(b) 30,000	(b) 25,000	n.a.	n.a.	n.a.	n.a.
Australia .. .. .	70	159	152	—	75	75
<b>OTHER COUNTRIES</b>						
Algeria .. .. .	80,319	52,087	58,940	(b) 60,000	(b) 60,000	(b) 60,000
Morocco .. .. .	36,777	31,779	37,009	30,004	26,138	29,492
South Africa .. .. .	879	161	580	—	1,131	212
United States (a) .. .. .	430,194	492,755	602,162	678,248	717,785	822,812

Fuller's earth is also produced in the United Kingdom, France, Senegal, Iran, Japan and Turkey.

(a) Sold or used by producers.

(b) Estimated.

**EXPORTS OF FULLER'S EARTH\***

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
Morocco .. .. .	28,867	22,833	21,956	27,679	21,291	n.a.
United States .. .. .	n.a.	n.a.	16,585	20,784	27,096	37,652
Iran (b) .. .. .	16	74	7	6	6	20

\*Statistics of exports of Fuller's earth are not generally separately recorded in official trade returns.

(a) As recorded by producers.

(b) Years ended March 20 of year following that stated.

**IMPORTS OF FULLER'S EARTH**

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Malawi .. .. .	n.a.	48	128	146	n.a.	n.a.
Zambia .. .. .	n.a.	n.a.	157	223	202	156
Canada .. .. .	n.a.	5,566	6,125	6,805	8,106	8,080
	(£46,660)	(£61,410)	(£65,546)	(£72,968)	(£87,429)	(£101,364)
Ceylon .. .. .	211	354	201	433	150	243
India (a) .. .. .	129	254	177	47	63	46
<b>OTHER COUNTRIES</b>						
South Africa .. .. .	1,137	n.a.	n.a.	n.a.	n.a.	n.a.
Chile .. .. .	423	663	5	n.a.	17	n.a.
Peru .. .. .	2,186	1,487	1,214	n.a.	896	n.a.
Venezuela .. .. .	439	549	913	797	987	765
Burma .. .. .	48	139	337	n.a.	n.a.	n.a.
Israel .. .. .	3,666	4,526	n.a.	n.a.	n.a.	n.a.

(a) Years ended March 31 following that stated.

**GOLD**  
**PRODUCTION OF GOLD**  
*(Metal content)*

Troy ounces fine

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Botswana .. .. .	142	10	—	—	—	<i>n.a.</i>
Ghana .. .. .	920,895	864,918	755,191	684,395	762,609	727,121
Kenya .. .. .	10,193	12,480	12,013	11,898	33,366	31,974
Nigeria .. .. .	252	195	63	40	39	248
Rhodesia .. .. .	566,278	575,386	544,100	(d) 550,000	(c) 515,000	(d) 500,000
Swaziland .. .. .	2,092	2,078	1,619	308	—	<i>n.a.</i>
Tanzania .. .. .	100,399	93,338	(b) 90,819	(b) 55,473	18,486	17,473
Uganda (b) .. .. .	50	—	40	—	—	—
Zambia .. .. .	4,960	5,130	5,196	5,100	(c) 5,000	(c) 5,000
Canada .. .. .	4,003,127	3,835,454	3,606,031	3,318,006	2,993,366	2,748,333
Guyana .. .. .	2,613	1,936	1,906	2,795	2,378	4,088
India .. .. .	138,400	148,500	130,600	120,200	101,600	114,400
Malaysia (West) (c) .. .. .	8,700	6,900	3,800	2,800	1,300	1,453
Sarawak .. .. .	2,773	3,115	2,601	2,611	2,521	2,718
Australia .. .. .	1,023,970	963,834	877,643	916,985	805,336	787,042
Fiji .. .. .	107,262	100,493	109,095	112,567	110,033	106,854
New Guinea and Papua	43,599	38,978	32,494	28,106	27,671	26,144
New Zealand .. .. .	14,206	8,948	12,136	8,964	10,703	8,626
Solomon Islands .. .. .	48	113	310	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>TOTAL .. .. .</b>	<b>6,950,000</b>	<b>6,662,000</b>	<b>6,185,000</b>	<b>5,820,000</b>	<b>5,388,000</b>	<b>5,082,000</b>
<b>OTHER COUNTRIES</b>						
Finland .. .. .	20,416	22,055	18,037	15,465	20,281	21,380
France .. .. .	53,630	54,296	57,390	60,164	62,730	58,450
Germany (Federal) .. .. .	2,048	2,402	1,865	(d) 1,800	(d) 1,100	<i>n.a.</i>
Portugal .. .. .	21,900	21,300	21,500	18,800	18,400	17,400
Spain .. .. .	16,000	24,000	8,300	450	<i>n.a.</i>	<i>n.a.</i>
Sweden .. .. .	115,200	117,700	118,100	79,570	60,668	49,737
Yugoslavia .. .. .	83,656	106,773	103,911	84,942	68,063	70,281
Angola .. .. .	37	7	2	—	—	—
Cameroun .. .. .	1,743	864	1,352	961	993	514
Central African Republic	90	70	20	40	—	<i>n.a.</i>
Congo (Republic of) .. .. .	2,700	3,270	3,390	3,730	4,590	<i>n.a.</i>
Congo Republic .. .. .	214,100	189,000	66,000	160,000	153,000	171,684
Eritrea .. .. .	(d) 2,300	(d) 2,300	} 24,236	21,256	23,612	24,113
Ethiopia .. .. .	(d) 25,000	(d) 25,000		34,000	31,500	29,386
Gabon .. .. .	32,700	39,100	30	11	22	6
Liberia (d) (a) .. .. .	1,960	1,824	1,701	4,351	5,111	3,216
Malagasy Republic .. .. .	900	420	568	809	755	476
Mozambique .. .. .	29	40	30	11	22	6
South Africa .. .. .	27,431,956	29,111,524	30,553,874	30,879,700	30,532,880	31,168,831
South-West Africa .. .. .	3	32	14	12	—	<i>n.a.</i>
Sudan .. .. .	868	877	300	(c) 200	<i>n.a.</i>	<i>n.a.</i>

(a) Years ended August 31 of year stated.

(b) Exports.

(c) Estimated.

(d) United States Bureau of Mines' estimate.

## PRODUCTION OF GOLD (cont.)

Troy ounces fine

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Upper Volta .. ..	40,310	29,400	29,250	14,470	<i>n.a.</i>	<i>n.a.</i>
Costa Rica (c) .. ..	3,000	3,000	600	600	500	500
Cuba (e) .. ..	61	—	—	—	—	<i>n.a.</i>
Haiti .. ..	6,778	8,090	6,719	5,071	(c) 6,000	3,100
Honduras (e) .. ..	2,474	3,319	3,546	3,516	2,860	6,426
Mexico .. ..	237,900	210,000	215,800	213,600	165,300	177,000
Nicaragua .. ..	204,769	211,900	198,152	169,154	194,683	<i>n.a.</i>
Salvador .. ..	(e) 230	(e) 390	(e) 290	(e) 236	673	<i>n.a.</i>
United States .. ..	1,454,010	1,456,308	1,705,190	1,803,420	1,584,187	1,478,292
Argentina .. ..	480	300	60	160	—	14
Bolivia (d) .. ..	153,033	50,042	84,950	16,238	<i>n.a.</i>	<i>n.a.</i>
Brazil (a) .. ..	132,000	142,500	155,000	168,000	173,000	170,000
Chile .. ..	75,880	63,080	57,100	67,770	58,130	57,743
Colombia .. ..	324,518	364,748	316,267	275,267	257,588	238,658
Ecuador .. ..	21,041	16,905	11,512	10,901	6,738	8,659
French Guiana .. ..	6,000	—	—	630	7,588	5,112
Peru .. ..	101,019	92,503	105,183	94,978	95,559	82,502
Surinam .. ..	3,548	8,258	6,269	5,159	(c) 4,500	(c) 4,690
Venezuela .. ..	26,947	33,536	22,390	16,895	18,917	20,600
Burma .. ..	(c) 200	(c) 200	(c) 200	(c) 200	(c) 200	(c) 200
Cambodia .. ..	6,687	(c) 6,000	(c) 4,500	(c) 4,000	(c) 4,000	(c) 4,000
Formosa .. ..	31,700	17,700	32,100	41,800	32,500	21,000
Indonesia .. ..	4,437	5,813	6,752	4,128	7,748	5,967
Japan .. ..	262,142	253,300	264,900	254,400	253,000	238,500
Korea (South) .. ..	90,090	75,780	62,820	60,540	63,337	62,405
Philippine Republic .. ..	376,006	425,770	437,474	453,546	498,114	527,355
<b>TOTAL*</b> .. ..	<b>31,600,000</b>	<b>33,200,000</b>	<b>34,700,000</b>	<b>35,100,000</b>	<b>34,700,000</b>	<b>34,900,000</b>
<b>WORLD'S TOTAL*</b> (excl. U.S.S.R.) .. ..	<b>38,500,000</b>	<b>39,900,000</b>	<b>40,900,000</b>	<b>40,900,000</b>	<b>40,100,000</b>	<b>40,000,000</b>

\*In view of the wide divergences in estimates of the production of gold in the U.S.S.R. (ranging from 2-18 million ounces) figures for that country have been omitted. The United States Bureau of Mines' revised estimate of annual production in recent years is 4-6 million ounces.

(a) Mined gold only.

(b) Estimated.

(c) United States Bureau of Mines' estimate.

(d) Exports.

(e) Imports into the United States.



**TOTAL EXPORTS OF GOLD\***

(Metal content)

Troy ounces fine

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Bullion, refined .. .. .	18,985,458	17,593,435	76,518,130	36,952,000	60,360,000	54,772,621
Coin .. .. .	865,340	2,408,318	2,100,438	1,324,117	920,170	399,815
Ghana—						
Bullion .. .. .	910,367	830,839	782,723	690,036	767,340	735,042
Kenya—						
Bullion .. .. .	8,868	12,162	13,813	12,019	26,942	24,741
Rhodesia (b)—						
Concentrates, etc.* .. .	1,200	1,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Bullion .. .. .	557,271	565,110	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tanzania—						
Bullion, refined .. .. .	102,519	93,040	90,817	55,473	18,486	17,474
Uganda—						
Bullion .. .. .	50*	—	40*	—	—	—
Canada—						
Bullion—						
Unrefined .. .. .	76,131	87,797	87,479	86,352	103,774	136,917
Refined .. .. .	2,305,337	3,161,509	1,940,013	1,171,898	2,296,197	16,186,394
Coin* .. .. .	47,700	71,800	124,400	249,700	177,500	56,337
Hong Kong—						
Bullion .. .. .	1,175,590	766,209	1,462,979	1,431,726	1,732,887	710,838
Australia (a)—						
Ores, etc. .. .. .	47,305	55,568	48,543	131,349	151,909	100,222
Bullion, refined .. .. .	394,950	449,003	576,575	768,702	515,134	485,480
do. unrefined .. .. .	16,018	562	157	1	61,280	15,831
Fiji—						
Bullion .. .. .	111,260	100,193	109,760	109,732	112,698	106,784
New Guinea (a)—						
Bullion* .. .. .	42,576	42,003	34,262	30,038	28,473	23,422
New Zealand* (a)—						
Beaten, rolled or drawn	18,000	8,000	7,000	5,000	3,000	2,000
Papua (a)—						
Bullion* .. .. .	48	28	56	56	30	47
Solomon Islands—						
Bullion .. .. .	240	101	323	349	672	654
Irish Republic*—						
Bullion .. .. .	1,502	1,338	1,380	3,900	1,800	1,529
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Bullion and scrap .. .	51,000	48,000	51,000	79,000*	119,000*	374,950
Coin .. .. .	289,000	113,000	60,000	106,000	64,301	128,603
France—						
Bullion and scrap .. .	691,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Coin .. .. .	57,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Beaten, rolled or drawn	32,000	28,000	21,000*	47,000*	53,000*	98,000
Germany (Federal)—						
Bullion .. .. .	204,000	241,000	316,800	300,000	358,000	802,000

\*Some countries record trade in gold by value or by the gross weight of bullion only. In such cases the weight has been obtained by dividing the value by the official annual average price of gold per fine ounce but in no case has any account been taken of the premium. Countries or items for which this conversion has been effected are marked with an asterisk.

(a) Years ended June 30 of that stated.

(b) Figures for 1963 relate to Rhodesia and Nyasaland.

## EXPORTS OF GOLD (cont.)

Troy ounces fine

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Netherlands—						
Bullion, etc. .. ..	13,000*	17,000*	78,000*	28,000*	28,000	38,000
Coin .. .. .	—	1,100	—	29,000	—	1,000
Sweden*—						
Bullion .. .. .	54,000	57,000	56,000	57,000	16,000	66,000
Switzerland—						
Bullion .. .. .	377,000	497,000	702,000*	659,000*	681,000	1,598,000
Cameroon—						
Bullion .. .. .	1,600	800	700*	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Equatorial African Community—						
Bullion .. .. .	33,000	35,000*	30,000*	25,000*	23,000	<i>n.a.</i>
Mozambique—						
Bullion .. .. .	397,000*	393,000*	291,000	294,000	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Bullion .. .. .	23,733,000	30,846,000	35,090,000	24,534,000	32,294,000	<i>n.a.</i>
Sudan*—						
Bullion .. .. .	—	200	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Upper Volta—						
Bullion .. .. .	45,000	33,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Honduras—						
Ore and base bullion ..	3,044	2,200*	—	3,860	4,906	6,005
Mexico—						
Bullion .. .. .	30,000	22,000	6,000	7,000	<i>n.a.</i>	<i>n.a.</i>
Nicaragua—						
Bullion .. .. .	203,386	200,749	153,900*	147,829	145,804	137,637
United States—						
Ore and base bullion ..	30,107	21,566	49,836	49,117	112,578	181,385
Refined bullion .. ..	5,789,826	12,056,841	36,667,207	13,017,549	28,607,404	23,781,006
Bolivia—						
Ore .. .. .	336	488	300	555	1,149	<i>n.a.</i>
Bullion .. .. .	152,697	49,554	84,650	15,683	1,100	760
Chile—						
Ores and concentrates	69,639	55,621	52,920	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
French Guiana—						
Bullion .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	1,100	<i>n.a.</i>
Peru—						
Ores, concentrates, etc.	40,197	36,847	35,734	43,594	} 33,887	} 32,000
Bullion .. .. .	3,658	2,487	8,900	10,044		
Philippine Republic—						
Ore and base bullion (a)	56,138	46,067	62,184	93,872	56,677	61,597
Refined bullion (a) ..	291,045	318,615	321,583	295,718	286,087	426,376

(a) Imports into the United States.

**TOTAL IMPORTS OF GOLD\***

*(Metal content)*

Troy ounces fine

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ore, etc.* .. ..	70	300	8,200	5,000	—	4
Bullion—						
Unrefined .. ..	1,675,865	1,550,421	1,526,633	763,770	819,002	819,275
Refined .. ..	32,622,702	39,299,321	37,884,653	25,838,792	33,735,000	44,636,753
Coin .. ..	382,260	451,450	551,080	72,060	118,382	90,062
Malta*—						
Bullion and coin .. ..	7,000	9,200	11,000	13,200	14,500	11,000
Ghana—						
Bullion .. ..	7,034	4,942	—	<i>n.a.</i>	610	2,500
Partly worked .. ..	1,094	808	1,904	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Coin .. ..	—	2,115	49,933	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Kenya—						
Bullion .. ..	634	5,285	6,858	7,034	6,748	7,318
Rhodesia* (c)—						
Concentrates .. ..	2,800	2,200	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tanzania—						
Bullion .. ..	1,269	1,434	2,700	3,676	556	62
Uganda—						
Bullion .. ..	1,152	2,599	1,172	3,810	2,745	1,173
Canada—						
Bullion .. ..	119,803	141,318	373,302	155,716	473,808	332,628
Coin* .. ..	520,000	75,000	442,000	29,000	133,000	221,000
Jamaica*—						
Bullion and coin .. ..	<i>n.a.</i>	200	<i>n.a.</i>	—	5,998	—
Trinidad and Tobago—						
Bullion and coin .. ..	8,718	9,252	9,011	7,020	8,578	<i>n.a.</i>
Brunei—						
Bullion .. ..	<i>n.a.</i>	52,750	38,588	59,217	61,116	28,390
Ceylon*—						
Bullion .. ..	40	100	11,000	—	30	55
Partly worked .. ..	11,200	13,500	100	12,700	—	—
Cyprus—						
Bullion .. ..	10,219	7,581	13,036	15,706	16,084	(d) 15,738
Hong Kong—						
Bullion .. ..	1,178,742	753,366	1,496,147	1,371,774	1,756,121	666,544
Sabah—						
Bullion .. ..	<i>n.a.</i>	4,610	15,528	<i>n.a.</i>	12,599	8,365
Sarawak—						
Bullion (b) .. ..	24,000	23,000	30,000	26,000	18,000	18,000
Australia (a)—						
Bullion .. ..	155,595	149,109	129,415	(d) 197,748	(d) 151,792	(d) 145,728
Fiji*—						
Bullion .. ..	200	400	200	300	300	300
New Zealand (a)—						
Bullion .. ..	47	1,257	429	1,838	588	<i>n.a.</i>
Beaten, rolled or drawn	10,837	9,746	10,150	10,744	13,088	<i>n.a.</i>
Irish Republic*—						
Bullion .. ..	4,800	12,800	21,200	20,400	23,500	30,000

\*See note on page 131.

(a) Years ended June 30 of that stated.  
 (b) Including coin and partly worked.

(c) Figure for 1963 relates to Rhodesia and Nyasaland.  
 (d) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF GOLD (cont.)

Troy ounces fine

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
Austria—						
Bullion .. .. .	211,000	683,000*	986,000*	1,161,000*	1,507,000	994,000
Belgium-Luxemburg						
E.U.—						
Bullion, scrap, etc. ..	293,000	418,000	1,140,000*	656,000*	1,275,000	1,097,000
Coin .. .. .	309,000	270,000	610,000*	579,000	479,000	212,000
Finland—						
Bullion and scrap ..	800	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	77,700	22,042
France—						
Bullion and scrap ..	10,011,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Coin .. .. .	9,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Beaten, rolled or drawn	12,000	15,000	14,000	15,000	18,000	68,400
Germany (Federal)—						
Bullion .. .. .	2,174,000	2,694,000	3,656,900*	3,686,000*	5,256,000	4,195,000
Coin .. .. .	83,000	99,000	251,100	345,000	345,000	301,000
Italy—						
Bullion and scrap ..	2,413,000*	1,299,000*	1,578,000	1,071,000*	1,620,000	1,038,000
Netherlands—						
Bullion .. .. .	146,000*	197,000	235,000*	38,000	35,000	53,000
Coin .. .. .	—	100	—	1,000	39	200
Norway—						
Bullion .. .. .	16,000	24,000	29,800	26,200	40,000	38,000
Sheets and rolled	3,000*	5,000	4,400*	5,500*	6,500	(b) 10,000
Sweden—						
Bullion* .. .. .	158,000	176,000	270,000	202,000	161,000	95,000
Switzerland—						
Bullion .. .. .	64,000	162,900	245,000	247,000	680,000	135,000
Mozambique—						
Bullion .. .. .	112,000*	102,000*	200*	266,000	<i>n.a.</i>	<i>n.a.</i>
Sudan—						
Bullion .. .. .	—	64	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
United States—						
Ore and base bullion ..	313,280	314,674	292,167	333,119	219,382	213,662
Refined bullion ..	967,339	854,211	2,613,161	866,926	710,487	5,730,853
Brazil—						
Bullion .. .. .	600	1,300	125	250*	17,000*	80,000*
Formosa—						
Bullion .. .. .	110,000	112,000	11,000	215,000	315,119	<i>n.a.</i>
Lebanon—						
Bullion and scrap ..	1,418,000	2,272,000	2,610,000*	3,284,000	2,939,000	<i>n.a.</i>
Syria—						
Bullion and scrap (a) ..	<i>n.a.</i>	11,800	<i>n.a.</i>	<i>n.a.</i>	360,000	<i>n.a.</i>

\*See note on page 131.

(a) Gross weight.

(b) Owing to a change of classification, not strictly comparable with previous years.

**GRAPHITE**  
**PRODUCTION OF GRAPHITE**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Ceylon (c) .. ..	8,286	10,676	8,740	9,867	10,203	10,631
Hong Kong—						
72%-80% fixed carbon	537	617	—	—	3	297
50% fixed carbon ..	259	93	—	—	16	201
<b>OTHER COUNTRIES</b>						
Austria (a) .. ..	98,016	100,622	84,401	78,283	31,043	25,066
Germany (Federal) ..	12,609	13,211	13,397	12,935	11,666	12,640
Italy .. ..	1,833	1,664	1,152	1,053	1,847	1,107
Norway .. ..	7,508	7,128	8,346	7,818	7,439	8,140
U.S.S.R. (b) .. ..	55,000	59,000	59,000	64,000	64,000	69,000
Malagasy Republic—						
Flake .. ..	8,986	6,953	8,012	7,873	} 16,146	16,170
Powder .. ..	9,954	6,011	8,734	8,234		
South Africa .. ..	599	930	399	1,037	629	711
South-West Africa ..	—	246	354	357	<i>n.a.</i>	<i>n.a.</i>
Mexico .. ..	29,519	29,857	39,775	38,140	40,047	51,862
Argentina .. ..	205	218	114	155	211	108
Brazil .. ..	5,929	4,598	6,851	9,018	9,080	<i>n.a.</i>
China (b) .. ..	40,000	40,000	40,000	40,000	30,000	30,000
Formosa .. ..	(b) 800	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Japan—						
Flake .. ..	2,501	2,024	} 2,216	2,168	1,688	<i>n.a.</i>
Amorphous .. ..	450	388				
Korea (South)—						
Flake .. ..	1,664	2,043	2,724	2,126	2,388	733
Amorphous .. ..	332,651	258,238	250,235	126,746	60,484	127,006
Korea (North) (b) ..	70,000	70,000	70,000	75,000	75,000	75,000
<b>TOTAL*</b> .. ..	<b>700,000</b>	<b>630,000</b>	<b>615,000</b>	<b>495,000</b>	<b>379,000</b>	<b>456,000</b>

\*An allowance has been made for graphite produced in India, Czechoslovakia and the United States.

(a) Crude.

(b) United States Bureau of Mines' estimate.

(c) Exports.

EXPORTS OF GRAPHITE

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Crucibles .. .. .	2,644	3,527	3,553	3,391	3,650	3,612
Ceylon .. .. .	8,286	10,676	8,740	9,867	10,203	10,631
Hong Kong .. .. .	100	460	352	305	30	100
India (b) .. .. .	14	14	8	11	33	164
Australia (a) .. .. .	10	3	20	21	—	—
<b>OTHER COUNTRIES</b>						
Austria .. .. .	19,212	18,850	20,852	16,610	17,923	24,329
Belgium-Luxemburg						
E.U. .. .. .	13	44	8	28	5	32
Denmark .. .. .	3	10	13	7	2	23
France .. .. .	1,738	2,250	1,871	1,760	1,667	1,178
Germany (Federal)	6,454	6,589	7,636	7,065	7,554	7,907
Italy .. .. .	1,492	1,272	1,654	1,398	1,467	1,543
Netherlands .. .. .	3	81	27	59	68	189
Norway .. .. .	7,138	7,389	8,211	7,638	7,274	8,558
Sweden .. .. .	35	8	24	133	155	47
U.S.S.R. .. .. .	6,300	7,400	6,000	8,200	9,349	10,039
Malagasy Republic	15,547	13,833	17,661	16,549	15,943	15,634
South Africa .. .. .	—	38	65	24	16	19
Mexico .. .. .	29,418	31,194	36,871	36,586	38,110	49,819
United States .. .. .	803	1,753	2,854	2,822	3,187	3,722
Formosa .. .. .	20	261	192	185	5	n.a.
Japan .. .. .	414	345	689	666	640	n.a.
Korea (South) .. .. .	46,667	42,045	48,102	55,183	50,422	n.a.

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

## IMPORTS OF GRAPHITE

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Natural .. .. .	7,963	9,137	10,284	10,011	8,280	10,105
Artificial .. ..	205	531	2,635	737	1,831	590
Rhodesia (d) .. ..	40	n.a.	n.a.	n.a.	n.a.	n.a.
Canada—						
Unground .. .. .	(£28,805)	n.a.	n.a.	n.a.	n.a.	n.a.
Ground, including manufactures .. .. .	(£779,409)	n.a.	n.a.	n.a.	n.a.	n.a.
Crucibles .. .. .	(£94,108)	(£81,196)	(£92,367)	(£92,393)	(£78,315)	n.a.
Hong Kong .. .. .	110	417	60	31	5	47
India (a)—						
Graphite .. .. .	1,051	2,183	13,359	908	1,409	940
Crucibles .. .. .	n.a.	n.a.	974	439	736	568
Malaysia West .. ..	n.a.	n.a.	109	145	144	174
Pakistan—	441	474	n.a.	n.a.	n.a.	n.a.
Australia (b) .. ..	(c) 1,223	(c) 1,268	(c) 1,543	1,211	1,449	1,274
New Zealand (b) .. .	41	27	36	89	207	n.a.
<b>OTHER COUNTRIES</b>						
Austria—						
Graphite .. .. .	141	219	293	231	293	683
Crucibles, etc. .. .	160	174	227	259	412	307
Belgium-Luxemburg						
E.U. .. .. .	870	997	887	617	537	717
Denmark .. .. .	364	405	361	403	283	296
Finland .. .. .	326	242	424	386	341	326
France .. .. .	5,014	4,375	4,928	4,803	4,805	4,700
Germany (Federal) ..	13,109	15,955	17,449	14,284	16,706	20,606
Germany (East) .. .	5,399	5,482	5,447	4,379	5,460	5,670
Greece .. .. .	257	270	363	290	255	187
Iceland .. .. .	1	—	—	1	—	—
Italy .. .. .	10,203	9,181	11,275	9,385	13,567	13,361
Netherlands .. .. .	386	358	337	242	182	235
Norway .. .. .	245	244	280	452	380	342
Poland .. .. .	9,781	10,352	10,405	12,266	9,854	11,386
Portugal .. .. .	104	109	130	142	156	184
Spain .. .. .	677	796	788	926	761	837
Sweden .. .. .	909	897	924	1,438	966	1,090
Switzerland .. .. .	658	552	547	616	463	500
Yugoslavia .. .. .	1,102	1,043	1,032	919	1,123	878
Morocco .. .. .	21	14	18	18	8	23
Mozambique .. .. .	3	33	6	4	n.a.	n.a.
South Africa .. .. .	771	540	442	422	465	484
Sudan .. .. .	10	—	—	9	—	16
Tunisia .. .. .	—	—	12	10	2	—
Mexico—						
Graphite .. .. .	60	65	266	131	204	184
Crucibles .. .. .	229	299	157	155	n.a.	240

(a) Years ended March 31 following that stated.

(b) Years ended June 30 of that stated.

(c) Including artificial.

(d) Figure for 1963 relates to Rhodesia and Nyasaland.

## IMPORTS OF GRAPHITE (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
United States (a) .. ..	46,263	42,093	51,798	50,568	50,322	60,550
Argentina .. ..	207	149	333	340	177	366
Brazil—						
Graphite .. ..	3	133	177	124	165	154
Crucibles .. ..	456	401	218	587	260	505
Chile .. ..	145	170	84	<i>n.a.</i>	312	<i>n.a.</i>
Colombia (b) .. ..	45	39	54	107	45	45
Peru (b) .. ..	37	87	107	72	251	<i>n.a.</i>
Uruguay .. ..	<i>n.a.</i>	<i>n.a.</i>	32	3	7	<i>n.a.</i>
Venezuela .. ..	88	184	295	524	266	186
Burma .. ..	<i>n.a.</i>	96	472	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Formosa .. ..	1,823	1,522	2,846	2,750	1,970	<i>n.a.</i>
Lebanon (b) .. ..	37	538	105	10	34	<i>n.a.</i>
Japan .. ..	60,330	55,773	51,437	51,909	54,325	61,939
Philippine Republic .. ..	74	107	34	<i>n.a.</i>	56	<i>n.a.</i>
Thailand .. ..	490	482	471	431	842	1,000
Turkey—						
Graphite .. ..	105	137	138	143	232	243
Crucibles, etc. .. ..	140	118	165	152	206	372

(a) In addition the following amounts of artificial graphite were imported:

Year	Long tons	
1963 .. ..	..	329
1964 .. ..	..	50
1965 .. ..	..	37
1966 .. ..	..	99
1967 .. ..	..	279
1968 .. ..	..	100

(b) Including artificial graphite.



**GYPSUM**  
**PRODUCTION OF GYPSUM**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Gypsum .. .. .	1,990,800	2,467,100	2,596,200	2,534,000	2,671,000	2,560,000
Anhydrite .. .. .	2,079,000	2,048,000	1,799,000	1,724,000	1,850,000	2,154,000
Kenya .. .. .	20,401	27,552	33,929	33,210	39,807	40,440
Tanzania .. .. .	1,847	2,910	6,126	3,190	15,235	4,391
Zambia .. .. .	—	—	—	1,058	1,478	1,058
Canada (a) .. .. .	5,430,622	f 5,732,177	f 5,630,006	f 5,335,861	f 4,620,879	f 5,486,779
Jamaica .. .. .	228,303	192,128	208,492	189,546	183,857	208,000
Trinidad .. .. .	2,958	2,260	1,836	1,981	3,589	4,251
Cyprus .. .. .	r 59,746	r 17,570	r 66,828	r 20,220	18,828	17,470
India .. .. .	1,172,103	868,555	1,142,000	1,273,000	1,011,764	1,298,000
Pakistan (g) .. .. .	194,578	192,283	147,068	111,210	101,000	45,321
Australia .. .. .	725,444	795,003	833,521	801,552	790,014	817,229
Irish Republic .. .. .	200,757	228,036	n.a.	n.a.	n.a.	n.a.
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Gypsum .. .. .	421,546	376,441	459,911	616,064	579,157	554,278
Anhydrite .. .. .	153,845	182,657	148,250	148,653	147,232	132,908
Bulgaria .. .. .	100,000	127,000	171,000	160,000	167,000	(e) 167,000
Czechoslovakia .. .. .	297,000	345,000	366,000	(e) 374,000	387,000	n.a.
France (a) .. .. .	4,141,636	4,834,477	4,933,544	5,188,513	5,108,097	(b) 5,000,000
<b>Germany (Federal)—</b>						
Gypsum .. .. .	(c) 1,120,340	(c) 1,258,200	(c) 1,279,000	1,295,513	1,221,753	1,454,535
Anhydrite .. .. .	57,414	99,819	140,643	142,710	99,203	42,996
Germany (East) (d) .. .. .	250,000	261,000	254,000	255,000	268,000	264,000
Greece .. .. .	121,925	138,394	157,248	200,516	207,000	217,000
Italy (including alabaster) .. .. .	2,358,017	2,509,342	3,124,212	3,315,561	n.a.	n.a.
Luxemburg .. .. .	6,639	7,045	7,565	6,000	9,307	6,264
Poland .. .. .	576,000	(e) 748,000	(e) 750,000	(e) 750,000	(e) 768,000	(e) 768,000
Portugal .. .. .	59,141	63,953	79,650	111,117	102,586	104,617
<b>Spain—</b>						
Gypsum (b) .. .. .	4,475,000	3,307,000	3,588,000	} 3,816,000	{ n.a.	n.a.
Anhydrite (b) .. .. .	50,000	n.a.	n.a.			
Switzerland (e) .. .. .	100,000	100,000	100,000	100,000	n.a.	n.a.
U.S.S.R. .. .. .	4,172,000	4,137,000	4,275,000	(e) 4,424,000	(e) 4,617,000	4,773,000
Yugoslavia .. .. .	136,000	153,000	164,000	166,000	168,000	n.a.
Angola .. .. .	13,983	9,890	10,000	(e) 10,000	(e) 10,000	(b) 10,000
Egypt .. .. .	446,552	332,120	225,316	450,850	536,265	561,160
Libya .. .. .	—	400	1,836	3,000	3,000	3,000
Niger .. .. .	—	—	1,500	(e) 2,000	1,702	n.a.
South Africa .. .. .	184,504	236,292	299,141	291,857	302,734	311,058
Sudan .. .. .	4,450	4,000	4,000	2,000	(b) 4,000	n.a.
Tunisia .. .. .	18,000	n.a.	n.a.	n.a.	n.a.	n.a.
Dominican Republic .. .. .	34,760	107,962	88,085	89,000	117,000	98,000
Guatemala .. .. .	14,560	7,000	9,000	12,000	11,000	8,000
Mexico .. .. .	1,080,000	1,146,654	1,064,660	1,133,000	961,000	1,216,000
Nicaragua .. .. .	2,500	5,500	5,000	9,000	10,000	14,000
United States .. .. .	9,275,000	9,539,000	8,960,000	8,613,000	8,387,000	8,945,000
Argentina (a) .. .. .	139,334	148,125	201,046	283,650	260,473	365,171
Brazil .. .. .	103,952	83,072	71,392	78,956	70,322	n.a.
Chile .. .. .	104,000	117,278	105,466	118,000	130,653	119,000
Colombia .. .. .	100,000	105,800	110,000	113,000	116,000	119,000
Paraguay .. .. .	n.a.	770	2,200	3,000	2,000	2,300
Peru .. .. .	51,726	49,246	65,425	62,000	65,000	n.a.
Venezuela .. .. .	63,449	75,000	89,000	(e) 85,000	(e) 84,000	(e) 100,000

(a) Including anhydrite.

(b) Estimated.

(c) Excluding a small production in Rheinland-Pfalz.

(d) Crude estimated on production of calcined

(e) United States Bureau of Mines' estimate.

(f) Producers' shipments.

(g) West Pakistan.

PRODUCTION OF GYPSUM (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
Burma .. .. .	(a) 1,000	(a) 1,000	(a) 1,000	(a) 1,000	(a) 1,000	(a) 1,500
Formosa .. .. .	26,168	16,824	27,320	8,280	16,197	5,547
Israel .. .. .	105,000	74,000	90,000	100,000	90,000	70,000
Japan .. .. .	770,306	738,914	639,000	588,000	575,000	553,671
Jordan .. .. .	(b) 8,600	n.a.	n.a.	n.a.	n.a.	n.a.
Philippine Republic .. .. .	30,209	40,311	27,054	15,087	19,963	20,325
Saudi Arabia .. .. .	(b) 35,000	r 11,456	r 24,518	r 25,697	30,108	(b) 32,500
Syria .. .. .	(b) 15,000	20,000	(b) 15,000	(b) 15,000	(b) 15,000	(b) 15,000
Thailand .. .. .	23,512	41,238	11,063	39,003	60,722	126,070
Turkey (a) .. .. .	180,000	200,000	220,000	250,000	275,000	290,000
<b>TOTAL*</b> .. .. .	<b>44,000,000</b>	<b>45,000,000</b>	<b>44,000,000</b>	<b>44,000,000</b>	<b>44,000,000</b>	<b>47,000,000</b>

\*Excluding gypsum known to have been produced in Roumania, Cuba, China and many other countries. Also excluded is production of "Juss" (an impure sandy gypsum) in Iraq.

(a) Estimated.

(b) United States Bureau of Mines' estimate.

EXPORTS OF GYPSUM

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Crude .. .. .	6,723	7,602	10,570	11,589	8,653	9,402
Calcined .. .. .	1,864	2,910	4,488	1,526	—	100
Canada—						
Crude .. .. .	4,199,212	4,515,404	4,238,070	4,171,891	3,478,691	3,985,362
Calcined .. .. .	134,492	137,463	192,738	197,769	188,696	249,326
Cyprus—						
Crude .. .. .	54,279	42,523	41,042	55,650	12,954	10,582
Calcined .. .. .	1,616	1,670	1,418	1,196	293	255
India (b) .. .. .	—	5	1	—	—	935
Malaysia (West)—						
Crude and calcined .. .. .	n.a.	n.a.	228	20	34	29
Singapore—						
Crude and calcined .. .. .	476	306	756	1,157	593	327
Australia (a)—						
Crude .. .. .	157,375	181,021	166,557	184,450	238,873	211,185
Calcined .. .. .	351	269	543	617	516	736
Irish Republic—						
Crude .. .. .	94,399	98,072	97,463	93,509	96,310	107,478
<b>OTHER COUNTRIES</b>						
Austria—						
Crude .. .. .	48,157	56,078	57,139	77,665	92,600	103,550
Calcined .. .. .	745	998	1,177	804	818	1,365
Belgium-Luxemburg						
E.U.—						
Crude .. .. .	617	338	722	299	44	182
Calcined .. .. .	13,647	15,261	15,482	13,789	10,481	10,459
Denmark—						
Crude and calcined .. .. .	20	7	11	29	125	55
France—						
Crude .. .. .	513,583	636,357	649,802	665,445	689,472	734,991
Calcined .. .. .	124,327	118,063	124,348	129,210	134,715	114,885
Germany (Federal)—						
Crude and calcined .. .. .	187,466	262,879	246,017	354,734	291,752	296,269
Germany (East)—						
Calcined .. .. .	36,460	49,943	59,771	32,571	58,266	71,809
Italy—						
Crude .. .. .	1,497	2,155	14,841	17,114	16,152	28,961
Calcined .. .. .	7,722	11,007	3,237			
Netherlands—						
Calcined .. .. .	167	155	167	100	229	197
Poland .. .. .	25,343	385,666	480,627	447,000	441,130	532,802
Portugal—						
Crude .. .. .	194	153	130	216	122	200
Calcined .. .. .	106	107	70	165	85	92
Spain—						
Crude and calcined .. .. .	4,654	4,433	6,523	3,756	4,762	4,182
Sweden—						
Calcined .. .. .	215	8	—	—	—	5
Switzerland—						
Ground and calcined .. .. .	75	108	68	109	1,334	2,183
Yugoslavia—						
Crude .. .. .	—	15	49	157	—	47
Ground and calcined .. .. .	—	—				
Angola—						
Crude .. .. .	2,968	5,592	5,478	5,613	9,486	7,271
Egypt—						
Crude and ground .. .. .	51,179	77,752	37,742	52,199	38,514	n.a.
Calcined .. .. .						

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

## EXPORTS OF GYPSUM (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Morocco—</b>						
Crude .. .. .	16,581	13,178	34,356	48,772	49,887	66,785
Calcined .. .. .	1,870	11,009	10,885	1,240	962	805
<b>South Africa .. .. .</b>	15,213	16,575	19,507	21,293	20,373	25,799
<b>Mexico—</b>						
Crude .. .. .	1,043,436	1,118,913	1,058,873	964,142	860,142	1,142,898
Calcined .. .. .	6	13	80	22	69	3
<b>United States—</b>						
Crude and calcined .. .. .	15,000	18,468	25,340	34,045	35,114	35,433
<b>Argentina .. .. .</b>	8,237	9,122	13,922	17,945	13,097	14,799
<b>Bolivia .. .. .</b>	<i>n.a.</i>	687	467	1,929	1,920	<i>n.a.</i>
<b>Venezuela .. .. .</b>	5,571	3,423	1,183	2,166	6,693	9,616
<b>Iran (a)—</b>						
Crude .. .. .	} 4,002	2,519	46	—	—	—
Calcined .. .. .			4,454	2,551	2,956	1,912
<b>Japan—</b>						
Crude .. .. .	6,978	6,526	6,439	6,438	6,726	5,664
Calcined .. .. .	405	365	780	7,266	3,949	7,908
<b>Syria .. .. .</b>	<i>n.a.</i>	<i>n.a.</i>	8,319	25,920	16,633	23,893

(a) Years ended March 20 following that stated.

## IMPORTS OF GYPSUM

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Crude and calcined .. .. .	139,864	154,481	156,212	147,010	143,378	188,255
Ghana .. .. .	3	25	4,577	2,520	5,483	7,697
Malawi .. .. .	<i>n.a.</i>	675	1,357	904	—	—
Rhodesia (c)—						
Crude and calcined .. .. .	15,130	9,252	7,707	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Zambia .. .. .	<i>n.a.</i>	7,617	9,250	16,044	2,870	21,345
Bermuda—						
Calcined .. .. .	828	601	306	325	267	269
Canada—						
Crude and ground .. .. .	66,632	72,309	67,351	} 76,708	61,707	61,662
Calcined .. .. .	7,484	3,712	4,216			
Hong Kong .. .. .	<i>n.a.</i>	9,870	9,832	17,766	4,329	22,263
India (a)—						
Crude .. .. .	41,627	98,872	} 15,434	8	—	2
Calcined .. .. .	10	14				
Malaysia (West)—						
Crude and calcined .. .. .	<i>n.a.</i>	<i>n.a.</i>	18,026	25,671	29,928	35,467
Singapore—						
Crude and calcined .. .. .	9,283	18,747	15,064	17,895	11,243	23,754
New Zealand (b)—						
Crude .. .. .	89,014	87,234	104,419	108,186	109,641	} 86,570
Calcined .. .. .	1,696	2,362	1,858	1,650	1,279	
<b>OTHER COUNTRIES</b>						
Austria—						
Crude .. .. .	179	3,876	7,298	11,620	16,066	17,433
Calcined .. .. .	4,409	3,736	42	7,546	11,008	12,695
Belgium-Luxemburg						
E. U.—						
Crude .. .. .	305,399	372,748	375,278	388,658	378,147	392,263
Calcined .. .. .	45,797	50,469	58,151	53,357	54,070	46,923
Denmark—						
Crude .. .. .	50,029	77,806	92,621	89,038	100,299	108,513
Calcined .. .. .	6,332	6,739	6,423	5,069	6,667	4,890
Finland—						
Crude .. .. .	79,206	76,309	85,367	69,425	73,251	77,244
Calcined .. .. .	41,658	43,947	45,463	38,041	39,676	43,158
France—						
Crude .. .. .	13,478	17,479	17,644	18,234	16,715	16,483
Calcined .. .. .	3,383	2,595	4,115	4,496	21,011	4,155
Germany (Federal)—						
Crude and calcined .. .. .	72,813	78,809	76,482	98,229	119,380	122,044
Greece—						
Crude .. .. .	41	44	51	72	46	92
Calcined .. .. .	221	197	318	333	700	576
Iceland .. .. .	4,529	9,625	4,105	2,970	4,861	6,830
Italy—						
Crude .. .. .	66	45	635	} 1,049	{ 1,550	908
Calcined .. .. .	481	561	65			
Netherlands—						
Crude .. .. .	99,870	185,512	140,610	231,693	154,450	171,925
Calcined .. .. .	50,983	57,468	59,993	62,909	70,910	73,830
Norway—						
Crude .. .. .	52,056	41,608	54,657	72,172	91,026	132,665
Calcined .. .. .	4,408	4,926	5,142	4,294	4,271	3,763
Portugal—						
Crude .. .. .	11,161	15,380	14,009	15,379	14,104	16,059
Calcined .. .. .	9	17	10	7	11	8

(a) Years ended March 31 following that stated.

(b) Year ended June 30 of that stated.

(c) Figure for 1963 relates to Rhodesia and Nyasaland.

## IMPORTS OF GYPSUM (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Sweden—						
Crude .. .. .	204,283	307,065	368,307	333,235	333,207	359,615
Calcined .. .. .	23,774	23,532	23,654	22,927	25,448	21,347
Switzerland—						
Crude .. .. .	21,424	27,740	33,408	50,678	52,877	53,923
Ground and calcined .. .. .	4,441	3,980	5,533	4,541	6,043	8,409
Angola—						
Crude and calcined .. .. .	87	91	131	215	129	61
Malagasy Republic .. .. .	2,159	1,228	2,120	2,342	<i>n.a.</i>	4,040
Morocco .. .. .	—	—	—	11	—	—
Mozambique—						
Crude .. .. .	5,609	4,502	5,694	8,319	<i>n.a.</i>	<i>n.a.</i>
Calcined .. .. .	201	94	83	88	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Crude and calcined .. .. .	2,562	3,167	3,451	4,600	4,701	5,361
Sudan .. .. .	395	260	193	672	—	870
Tunisia—						
Calcined .. .. .	207	541	300	393	397	<i>n.a.</i>
Costa Rica .. .. .	160	460	3,910	3,287	4,422	<i>n.a.</i>
Guatemala .. .. .	21	18	—	21	31	21
Honduras—						
Calcined .. .. .	16	16	19	28	15	23
Mexico—						
Crude .. .. .	75	43	121	41	114	102
Panama Republic .. .. .	6,290	5,999	5,237	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Salvador—						
Crude .. .. .	998	984	2,743	1,991	7,589	3,062
Calcined .. .. .	49	46	61	66	57	54
United States—						
Crude .. .. .	4,902,052	5,587,234	5,277,909	4,892,000	4,074,100	4,887,500
Ground and calcined .. .. .	202	1,218	1,366	2,000	2,000	2,000
Argentina—						
Crude .. .. .	47	27	28	1	10	34
Brazil—						
Crude .. .. .	39	916	841	2,014	1,225	1,595
Colombia—						
Crude .. .. .	1	7,876	10,015	3,779	9,313	12,106
Calcined .. .. .	463	596	196	709	68	73
Peru—						
Crude and calcined .. .. .	23	148	104	209	424	<i>n.a.</i>
Uruguay—						
Crude and ground .. .. .	<i>n.a.</i>	<i>n.a.</i>	12,482	18,929	19,287	<i>n.a.</i>
Venezuela .. .. .	57	86	81	124	206	211
Formosa .. .. .	22,263	58,669	44,488	71,445	61,119	<i>n.a.</i>
Iran (a) .. .. .	65	144	220	129	934	372
Israel—						
Calcined .. .. .	70	49	111	172	170	<i>n.a.</i>
Japan .. .. .	106,601	89,551	49,537	48,308	43,267	56,186
Korea (South) .. .. .	29,499	45,472	40,951	70,327	81,130	<i>n.a.</i>
Lebanon .. .. .	37,468	34,283	31,114	23,602	20,223	<i>n.a.</i>
Philippine Republic—						
Crude .. .. .	19,790	27,145	25,525	<i>n.a.</i>	57,093	<i>n.a.</i>
Calcined .. .. .						
Thailand—						
Crude .. .. .	89	102	157	147	111	48

(a) Years ended March 20 of year following that stated.

**IODINE**  
**PRODUCTION OF IODINE**

Lb. avdp.

Producing Country	1963	1964	1965	1966	1967	1968
Italy .. .. .	7,209	—	—	—	—	—
Chile .. .. .	4,757,112	4,763,265	5,027,000	6,462,000	4,886,000	4,329,900
Indonesia.. ..	9,642	8,900	4,000	3,913	4,000	4,000
Japan .. .. .	3,117,870	4,464,000	4,841,000	5,792,000	6,417,000	7,916,000

Iodine is also produced in the U.S.S.R. and the United States.

**EXPORTS OF IODINE**

Lb. avdp.

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom ..	36,053	54,215	54,718	76,932	87,376	94,696
<b>OTHER COUNTRIES</b>						
<b>Belgium-Luxemburg E.U.—</b>						
Crude .. .. .	16,535	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Resublimed .. ..	65,036	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>France—</b>						
Resublimed .. ..	15,400	16,400	24,300	13,000	24,000	33,000
Germany (Federal) ..	38,140	25,353	100,972	14,000	17,000	34,000
<b>Netherlands—</b>						
Crude .. .. .	2,205	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Resublimed .. ..	4,409	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Chile .. .. .	3,875,649	4,392,558	3,860,000	5,380,600	5,476,300	<i>n.a.</i>
<b>Japan—</b>						
Crude .. .. .	} 2,486,664	2,930,236	3,077,390	5,215,078	4,680,404	6,619,509
Resublimed .. ..						

## IMPORTS OF IODINE

Lb. avdp

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom ..	813,775	939,502	1,174,108	1,242,474	1,428,663	1,394,904
Canada—						
Crude .. ..	240,292	178,800	228,900	213,400	371,900	234,700
India (a) .. ..	143,029	220,498	349,413	297,370	216,326	226,245
Australia (b)—						
Crude .. ..	4,900	200	7,728	19,600	<i>n.a.</i>	<i>n.a.</i>
New Zealand (b) ..	1,350	1,455	3,593	1,653	1,752	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Crude .. ..	257,941	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Resublimed .. ..	1,323	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Denmark .. ..	2,205	4,409	22,000	22,000	8,800	<i>n.a.</i>
France—						
Crude .. ..	354,944	630,522	881,849	1,113,000	798,073	630,522
Germany (Federal) ..	690,047	644,411	953,279	915,400	1,026,100	1,250,462
Greece .. ..	4,850	9,004	7,822	7,562	5,450	4,209
Italy—						
Crude .. ..	79,587	284,760	91,500	303,100	312,836	278,885
Resublimed .. ..	64,816	3,047	900	10,582	3,527	2,866
Netherlands .. ..	15,432	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Portugal—						
Crude .. ..	4,630	—	9,000	8,818	4,409	4,409
Resublimed .. ..	3,968	2,866	2,000	5,732	882	11
Spain—						
Crude .. ..	31,526	52,933	37,479	110,231	50,696	46,599
Resublimed .. ..	5,320	79	59	919	64	73
Sweden .. ..	11,000	4,000	9,000	7,000	7,000	<i>n.a.</i>
Yugoslavia .. ..	<i>n.a.</i>	<i>n.a.</i>	12,352	24,978	10,538	8,084
Morocco—						
Resublimed .. ..	712	847	53	359	752	531
Costa Rica .. ..	351	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	—	<i>n.a.</i>
Mexico .. ..	25,554	81,847	45,746	78,207	97,305	136,686
United States—						
Crude .. ..	3,336,000	2,592,000	2,847,133	7,133,000	3,459,000	5,882,524
Resublimed .. ..	3,000	3,000	2,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Argentina—						
Crude .. ..	33,116	113,016	90,423	52,408	37,055	51,992
Resublimed .. ..	14,826	12,547	15,503	66	—	5,512
Brazil .. ..	23,343	24,959	36,100	49,364	41,692	47,631
Colombia .. ..	6,788	4,676	2,599	5,031	4,274	9,771
Peru—						
Crude .. ..	115	1,618	1,570	1,124	<i>n.a.</i>	<i>n.a.</i>
Resublimed .. ..	1,556	2,928	2,100	2,211	<i>n.a.</i>	<i>n.a.</i>
Venezuela .. ..	9,841	7,328	11,391	6,515	7,961	7,032
Turkey .. ..	6,640	5,844	9,504	10,926	10,556	7,268

(a) Years ended March 31 following that stated.

(b) Years ended June 30 of that stated.



**IRON AND STEEL  
PRODUCTION OF IRON ORE\***  
(including Manganiferous Iron Ore)

Long tons

Producing Country	ORE										Estimated Iron Content			
	1963	1964	1965	1966	1967	1968	1963	1964	1965	1966	1967	1968		
<b>COMMONWEALTH COUNTRIES</b>														
United Kingdom (a) ..	14,912,000	16,325,700	15,414,700	13,657,900	12,739,100	13,715,500	4,026,000	4,408,000	4,162,000	3,688,000	3,567,000	3,840,000		
Rhodesia ..	645,025	810,981	n.d.	2,182,792	n.d.	n.d.	351,000	478,000	n.d.	n.d.	n.d.	n.d.		
Sierra Leone (f) ..	1,953,651	1,980,535	2,296,983	1,566,091	2,228,467	2,421,246	1,260,000	478,000	1,475,000	1,410,000	1,446,000	1,457,000		
Swaziland ..	—	59,242	1,003,848	36,331,003	1,715,985	44,018,031	—	1,276,000	632,000	987,000	1,032,000	1,271,000		
Canada ..	26,913,972	34,219,484	35,677,621	36,331,003	37,783,750	44,083,329	14,803,000	18,821,000	19,623,000	19,982,000	20,283,000	24,246,000		
Hong Kong ..	111,865	114,374	131,955	134,785	141,324	159,041	63,000	64,000	74,000	75,000	79,000	89,000		
India ..	14,758,570	15,069,580	23,363,000	19,620,000	18,648,743	20,000,000	9,000,000	8,440,000	14,000,000	11,970,000	11,350,000	12,000,000		
Cuba ..	5,422,000	5,956,000	6,872,711	6,480,000	6,645,000	6,508,342	3,145,000	3,454,000	3,760,000	3,854,000	4,200,000	4,200,000		
Malaysia (West) ..	7,264,543	6,465,695	6,872,711	5,762,440	5,349,780	5,100,342	4,068,000	3,621,000	3,849,000	3,227,000	2,996,000	2,866,000		
Pakistan (g) ..	67	4,824	23,000	5,000	16,887,000	25,977,000	3,558,000	n.d.	n.d.	n.d.	n.d.	n.d.		
Australia ..	5,514,562	5,669,518	6,695,269	11,552,985	16,887,000	25,977,000	3,558,000	3,655,000	4,297,000	7,385,000	10,831,000	16,767,000		
Fiji ..	1,062	—	2,236	2,624	2,575	3,286	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.		
New Zealand (b) ..	3,074	2,550	2,236	2,624	2,575	3,286	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.		
<b>TOTAL</b> ..	77,500,000	86,677,000	92,000,000	98,000,000	104,000,000	121,000,000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.		
<b>OTHER COUNTRIES</b>														
Albania ..	255,000	345,000	(h) 360,000	(h) 360,000	(h) 399,000	(h) 1,400,000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.		
Austria ..	3,675,420	3,506,826	3,480,400	3,420,460	3,418,400	3,427,105	1,161,000	1,110,000	1,093,000	1,081,000	1,082,000	1,101,000		
Belgium ..	94,000	60,000	90,000	122,000	87,000	80,000	33,000	21,000	32,000	43,000	30,000	28,000		
Bulgaria ..	645,000	710,000	1,776,000	2,567,000	2,457,000	2,700,000	400,000	440,000	1,100,000	1,600,000	1,500,000	1,700,000		
Czechoslovakia ..	3,357,000	2,801,000	2,407,000	2,202,000	1,884,000	1,516,000	1,010,000	840,000	1,100,000	660,000	570,000	500,000		
Finland (c) ..	357,942	469,000	670,000	646,000	633,000	650,000	233,000	305,000	440,000	420,000	412,000	420,000		
France ..	56,977,556	59,975,576	58,591,587	54,550,015	48,444,253	54,366,000	17,124,000	18,148,000	17,812,000	16,843,000	15,232,000	16,906,000		
Germany—														
Federal Republic (e) ..	8,454,152	8,559,334	7,827,626	7,083,399	6,679,268	6,345,172	3,074,000	2,752,000	2,512,000	2,265,000	2,152,000	2,031,000		
Eastern ..	1,635,000	1,608,000	1,604,000	1,694,000	1,653,000	1,392,000	491,000	482,000	481,000	508,000	496,000	350,000		
Greece ..	34,479	—	15,000	25,440	16,531	12,000	18,000	18,000	8,000	12,000	8,000	6,000		
Hungary ..	—	762,460	735,000	735,000	704,000	628,000	175,000	185,000	184,000	180,000	172,000	151,000		
Italy ..	1,007,937	861,809	772,300	81,4805	725,026	697,105	522,000	440,000	390,000	390,000	375,000	362,000		
Luxembourg ..	6,879,912	6,574,181	6,215,706	6,424,519	6,204,347	6,297,403	1,868,000	1,832,000	1,760,000	1,805,000	1,689,000	1,720,000		
Norway ..	1,966,992	2,089,812	2,425,555	2,411,839	3,324,392	3,645,052	1,268,000	1,348,000	1,572,000	1,562,000	2,068,000	2,376,662		
Poland ..	2,568,000	2,638,000	2,816,000	3,005,000	3,028,000	3,002,000	870,000	900,000	960,000	1,020,000	1,029,000	1,020,000		
Portugal ..	258,000	212,000	208,000	189,000	194,000	197,000	129,000	106,000	102,000	92,000	97,000	98,000		
Roumania ..	2,250,000	1,901,000	2,440,000	2,639,000	2,753,000	2,704,000	1,010,000	850,000	1,100,000	1,190,000	1,240,000	1,226,000		
Spain ..	5,111,433	5,026,800	5,601,478	4,835,000	5,118,000	6,102,000	2,518,000	2,489,000	2,721,000	2,500,000	2,500,000	3,050,000		
Sweden ..	23,263,601	26,198,490	28,890,053	27,545,300	27,889,300	26,762,100	14,208,000	16,036,000	17,789,000	17,189,000	17,150,000	16,500,000		
Switzerland (d) ..	94,000	90,000	111,000	65,000	4,000	n.d.	40,000	40,000	40,000	25,000	2,000	2,000		
U.S.S.R. ..	135,304,000	143,285,000	151,000,000	157,600,000	165,594,000	174,200,000	81,200,000	86,000,000	91,000,000	95,000,000	99,000,000	100,000,000		

\* For detailed figures see page 149.

(a) In addition bog ore and iron ore (not used for smelting) are produced.

(b) Used mainly or entirely for purposes other than iron production.

(c) Concentrated.

(d) Estimated.

(e) Marketable production.

(f) Exports.

(g) West Pakistan.

(h) United States Bureau of Mines' estimate

PRODUCTION OF IRON ORE (cont.)

Long tons

Producing Country	ORE							Estimated Iron Content				
	1963	1964	1965	1966	1967	1968	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>												
Yugoslavia	2,261,000	2,271,000	2,464,000	r 2,453,000	2,538,000	2,677,000	1,000,000	1,000,000	1,100,000	1,100,000	1,100,000	1,100,000
Algeria	1,945,000	2,696,000	3,082,321	1,457,000	2,499,000	3,031,000	1,050,000	1,460,000	1,670,000	790,000	1,350,000	1,600,000
Angola	626,620	885,184	802,321	778,062	1,136,072	3,167,385	410,000	580,000	520,000	510,000	738,000	2,059,000
Egypt	481,176	440,150	499,002	433,083	416,000	400,000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ghana	652,000	894,000	743,000	(g) 600,000	690,000	700,000	330,000	450,000	370,000	300,000	350,000	360,000
Liberia (h)	6,355,687	12,029,388	15,086,547	16,290,151	17,163,135	18,930,608	4,322,000	8,180,000	10,259,000	11,077,000	11,671,000	12,873,000
Mauritania	1,651,000	5,000,000	6,185,000	7,044,000	6,933,000	7,918,000	1,083,000	3,280,000	4,060,000	4,620,000	4,548,000	5,194,000
Morocco	1,018,249	873,611	936,000	1,000,661	870,447	794,197	598,000	518,000	558,000	597,000	519,000	493,000
South Africa (h)	4,910,589	5,599,642	6,616,761	7,568,104	7,614,987	8,102,708	2,950,000	3,360,000	3,970,000	4,540,000	4,570,000	4,862,000
Sudan	14,792	9,231	32,316	37,312	(e) 50,000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Tanzania	300	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Tunisia	851,000	925,000	1,099,000	1,267,000	903,000	999,600	460,000	500,000	590,000	680,000	500,000	550,000
Guatemala (f)	6,000	7,000	8,000	8,000	9,000	9,000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mexico	2,290,000	2,280,000	2,610,000	2,460,000	2,653,000	3,151,000	1,374,820	1,370,475	1,567,581	1,474,254	1,593,000	1,772,000
United States (c)	73,737,000	84,864,000	87,472,000	90,151,000	84,179,000	85,865,000	41,000,000	48,000,000	50,000,000	52,000,000	48,000,000	49,000,000
Argentina	92,916	93,008	111,109	153,488	220,650	272,428	46,000	47,000	56,000	68,000	97,000	120,000
Brazil	11,041,748	16,694,380	17,873,111	22,887,115	23,129,000	24,800,000	7,730,000	11,690,000	12,510,000	16,020,000	16,020,000	17,400,000
Chile	8,375,886	9,731,793	11,953,264	12,018,781	10,613,141	11,728,087	5,394,219	6,260,747	7,698,000	7,740,000	6,792,000	7,510,000
Colombia	684,000	700,000	694,960	649,424	842,136	849,140	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Peru	8,267,202	8,593,610	10,134,020	7,664,000	7,538,000	8,409,140	4,897,000	5,204,000	5,914,000	4,440,000	4,300,000	5,000,000
Uruguay	11,561,612	15,397,909	17,371,381	17,559,212	16,853,101	15,940,000	7,399,000	9,853,000	11,118,000	11,238,000	10,786,000	10,200,000
Venezuela	4,192	5,000	5,000	5,000	5,000	5,000	2,000	n.a.	3,000	n.a.	n.a.	n.a.
Burma (d)	50,000,000	50,000,000	50,000,000	50,000,000	35,000,000	32,000,000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
China (a)	21,000	20,000	50,000	(f) 60,000	10,000	10,000	10,000	10,000	30,000	30,000	n.a.	n.a.
Iran (g)	2,286,910	2,516,975	2,469,000	r 2,332,000	2,180,000	2,137,000	1,342,000	1,400,000	1,400,000	1,300,000	1,200,000	1,160,000
Japan (d)	492,800	674,000	725,500	r 777,200	687,000	817,000	251,000	344,000	569,000	596,000	350,000	417,000
Korea (South)	3,799,000	4,700,000	f 5,800,000	f 6,000,000	6,900,000	6,900,000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Korea (North)	1,362,835	1,945,369	1,415,070	r 1,431,859	1,454,412	1,531,846	790,000	780,000	820,000	840,000	831,000	766,000
Philippine Republic	15,493	188,000	178,656	680,776	540,000	490,000	10,000	120,000	460,000	430,000	350,000	310,000
Thailand	734,800	960,248	1,506,000	1,589,000	1,499,000	1,900,000	410,000	540,000	840,000	890,000	840,000	1,000,000
Turkey	294,200	302,300	274,800	216,800	201,000	169,000	164,000	168,000	151,000	121,000	110,000	93,000
New Caledonia	451,000,000	498,000,000	527,000,000	534,000,000	515,000,000	539,000,000	539,000,000	539,000,000	539,000,000	539,000,000	539,000,000	539,000,000
<b>TOTAL</b>	<b>528,000,000</b>	<b>585,000,000</b>	<b>619,000,000</b>	<b>632,000,000</b>	<b>619,000,000</b>	<b>661,000,000</b>						
<b>World's Total</b>												

Iron ore is also produced in Cuba, the Lebanon and North Vietnam.

(a) Estimated. (b) Exports. (c) Usable ore.

(d) Including iron sand as follows (long tons):

1963—1,274,743; 1964—1,402,808; 1965—1,369,000; 1966—1,239,000; 1967—1,107,987; 1968—1,114,000.

(e) Used mainly or entirely for purposes other than iron production.

(f) United States Bureau of Mines estimate.

(g) Years ended March 20 following that stated.

(h) Including by-product magnetite as follows (long tons): 1963—521,261; 1964—845,451; 1965—892,513; 1966—878,220; 1967—860,000; 1968—911,912.

## DETAILS OF PRODUCTION OF IRON ORE IN CERTAIN COUNTRIES

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Hematite .. ..	393,900	427,100	408,200	397,900	399,500	364,800
Jurassic ironstones—						
Lower lias .. ..	5,268,900	5,440,900	5,065,300	4,754,300	4,732,100	4,741,700
Middle lias .. ..	1,392,000	1,590,000	1,456,500	1,061,000	537,600	245,100
Inferior oolite .. ..	7,857,200	8,867,700	8,484,700	7,444,700	7,069,100	8,368,900
Sierra Leone (c)—						
Concentrates .. ..	1,814,687	1,827,018	2,054,882	2,076,522	2,168,160	2,355,870
Fines .. ..	138,189	153,298	241,930	105,131	55,483	63,954
Ferromax .. ..	775	219	171	1,139	824	1,422
<b>OTHER COUNTRIES</b>						
France—						
Phosphoric .. ..	53,518,180	56,547,534	55,238,426	50,807,451	45,315,739	51,448,000
Medium phosphoric .. ..	3,378,933	3,346,263	3,274,033	3,624,059	3,086,871	2,898,000
Non-phosphoric .. ..	80,443	81,779	79,128	58,505	41,644	19,000
Luxembourg—						
Siliceous iron ore .. ..	3,343,640	3,419,260	3,001,948	2,965,075	2,862,828	2,887,314
Calcareous iron ore .. ..	3,103,315	2,787,177	2,901,279	3,151,375	3,067,740	3,337,684
Ferruginous limestone .. ..	432,957	367,744	312,479	308,069	273,780	72,405
Portugal—						
Hematite .. ..	58,000	42,000	52,000	51,000	55,000	58,000
Magnetite .. ..	162,000	128,000	110,000	86,000	86,000	87,000
Manganiferous iron ore .. ..	38,000	42,000	46,000	52,000	53,000	52,000
Sweden—						
Manganiferous iron ore .. ..	181,000	133,000	133,000	106,000	111,000	} 26,762,100
Other iron ore .. ..	23,083,000	26,066,000	28,757,000	27,439,000	27,778,000	
By phosphorus content (a)						
Under 0.006% .. ..	1,454,568	1,358,059	1,404,705	1,207,245	1,738,798	n.a.
0.006% to under 0.04% .. ..	2,647,784	3,306,509	3,622,682	3,686,296	3,338,702	n.a.
0.04% to under 0.1% .. ..	1,244,866	1,426,243	2,371,340	3,839,754	3,360,726	n.a.
0.1% to under 0.7% .. ..	6,313,641	6,674,363	7,946,280	6,457,254	6,062,464	n.a.
0.7% to under 1% .. ..	1,482,344	2,045,676	2,447,422	2,423,490	2,724,573	n.a.
1% and over .. ..	10,120,398	11,387,640	11,097,624	9,931,267	10,663,850	n.a.
United States—						
Ore containing less than 5% Mn—						
Hematite (b) .. ..	46,509,000	47,603,000	47,043,000	46,602,000	40,991,000	34,627,000
Magnetite (b) .. ..	23,891,000	34,395,000	36,927,000	39,841,000	40,656,000	49,331,000
Limonite .. ..	2,443,000	1,806,000	2,664,000	2,913,000	1,760,000	1,177,000
Pyrite cinder and sinter .. ..	757,000	1,032,000	805,000	791,000	772,000	728,000
Ore containing 5 to under 10% Mn .. ..	136,569	27,725	32,935	4,035	—	n.a.

(a) Calculated on a basis of 50% Fe content.

(b) A small quantity of hematite is included with magnetite, and a small quantity of magnetite with hematite.

(c) Exports.

**EXPORTS OF IRON ORE**  
(including Manganiferous Iron Ore)

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	482	403	273	217	213	1,198
Rhodesia (d) .. .. .	207,239	282,045	316,270	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sierra Leone .. .. .	1,953,651	1,980,535	2,296,983	2,182,792	2,224,667	2,421,246
Canada .. .. .	23,854,973	30,473,700	30,799,252	30,693,745	31,406,52	36,010,719
Hong Kong .. .. .	119,826	129,569	142,948	138,566	167,01	168,529
India (b) .. .. .	9,712,220	10,407,378	12,075,253	13,191,038	13,516,997	15,498,348
Malaysia (West) .. .. .	6,581,755	6,316,970	6,634,197	5,680,684	5,245,852	5,106,707
Australia (e)—						
Iron ore .. .. .	113	12,201	96,651	337,856	<i>f</i> 5,468,386	<i>f</i> 12,325,812
Burnt pyrites .. .. .	118,337	106,715	73,912	70,070	—	—
Fiji .. .. .	1,227	—	—	—	—	—
Irish Republic—						
Burnt pyrites .. .. .	1,639	6,067	1,610	1,259	—	1,491
<b>OTHER COUNTRIES</b>						
Albania—						
Iron ore .. .. .	78,900	454,600	497,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Austria .. .. .	39	63	39	120	389	572
Belgium-Luxemburg						
E.U.—						
Iron ore .. .. .	271,060	222,103	66,334	22,083	61,126	16,675
Burnt pyrites .. .. .	210,810	184,691	195,922	206,658	226,790	266,959
Bulgaria .. .. .	14,096	10,651	10,441	—	<i>n.a.</i>	<i>n.a.</i>
Denmark—						
Bog ore (a) .. .. .	50,169	56,862	35,530	25,756	27,171	16,000
Burnt pyrites .. .. .	84,442	101,999	93,503	86,790	81,975	100,139
Finland—						
Iron ore .. .. .	85,674	167,236	17,019	3,297	12,008	12,280
Burnt pyrites .. .. .	163,855	122,807	105,868	68,902	5,530	14,125
France—						
Iron ore .. .. .	20,869,283	21,741,834	20,419,735	17,907,510	17,260,172	18,003,976
Burnt pyrites .. .. .	338,289	286,846	238,875	298,446	223,365	206,440
Germany (Federal)—						
Iron ore .. .. .	281,577	285,072	274,323	295,609	326,973	18,035
Burnt pyrites .. .. .	2,566	14,259	37,372	60,747	50,606	21,638
Greece—						
Iron ore .. .. .	50,089	<i>n.a.</i>	4,409	<i>n.a.</i>	—	591
Burnt pyrites .. .. .	42,488	<i>n.a.</i>	24,641	<i>n.a.</i>	57,481	34,172
Italy—						
Iron ore .. .. .	43	6,427	36,437	19,043	19	23
Burnt pyrites .. .. .	645,669	657,388	631,391	740,234	706,466	622,871
Netherlands—						
Iron ore .. .. .	6,652	3,070	6,587	3,837	3,277	3,241
Burnt iron pyrites .. .. .	125,148	244,879	254,159	187,327	88,911	69,045
Norway—						
Iron ore .. .. .	1,203,570	1,527,988	1,351,992	1,414,106	2,345,625	2,697,254
Burnt pyrites .. .. .	63,374	74,896	69,499	66,781	120,555	137,190
Portugal—						
Iron ore .. .. .	71,771	36,277	2,731	—	—	—
Burnt pyrites .. .. .	15,403	22,775	3,986	335	—	—
Spain (c) .. .. .	1,904,347	2,414,014	1,854,492	957,471	1,516,294	1,825,015
Sweden—						
Iron ore .. .. .	19,936,000	23,973,000	24,075,000	23,935,000	22,692,000	28,306,700
Burnt pyrites .. .. .	227,000	341,000	417,000	254,000	294,000	273,000
Switzerland (c) .. .. .	88,509	62,634	95,304	31,152	14,338	10,308

- (a) Used for purposes other than iron making. (e) Years ended June 30 of that stated.  
 (b) Years ended March 31 following that stated. (f) Including iron ore pellets.  
 (c) Including burnt pyrites.  
 (d) Figure for 1963 relates to Rhodesia and Nyasaland.

## EXPORTS OF IRON ORE (cont.)

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
U.S.S.R.—						
Iron ore .. ..	20,460,700	22,243,000	23,757,000	25,706,000	24,167,200	31,692,000
Burnt pyrites .. ..	999,954	927,122	1,213,000	1,478,000	1,586,000	1,507,804
Yugoslavia—						
Iron ore .. ..	151,547	198,169	97,231	<i>n.a.</i>	89,714	95,808
Burnt pyrites .. ..	—	1,037	2,358	<i>n.a.</i>	516	2,332
Algeria—						
Iron ore .. ..	1,928,060	2,783,645	2,945,431	1,574,730	<i>n.a.</i>	3,216,000
Burnt pyrites .. ..	32,381	31,642	35,313	29,944	<i>n.a.</i>	<i>n.a.</i>
Angola .. ..	645,183	1,109,740	682,450	616,893	768,290	435,196
Guinea .. ..	551,000	<i>n.a.</i>	<i>n.a.</i>	333,000	<i>n.a.</i>	<i>n.a.</i>
Liberia .. ..	6,355,687	12,029,388	15,086,547	16,290,151	17,163,135	18,930,608
Mauritania .. ..	128,000	4,900,000	5,871,000	7,044,260	7,330,200	7,581,000
Morocco—						
Iron ore .. ..	1,061,784	977,997	942,141	777,301	901,297	646,243
Burnt pyrites .. ..	19,547	25,738	13,860	14,369	5,049	837
South Africa .. ..	679,779	1,116,077	1,220,301	1,287,963	2,350,630	2,677,814
Sudan .. ..	—	—	34,023	46,941	8,612	9,857
Tunisia .. ..	755,771	817,634	895,842	862,492	762,642	650,000
Dominican Republic .. ..	—	5,567	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Mexico .. ..	1,095	21,148	9,757	118	77	134
United States .. ..	6,812,793	6,963,375	7,084,682	7,778,916	5,943,198	5,926,729
Brazil .. ..	8,137,174	9,575,964	12,530,156	12,706,562	14,053,619	14,812,045
Chile .. ..	6,979,980	8,969,654	10,555,000	10,559,486	9,737,628	<i>n.a.</i>
Peru .. ..	5,657,870	5,122,981	6,274,264	6,207,798	5,230,481	5,370,000
Venezuela .. ..	12,124,597	14,658,189	16,737,405	16,767,674	16,226,490	14,814,861
Iran (a) .. ..	1,968	5,234	—	—	—	—
Korea (South) .. ..	540,966	577,629	697,675	631,229	657,835	<i>n.a.</i>
Philippine Republic—						
Iron ore .. ..	1,442,499	1,324,083	1,367,091	1,489,319	1,527,959	1,492,000
Burnt pyrites .. ..	8,169	3,740	8,651	<i>n.a.</i>	11,623	<i>n.a.</i>
Turkey .. ..	11,909	—	—	—	99,523	62,271
New Caledonia .. ..	289,502	308,397	271,501	210,621	195,106	194,435

(a) Years ended March 20 following that stated.

**IMPORTS OF IRON ORE**  
(including Manganiferous Iron Ore)

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Iron ore .. .. .	13,940,164	18,000,505	18,299,984	15,542,087	15,521,447	17,246,957
Burnt pyrites .. .. .	383,248	597,774	556,972	400,501	553,417	343,456
Kenya .. .. .	1,355	2,511	5,598	6,642	5,500	—
Canada .. .. .	5,325,713	5,232,404	4,763,029	4,323,121	2,400,669	2,749,588
Hong Kong .. .. .	12,250	1,545	9,838	12,100	1,984	—
India (d) .. .. .	100	150	—	116	—	—
Singapore .. .. .	40	—	—	16,081	—	—
Australia (a) .. .. .	293,467	274,241	277,496	283,761	204,056	168,230
<b>Irish Republic .. .. .</b>	<b>202</b>	<b>267</b>	<b>1,242</b>	<b>713</b>	<b>555</b>	<b>518</b>
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Iron ore .. .. .	972,994	1,089,893	1,101,776	1,156,800	889,978	1,352,805
Burnt pyrites .. .. .	356,078	368,068	355,247	340,519	329,489	241,538
<b>Belgium-Luxemburg E.U.—</b>						
Iron ore .. .. .	19,409,036	22,535,724	23,369,882	21,068,540	21,533,065	25,921,327
Burnt pyrites .. .. .	43,483	113,197	151,382	142,590	125,126	149,968
Czechoslovakia .. .. .	9,186,000	9,162,000	9,402,000	9,189,000	10,202,000	10,836,000
Denmark .. .. .	(b) 2,053	(b) 2,048	(b) 7,950	(b) 12,000	(b) 7,517	(b) 6,400
Finland .. .. .	377,101	505,459	953,519	824,090	627,820	618,349
<b>France—</b>						
Iron ore .. .. .	3,423,086	3,545,327	3,846,865	4,178,100	4,766,596	4,937,516
Burnt pyrites .. .. .	26,865	38,921	75,536	57,794	44,873	33,752
<b>Germany (Federal)—</b>						
Iron ore .. .. .	26,573,630	34,470,471	34,911,085	30,774,166	31,357,416	39,018,272
Burnt pyrites .. .. .	1,885,295	1,918,140	1,858,488	1,715,370	1,587,537	1,760,999
<b>Germany (East) (c) .. .. .</b>	<b>1,312,400</b>	<b>1,382,500</b>	<b>1,429,500</b>	<b>1,433,200</b>	<b>1,524,500</b>	<b>1,401,400</b>
Greece .. .. .	119,215	228,793	456,115	398,815	175,245	362,923
Hungary .. .. .	2,314,180	2,619,766	2,442,000	2,653,000	2,763,652	2,785,304
Italy .. .. .	5,144,832	4,959,134	7,886,661	8,032,473	9,769,503	9,909,465
Netherlands .. .. .	2,501,403	3,011,856	3,519,462	3,396,862	3,583,135	4,282,405
Norway .. .. .	10,870	19,635	17,105	8,522	7,606	13,633
Poland .. .. .	8,666,900	8,943,200	9,127,000	9,280,000	9,897,000	10,931,000
Roumania .. .. .	2,201,200	2,268,700	2,581,800	2,809,000	3,307,032	4,474,202
Spain .. .. .	91,701	92,823	347,287	561,184	588,547	584,750
<b>Sweden—</b>						
Iron ore .. .. .	2,000	72,000	169,000	211,000	3,000	80,000
Burnt pyrites .. .. .	15,000	10,000	20,000	6,000	3,000	5,000
Switzerland (b) .. .. .	3,669	1,958	2,562	7,126	21,149	23,691
Yugoslavia .. .. .	424,751	375,248	358,162	386,898	126,182	197,636
Morocco .. .. .	806	24,605	442	984	443	1,526
<b>United States—</b>						
Iron ore .. .. .	33,262,892	42,408,092	45,103,418	} 46,259,167	44,627,059	43,940,547
Burnt pyrites .. .. .	3,263	8,635	1,563			
Argentina .. .. .	745,428	1,003,020	1,032,519	695,738	866,155	606,001
Formosa .. .. .	43,020	76,277	30,612	104,957	66,565	n.a.
<b>Japan—</b>						
Iron ore .. .. .	25,661,157	30,678,093	38,370,349	45,361,775	55,790,332	67,066,569
Burnt pyrites .. .. .	191,905	64,820	31,538	5,149	9,389	21,230

(a) Years ended June 30 of that stated.

(d) Years ended March 31 following that stated.

(b) Including burnt pyrites.

(c) Fe content.

## PRODUCTION OF PIG-IRON AND FERRO-ALLOYS\*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	14,591,400	17,273,600	17,459,900	15,709,700	15,153,000	16,431,700
Rhodesia .. .. .	232,262	312,706	246,000	256,000	256,000	n.a.
Canada .. .. .	5,433,000	5,994,000	6,470,038	6,607,515	6,346,755	7,633,494
India .. .. .	6,630,000	6,489,000	7,030,000	7,085,026	6,957,588	7,364,000
Australia (e) .. .. .	3,629,771	3,930,107	4,183,678	4,666,885	4,977,334	5,483,000
<b>TOTAL .. .. .</b>	<b>30,520,000</b>	<b>34,000,000</b>	<b>35,390,000</b>	<b>34,370,000</b>	<b>33,691,000</b>	<b>37,168,000</b>
<b>OTHER COUNTRIES</b>						
Austria .. .. .	2,076,600	2,174,200	2,170,400	2,164,700	2,111,400	2,440,000
Belgium .. .. .	6,789,554	7,919,500	8,233,933	8,099,687	8,761,394	10,206,220
Bulgaria .. .. .	261,135	450,000	684,000	855,000	1,014,000	1,100,000
Czechoslovakia .. .. .	5,171,000	5,627,000	5,776,000	6,170,000	6,714,000	6,800,000
Finland .. .. .	326,692	583,000	921,000	919,000	1,021,600	1,088,000
France (a) .. .. .	14,080,508	15,612,174	15,520,937	15,343,969	15,462,067	16,190,198
Germany—						
Federal Republic .. .. .	22,652,000	26,882,000	26,706,000	25,158,000	26,933,000	29,826,000
Eastern .. .. .	2,115,900	2,224,200	2,301,100	2,409,000	2,485,000	2,296,000
Hungary .. .. .	1,379,266	1,476,414	1,564,000	1,614,000	1,631,000	1,623,000
Italy .. .. .	3,806,758	3,567,441	5,539,551	6,315,450	7,346,375	7,867,079
Luxembourg .. .. .	3,530,158	4,124,824	4,079,129	3,899,902	3,899,996	4,239,715
Netherlands .. .. .	1,681,400	1,916,200	2,327,000	2,173,900	2,545,000	2,776,000
Norway .. .. .	737,028	879,469	1,072,950	1,121,240	1,212,481	1,366,379
Poland .. .. .	5,310,000	5,554,000	5,669,000	5,763,000	6,477,000	6,732,000
Portugal .. .. .	236,453	264,217	271,404	244,880	280,836	284,047
Roumania .. .. .	1,679,000	1,894,000	1,987,000	2,163,000	2,417,000	2,945,000
Spain .. .. .	1,952,717	1,938,618	2,369,210	2,151,933	2,707,000	2,796,000
Sweden .. .. .	1,993,065	2,324,201	2,420,992	2,367,451	2,534,953	2,676,200
Switzerland .. .. .	41,000	30,000	25,000	25,000	24,000	22,000
U.S.S.R. .. .. .	57,764,000	61,392,000	65,200,000	69,154,000	73,630,000	77,600,000
Yugoslavia .. .. .	1,043,450	1,056,616	1,156,395	1,198,072	1,236,000	1,266,000
Egypt .. .. .	201,473	189,062	170,000	(d) 170,000	n.a.	n.a.
South Africa .. .. .	2,389,200	2,853,700	3,595,600	3,740,000	3,718,900	4,056,000
Mexico .. .. .	845,468	954,000	973,000	1,162,569	1,318,669	1,570,000
United States .. .. .	65,817,167	78,511,112	81,176,821	83,931,600	79,885,000	81,558,000
Argentina .. .. .	415,800	580,000	652,700	510,400	600,000	556,500
Brazil .. .. .	2,474,955	2,625,321	2,364,795	2,916,917	2,950,000	3,300,000
Chile (b) .. .. .	411,000	430,000	304,000	426,000	498,000	434,600
Colombia .. .. .	199,000	201,728	200,727	166,000	203,352	201,938
Peru (b) .. .. .	29,000	27,000	20,000	28,000	29,000	n.a.
Venezuela .. .. .	297,000	318,000	329,000	345,000	416,000	604,000
China (d) .. .. .	17,000,000	18,000,000	19,000,000	20,000,000	14,000,000	19,000,000
Formosa .. .. .	r 54,259	r 62,661	r 72,785	r 76,079	85,408	76,590
Japan .. .. .	20,154,399	24,100,000	27,700,000	32,200,000	40,400,000	46,713,000
Korea (South) .. .. .	5,340	1,314	18,092	20,270	22,039	n.a.
Korea (North) .. .. .	1,165,000	1,348,000	(d)1,462,000	(d)1,500,000	d 1,722,000	d 1,964,000
Thailand .. .. .	6,000	5,000	5,000	2,000	6,000	(d) 39,000
Turkey .. .. .	392,000	400,000	499,000	816,000	842,000	896,000
<b>TOTAL .. .. .</b>	<b>246,000,000</b>	<b>278,000,000</b>	<b>295,000,000</b>	<b>307,000,000</b>	<b>317,000,000</b>	<b>343,000,000</b>
<b>WORLD'S TOTAL .. .. .</b>	<b>276,000,000</b>	<b>312,000,000</b>	<b>330,000,000</b>	<b>341,000,000</b>	<b>351,000,000</b>	<b>380,000,000</b>

\* For details see page 154.

(a) Excluding electric furnace and aluminio-thermic ferro-alloys. For these see page 155.

(b) Excluding ferro-alloys.

(c) Estimated.

(d) United States Bureau of Mines' estimate.

(e) Including recovery from scrap and excluding ferro-alloys. For ferro-alloys see page 154.

## DETAILS OF PRODUCTION OF PIG-IRON AND FERRO-ALLOYS IN CERTAIN COUNTRIES

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Hematite .. .. .	816,800	956,800	877,300	677,900	641,500	887,600
Basic .. .. .	12,644,400	15,069,300	15,377,100	13,945,100	13,681,100	14,925,300
Foundry .. .. .						
Forge .. .. .	1,005,800	1,079,100	1,012,300	926,700	678,700	453,700
Direct castings .. .. .						
<b>Blast furnace ferro-alloys—</b>						
Spiegelisen .. .. .	23,000	16,900	21,200	9,100	} 151,700	165,200
Ferro-manganese .. .. .	101,400	151,500	172,000	150,900		
<b>Canada—</b>						
Basic .. .. .	4,549,179	5,060,871	5,634,602	5,683,266	5,509,085	6,751,729
Foundry .. .. .	279,153	389,620	427,926	417,529	475,142	500,446
Malleable .. .. .	469,230	398,469	245,401	338,975	212,535	232,290
Ferro-alloys (a) .. .. .	135,000	145,000	162,109	167,745	149,993	149,029
<b>India—</b>						
Basic .. .. .	4,750,000	4,640,000	} 6,860,000	6,930,000	6,802,000	7,200,000
Foundry .. .. .	1,364,000	1,297,000				
Other pig-iron .. .. .	365,000	} 552,000	} 6,860,000	6,930,000	6,802,000	7,200,000
Direct castings .. .. .	20,000					
Ferro-manganese .. .. .	115,711	123,749	146,973	135,311	133,684	143,507
Ferro-silicon .. .. .	14,982	17,245	20,215	19,088	19,881	20,176
Ferro-chrome .. .. .	—	319	—	627	68	317
<b>Australia—</b>						
Pig-iron .. .. .	3,629,771	3,930,107	4,183,678	4,666,885	4,977,334	5,483,000
Ferro-manganese (b) .. .. .	34,000	33,729	40,254	44,729	56,168	36,317
Ferro-silicon (b) .. .. .	8,302	5,015	4,404	4,225	8,807	10,052
Silico-manganese (b) .. .. .	4,322	13,510	15,748	10,716	18,940	14,870
Ferro-chrome (b) .. .. .	1,094	2,441	1,337	1,753	2,182	2,472
Chrome silicide (b) .. .. .	—	238	—	—	—	—
Ferro-silicon zirconium .. .. .	—	—	—	180	<i>n.a.</i>	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Basic .. .. .	2,037,632	2,139,502	2,111,378	2,131,090	2,071,705	2,406,793
Hematite .. .. .	35,102	29,575	53,954	28,847	34,024	27,951
<b>Electric furnace ferro-alloys .. .. .</b>						
	3,900	5,100	5,100	4,800	5,700	5,500
<b>Belgium—</b>						
Basic .. .. .	6,695,583	7,816,863	8,122,069	7,977,674	8,655,058	9,994,616
Forge .. .. .	481	1,021	—	—	—	—
Foundry .. .. .	76,155	89,704	98,590	105,223	93,134	99,405
Ferro-alloys .. .. .	17,335	11,912	13,274	16,790	13,202	13,780
<b>Czechoslovakia—</b>						
Basic .. .. .	4,550,000	4,944,000	5,048,000	5,471,000	6,157,000	} 6,800,000
Foundry .. .. .	544,000	591,000	636,000	651,000	513,000	
Ferro-alloys .. .. .	77,000	92,000	92,000	48,000	44,000	
<b>France—</b>						
<b>Phosphoric (over 1.4% P)—</b>						
Basic .. .. .	11,872,295	12,793,864	12,357,070	12,048,514	11,893,889	12,486,121
Foundry .. .. .	146,518	156,782	141,593	82,489	106,911	90,957
<b>Semi-phosphoric (from 0.5% to 1.4% P)—</b>						
Foundry .. .. .	293,879	288,060	267,647	195,494	96,341	94,207
Open hearth, basic .. .. .	(c)	(c)	(c)	(c)	(c)	(c)
<b>Hematite (less than 0.5% P)—</b>						
Foundry .. .. .	436,753	443,040	500,599	542,941	615,195	571,367
Open hearth and Bessemer .. .. .	769,698	1,279,228	1,653,051	1,951,609	2,322,088	2,466,278

(a) Factory shipments.

(b) Years ended November 30 of year stated.

(c) Included, if any, with phosphoric.



## DETAILS OF PRODUCTION OF PIG-IRON AND FERRO-ALLOYS (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
France <i>(cont.)</i> —						
Blast furnace ferro-alloys—						
Spiegeleisen .. ..	110,153	90,725	103,703	52,252	56,529	} 368,056
Ferro-manganese .. ..	252,510	315,021	321,945	296,762	258,340	
Other pig-iron .. ..	198,702	245,454	175,329	173,908	113,212	
Electric furnace and aluminio-thermic ferro-alloys—						
Ferro-silicon (50% Si)	86,649	101,720	117,550	119,723	112,569	128,901
Silico-spiegeleisen and silico-manganese .. ..	18,442	11,505	14,285	12,855	15,059	21,654
Silico-aluminium and silico-manganese-aluminium .. ..	938	844	1,052	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-manganese .. ..	28,500	28,864	29,845	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-chrome .. ..	53,722	61,480	70,356	} 83,806	93,586	96,116
Silico-chrome .. ..	3,370	4,097	3,907			
Ferro-tungsten ( <i>W content</i> ) .. ..	657	458	559	} (a) 766	(a) 606	<i>n.a.</i>
Ferro-molybdenum ( <i>Mo content</i> ) .. ..	1,772	1,786	1,428			
Ferro-vanadium ( <i>V content</i> ) .. ..	269	306	392	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Titanium alloys .. ..	3,424	3,915	4,876	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Silico-zirconium .. ..	338	506	1,277	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-silico-magnesium and silico-magnesium .. ..	2,662	2,227	3,268	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-niobium ( <i>Nb + Ta content</i> ) .. ..	13	70	47	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Germany (Federal)—						
Hematite and malleable						
Basic .. ..	959,000	1,234,000	1,271,000	1,120,000	999,000	1,080,000
Foundry .. ..	13,858,000	15,282,000	14,681,000	13,493,000	13,272,000	14,023,000
Stahleisen .. ..	593,000	493,000	446,000	299,000	244,000	275,000
Spiegeleisen .. ..	6,599,000	9,224,000	9,614,000	9,545,000	11,798,000	13,709,000
Spiegeleisen (blast-furnace) .. ..	} 286,000	} 283,000	} 276,000	} 291,000	} 250,000	} 323,000
Ferro-manganese (blast furnace) .. ..						
Siegerland special .. ..						
Other pig-iron .. ..						
Ferro-silicon (blast-furnace) .. ..	} 253,000	} 237,000	} 276,000	} 264,000	} 370,000	} 418,000
Electric furnace and aluminio-thermic ferro-alloys .. ..						
Germany (East)—	103,635	129,371	141,721	145,506	129,648	<i>n.a.</i>
Foundry .. ..	524,700	541,700	596,200	594,100	602,200	} 2,296,000
Open hearth .. ..	1,140,300	1,225,200	1,238,700	1,342,300	1,408,100	
Basic Bessemer .. ..	430,100	437,400	449,300	455,500	464,200	
Spiegeleisen .. ..	20,300	19,100	16,600	17,100	10,600	
Other .. ..	500	800	300	—	—	
Hungary—						
Basic .. ..	1,264,456	1,382,027	1,489,000	1,559,000	1,614,000	1,599,000
Foundry .. ..	99,149	87,698	64,000	48,000	9,000	12,000
Spiegeleisen .. ..	2,535	917	4,000	—	2,000	1,000
Ferro-manganese .. ..	6,952	161	1,536	2,223	7,558	11,000
Ferro-silicon .. ..	6,174	5,611	5,542	5,035	6,544	<i>n.a.</i>
Italy—						
Pig-iron .. ..	3,681,586	3,442,542	5,403,225	6,158,206	7,177,487	7,700,748
Spiegeleisen .. ..	5,481	1,330	2,829	3,420	4,120	4,761
Ferro-manganese .. ..	28,657	24,564	18,792	21,847	25,511	25,103
Ferro-silicon .. ..	43,514	44,099	48,226	61,427	62,172	58,787

(a) Excluding aluminio-thermic.

DETAILS OF PRODUCTION OF PIG-IRON AND FERRO-ALLOYS (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Italy (cont.)—</b>						
Silico-manganese ..	33,739	26,990	33,817	31,534	32,488	32,412
Ferro-chrome ..	5,146	15,208	21,795	28,798	31,398	34,041
Ferro-titanium ..	199	232	76	99	203	135
Ferro-tungsten ..	33	21	2	15	—	11
Ferro-vanadium ..	80	129	140	147	170	69
Ferro-molybdenum ..	833	859	957	947	665	347
Silico-aluminium ..	634	1,090	—	814	711	263
Silicon pig iron (10-12% Si) ..	967	1,631	1,752	1,852	1,947	1,410
Silico-spiegeleisen ..	1,750	2,053	1,318	1,597	1,949	1,850
Silico-chrome ..	—	2,885	2,047	802	—	—
Calcium silicide ..	3,676	3,049	3,670	3,340	4,699	4,566
Ferro-phosphorus ..	463	759	905	1,138	1,176	n.a.
<b>Luxemburg—</b>						
Basic ..	3,530,158	4,124,824	4,079,129	3,899,902	3,899,996	4,239,715
<b>Norway—</b>						
Pig-iron ..	400,594	429,815	516,061	619,702	626,776	663,433
Ferro-silicon ..	155,721	220,970	273,710	232,745	283,304	350,800
Ferro-manganese ..	57,091	74,684	118,701	115,221	133,226	166,598
Ferro-silico-manganese ..	89,026	107,809	124,318	119,454	131,800	139,713
Ferro-chrome and silico- chrome ..	33,346	45,112	39,023	30,948	32,222	38,699
Other ferro-alloys ..	1,250	1,079	1,137	3,170	5,153	7,136
<b>Portugal—</b>						
Basic ..	199,597	222,671	244,065	221,008	263,060	262,848
Foundry ..	31,284	35,930	20,490	15,772	10,395	13,897
Ferro-manganese ..	706	661	672	825	938	800
Ferro-silicon ..	4,866	4,633	5,962	7,034	6,079	6,207
Ferro-tungsten ..	—	322	215	241	364	295
<b>Spain—</b>						
Pig-iron ..	1,880,923	1,873,333	2,300,843	2,073,000	2,644,000	2,735,000
Ferro-manganese ..	27,145	32,326	37,163	35,396	40,284	40,294
Ferro-silicon ..	27,601	16,364	14,867	18,237	21,873	20,483
Ferro-tungsten ..	—	—	—	—	—	—
Ferro-chrome ..	—	—	—	—	—	—
Ferro-phosphorus ..	17,048	16,595	16,337	17,300	n.a.	n.a.
Other ferro-alloys ..	—	—	—	—	—	—
<b>Sweden—</b>						
Pig-iron ..	1,854,282	2,161,175	2,243,506	2,188,509	2,320,381	2,441,500
Ferro-manganese ..	25,480	26,250	25,703	25,014	38,772	34,300
Ferro-silicon ..	23,148	26,862	30,379	28,749	29,857	38,100
Ferro-silico-manganese ..	10,970	10,733	14,428	20,718	24,919	29,800
Ferro-chrome ..	45,067	50,036	56,217	55,192	53,980	59,800
Ferro-tungsten ..	237	208	78	51	316	100
Ferro-molybdenum ..	1,460	2,043	2,397	2,304	2,141	2,700
Ferro-vanadium ..	312	319	370	430	356	500
Metallic silicon ..	8,026	7,145	9,168	8,805	8,781	8,100
Silico-chrome ..	23,816	39,206	38,386	37,259	55,329	61,300
Other ferro-alloys ..	267	224	148	186	122	n.a.
<b>U.S.S.R.—</b>						
Basic ..	47,602,000	50,779,000	n.a.	58,887,000	63,134,000	66,721,000
Foundry ..	8,481,000	8,835,000	n.a.	8,837,000	9,161,000	9,437,000
Spiegeleisen ..	90,000	80,000	n.a.	91,000	90,000	74,000
Ferro-manganese ..	808,000	902,000	n.a.	888,000	897,000	929,000
Other blast furnace ferro-alloys ..	783,000	796,000	n.a.	451,000	349,000	383,000
<b>Yugoslavia—</b>						
Pig-iron ..	980,673	1,009,814	1,097,447	1,125,155	1,158,000	1,182,000
Ferro-alloys ..	62,777	46,802	58,948	72,917	77,422	83,658
<b>South Africa—</b>						
Pig-iron ..	2,182,800	2,614,500	3,219,600	3,367,900	3,366,200	3,713,100
Ferro-alloys ..	206,400	239,200	376,000	372,100	352,700	342,900

## DETAILS OF PRODUCTION OF PIG-IRON AND FERRO-ALLOYS (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>United States—</b>						
Basic .. .. .	57,991,137	69,997,803	71,813,215	74,529,700	72,629,000	74,461,000
Bessemer .. .. .	2,472,682	2,435,272	2,425,000	2,573,200	1,537,000	1,283,000
Low phosphorus .. .. .	167,561	174,737	195,939	186,600	148,000	151,000
Foundry .. .. .	1,368,587	1,449,111	1,428,054	1,493,800	1,384,000	1,371,000
Malleable .. .. .	1,952,204	2,029,979	2,505,409	2,542,900	1,634,000	1,611,000
Other pig-iron .. .. .	194,306	279,691	368,902	370,500	332,000	391,000
Ferro-manganese and spiegeleisen .. .. .	606,635	773,712	901,041	816,100	842,000	804,000
Ferro-silicon and silvery pig-iron .. .. .	493,874	598,416	(b) 628,712	(b) 463,400	(b) 471,000	487,000
Other ferro-alloys .. .. .	570,181	772,391	910,549	955,400	908,000	1,014,000
<b>Brazil—</b>						
Pig-iron .. .. .	2,437,428	2,586,979	2,317,477	2,865,576	3,050,000	3,300,000
Ferro-chrome .. .. .	1,684	128	2,150	2,978	<i>n.a.</i>	<i>n.a.</i>
Ferro-columbium .. .. .	—	18	272	452	520	1,126
Ferro-manganese .. .. .	20,132	20,317	22,829	27,795	<i>n.a.</i>	<i>n.a.</i>
Ferro-nickel .. .. .	237	3,172	3,525	3,708	<i>n.a.</i>	<i>n.a.</i>
Ferro-silicon .. .. .	9,930	8,120	7,489	9,178	<i>n.a.</i>	<i>n.a.</i>
Ferro-silico-manganese	5,544	6,587	11,053	7,230	<i>n.a.</i>	<i>n.a.</i>
<b>Japan—</b>						
Pig-iron .. .. .	19,621,124	23,402,839	27,068,000	31,512,000	39,462,000	45,664,000
Spiegeleisen .. .. .	717	535	100	500	700	<i>n.a.</i>
Ferro-chrome .. .. .	80,587	134,632	115,000	135,100	194,300	211,000
Ferro-manganese .. .. .	162,979	208,248	217,200	233,800	297,800	339,000
Ferro-molybdenum .. .. .	1,001	1,406	1,200	1,700	2,000	<i>n.a.</i>
Ferro-phosphorus .. .. .	1,241	1,703	1,500	2,000	2,400	<i>n.a.</i>
Ferro-silicon .. .. .	92,687	111,995	118,900	136,400	144,000	164,000
Ferro-titanium .. .. .	169	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-tungsten .. .. .	748	1,159	700	700	1,100	<i>n.a.</i>
Ferro-nickel .. .. .	46,143	77,086	72,600	70,400	105,200	132,000
Ferro-vanadium .. .. .	1,267	1,110	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Silico-manganese .. .. .	95,353	112,906	113,400	124,100	173,100	187,000
Silico-chrome .. .. .	31,989	58,209	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Calcium-silicon .. .. .	6,922	9,477	5,500	7,200	7,800	<i>n.a.</i>
Other ferro-alloys .. .. .	11,472	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Turkey—</b>						
Pig-iron .. .. .	388,000	395,000	492,000	809,000	834,000	896,000
Ferro-chrome .. .. .	3,700	4,745	7,355	7,000	8,337	<i>n.a.</i>

(a) Estimated.

(b) Excluding silvery pig-iron, included with "other pig-iron".

PRODUCTION OF STEEL INGOTS AND CASTINGS\*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	22,520,200	26,229,900	27,006,100	24,315,300	23,895,200	25,862,200
Rhodesia (c) .. .. .	82,555	125,597	128,000	128,000	134,000	n.a.
Canada .. .. .	7,318,813	8,150,417	8,954,374	8,931,132	8,655,688	10,045,532
India .. .. .	(c)5,874,324	(c)5,937,477	(c)6,311,398	(c)6,502,000	(c)6,216,000	6,600,000
Pakistan .. .. .	11,590	12,067	n.a.	n.a.	n.a.	n.a.
Australia (f) .. .. .	4,579,892	4,967,744	5,373,049	5,796,813	6,167,000	6,399,000
<b>TOTAL .. .. .</b>	<b>40,390,000</b>	<b>45,420,000</b>	<b>47,800,000</b>	<b>45,700,000</b>	<b>45,100,000</b>	<b>49,050,000</b>
Irish Republic (d) .. .. .	19,400	51,800	52,100	55,600	64,000	66,000
<b>OTHER COUNTRIES</b>						
Austria .. .. .	2,900,761	3,143,976	3,170,438	3,142,383	2,975,224	3,412,719
Belgium .. .. .	7,298,575	8,600,000	9,000,000	8,700,000	9,546,000	11,400,000
Bulgaria .. .. .	453,334	467,000	579,000	689,000	1,219,000	1,480,000
Czechoslovakia .. .. .	7,480,000	8,244,000	8,463,000	8,984,000	9,844,000	10,388,000
Denmark .. .. .	353,200	389,900	405,400	398,300	395,000	450,000
Finland .. .. .	303,543	352,000	373,000	409,000	421,000	696,000
France .. .. .	17,279,305	19,467,773	19,294,145	19,275,848	19,344,752	20,087,668
Germany—						
Federal Republic .. .. .	31,098,000	36,749,000	36,240,000	34,758,000	36,164,000	40,509,000
Eastern .. .. .	3,568,600	3,790,900	3,828,500	4,020,000	4,176,000	4,622,000
Greece .. .. .	206,000	207,000	207,000	196,000	269,000	215,000
Hungary .. .. .	2,336,539	2,327,404	2,480,294	2,607,000	2,696,000	2,857,000
Italy .. .. .	9,996,123	9,638,613	12,481,118	13,423,208	15,648,746	16,683,992
Luxemburg .. .. .	3,967,985	4,486,546	4,512,400	4,320,794	4,410,262	4,757,753
Netherlands .. .. .	2,310,100	2,604,600	3,088,800	3,216,300	3,350,000	3,648,000
Norway .. .. .	535,000	605,720	675,118	716,300	766,000	810,000
Poland .. .. .	7,878,000	8,437,000	8,944,000	9,694,000	10,289,000	10,833,000
Portugal .. .. .	218,879	245,703	264,929	261,288	305,864	307,000
Roumania .. .. .	2,661,000	2,991,000	3,372,000	3,612,000	4,023,000	4,676,000
Spain .. .. .	2,721,000	3,101,000	3,460,000	r 3,786,000	4,279,000	4,862,000
Sweden .. .. .	3,838,965	4,438,938	4,637,290	4,678,726	4,570,000	5,014,000
Switzerland .. .. .	317,000	340,000	342,000	421,000	438,000	446,000
U.S.S.R. .. .. .	78,959,000	83,691,000	89,563,000	95,376,000	100,620,000	104,850,000
Yugoslavia .. .. .	1,562,776	1,650,679	r 1,740,893	r 1,837,824	1,803,000	1,965,000
Egypt .. .. .	193,964	179,791	183,278	194,204	196,000	n.a.
South Africa (a) .. .. .	2,707,400	2,954,400	3,080,100	3,092,300	3,521,300	3,869,800
Mexico .. .. .	1,935,398	2,300,000	2,341,091	2,743,454	2,991,642	3,200,000
United States (b) .. .. .	97,554,418	113,460,506	117,376,430	119,733,400	113,584,000	117,378,000
Argentina (c) .. .. .	880,600	1,247,000	1,324,900	1,250,300	1,304,000	1,527,700
Brazil .. .. .	2,787,100	3,024,400	2,969,200	3,800,000	3,500,000	4,300,000
Chile (c) .. .. .	481,274	535,655	434,000	531,000	586,881	517,300
Colombia .. .. .	195,422	192,979	200,490	171,000	n.a.	n.a.
Peru .. .. .	75,000	81,000	93,000	76,000	75,000	104,000
Uruguay .. .. .	7,000	14,000	13,000	r 10,200	13,300	8,400
Venezuela .. .. .	358,000	433,000	1,068,000	514,000	656,000	735,000
Burma (e) .. .. .	15,000	15,000	15,000	15,000	n.a.	n.a.
China .. .. .	12,000,000	e 14,000,000	e 15,000,000	e 16,000,000	e 11,000,000	e 15,000,000
Formosa .. .. .	271,000	296,000	433,000	295,000	(e) 246,000	(e) 246,000
Israel .. .. .	82,000	(e) 82,000	(e) 83,000	(e) 83,000	n.a.	n.a.
Japan .. .. .	31,003,913	39,170,588	40,511,000	47,029,100	61,172,000	65,837,000
Korea (North) .. .. .	1,006,000	1,032,000	1,210,000	(e)1,300,000	(e)1,427,000	(e)1,723,000
Korea (South) .. .. .	159,800	131,634	191,793	214,418	324,000	360,000

\* For details see page 160.

(a) Excluding steel castings for which the amounts produced for sale were 82,000 tons, 93,200 tons, 106,900 tons, 99,700 tons, 146,000 and 117,500 tons, in 1963, 1964, 1965, 1966, 1967 and 1968 respectively.

(b) Excluding steel castings which were produced by companies not manufacturing steel ingots.

(c) Ingots only.

(f) Including recovery from scrap.

(d) Years ended June 30 of that stated.

(e) United States Bureau of Mines' estimate.

PRODUCTION OF STEEL INGOTS AND CASTINGS (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Thailand .. ..	3,000	4,000	7,000	5,000	3,000	<i>n.a.</i>
Turkey (b) .. ..	382,000	477,000	655,000	924,000	1,075,000	1,100,000
<b>TOTAL .. ..</b>	<b>340,000,000</b>	<b>386,000,000</b>	<b>404,000,000</b>	<b>422,000,000</b>	<b>440,000,000</b>	<b>471,000,000</b>
<b>WORLD'S TOTAL ..</b>	<b>380,000,000</b>	<b>431,000,000</b>	<b>452,000,000</b>	<b>468,000,000</b>	<b>485,000,000</b>	<b>520,000,000</b>

(a) United States Bureau of Mines' estimate.

(b) Ingots only.

DETAILS OF PRODUCTION OF STEEL INGOTS AND CASTINGS  
IN CERTAIN COUNTRIES

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
<b>Ingots and castings—</b>						
Open hearth, acid ..	383,500	419,300	392,000	255,900	131,700	154,200
do. basic ..	16,725,600	18,069,600	16,822,200	14,114,700	13,518,400	14,028,400
Bessemer, acid (a) ..	213,700	290,300	258,400	} 6,601,300	6,826,700	7,528,600
do. basic (a) ..	3,041,900	4,432,300	6,026,300			
Ingots, electric ..	1,692,300	} 2,938,700	3,437,300	3,343,400	3,418,400	4,151,000
Castings, electric ..	384,600					
All other ingots and castings ..	78,600	79,700	69,900	(b)	(b)	(b)
<b>Canada—</b>						
<b>Ingots—</b>						
Open hearth, basic and oxygen ..	6,537,118	7,249,831	7,809,471	7,728,426	7,530,912	8,659,364
do. electric ..	669,098	756,881	999,099	1,034,132	996,922	1,259,035
<b>Castings—</b>						
Open hearth, basic ..	2,360	1,206	} 145,804	168,574	127,855	127,133
Electric ..	110,237	142,499				
<b>India—</b>						
<b>Ingots—</b>						
Open hearth, basic ..	5,791,632	5,851,577	6,205,109	} 6,502,000	6,216,000	6,600,000
Electric ..	82,692	85,900	106,289			
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Open hearth ..	735,861	810,409	826,662	823,472	594,763	607,328
Electric ..	345,409	400,627	405,712	391,727	388,085	423,248
L.D. ..	1,819,491	1,932,940	1,938,064	1,927,184	1,992,376	2,382,143
<b>Belgium—</b>						
Ingots, open hearth ..	317,964	435,767	377,825	245,521	211,472	188,000
do. Bessemer, basic ..	6,599,526	7,088,736	6,780,051	6,144,916	6,339,768	6,408,000
do. electric ..	183,935	340,904	333,607	302,787	285,813	307,000
do. oxygen ..	134,091	625,682	1,424,108	1,987,332	2,645,852	4,401,000
Castings ..	63,059	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Czechoslovakia—</b>						
Open hearth ..	6,198,000	6,897,000	7,087,000	7,285,000	7,318,000	} 10,388,000
Bessemer ..	219,000	230,000	233,000	238,000	243,000	
Electric ..	1,063,000	1,117,000	1,143,000	1,190,000	1,240,000	
<b>Denmark—</b>						
Ingots, open hearth ..	328,600	362,700	376,300	373,400	} 379,900	432,000
Castings do. ..	9,000	5,400	6,100	8,100		
do. electric ..	15,600	21,800	23,000	16,800	14,800	17,700
<b>Finland—</b>						
Ingots ..	289,220	338,000	357,000	393,000	405,000	680,000
Castings ..	14,323	14,000	16,000	16,000	16,000	16,000
<b>France—</b>						
<b>Ingots and castings—</b>						
Bessemer, acid ..	79,742	92,019	87,018	65,673	66,110	56,313
do. basic ..	9,678,178	10,435,836	10,231,772	10,138,067	9,952,647	10,341,283
Open hearth, acid ..	4,698,713	5,100,438	4,699,518	4,412,322	4,216,285	4,008,154
do. basic ..						
Crucible ..	2,086	1,957	1,995	566	—	—
Electric ..	1,501,032	1,648,653	1,746,371	1,833,469	1,874,619	2,035,258
Kaldo, L.D., etc. ..	1,319,554	2,188,870	2,527,471	2,825,751	3,235,090	3,646,660
<b>Of which—</b>						
Ingots ..	16,938,984	19,106,958	18,933,262	18,943,472	19,004,481	19,708,471
Castings ..	340,321	360,815	360,883	332,376	340,271	379,197

(a) Bessemer acid and basic includes V.L.N., L.D., Rotor, and as from 1964, Kaldo.

(b) Included with Bessemer.

## DETAILS OF PRODUCTION OF STEEL INGOTS AND CASTINGS (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES						
(cont.)						
Germany (Federal)—						
Ingots—						
Open hearth .. ..	13,724,000	16,482,000	15,479,000	13,488,000	13,335,000	14,314,000
Bessemer, basic .. ..	12,244,000	12,046,000	10,640,000	9,640,000	8,333,000	7,543,000
Electric .. ..	2,150,000	2,451,000	2,557,000	2,545,000	3,059,000	3,626,000
Oxygen .. ..	2,414,000	5,143,000	6,924,000	8,516,000	11,379,000	15,017,000
Castings—						
Open hearth .. ..	72,000	87,000	78,000	57,000	49,000	57,000
Electric .. ..	454,000	501,000	530,000	497,000	462,000	557,000
Other .. ..	40,000	39,000	32,000	15,000	8,000	9,000
Germany (East)—						
Open hearth .. ..	2,820,200	3,020,900	3,044,300	3,209,300	3,834,000	} 4,622,000
Bessemer, basic .. ..	369,800	373,500	368,700	371,900	367,700	
Electric .. ..	378,600	396,500	415,500	438,800	474,500	
Italy—						
Ingots .. ..	9,803,095	9,473,766	12,324,239	13,252,048	15,401,724	16,436,060
Castings .. ..	193,028	164,847	156,879	171,160	237,180	247,932
Luxembourg—						
Bessemer, basic and oxygen .. ..	3,903,032	4,418,512	4,456,700	4,270,272	4,369,809	4,691,179
Electric .. ..	64,953	68,034	55,665	50,522	40,453	66,574
Norway—						
Ingots .. ..	511,021	580,979	648,096	687,042	750,501	768,890
Castings .. ..	24,000	24,741	27,022	29,300	27,000	42,000
Portugal—						
Ingots—						
L.D. .. ..	179,327	203,807	228,411	210,259	261,855	268,072
Electric .. ..	30,230	32,242	29,456	43,254	35,178	29,161
Castings .. ..	9,322	9,654	7,062	7,775	8,831	10,000
Spain—						
Open hearth and Bessemer .. ..	1,822,000	1,947,000	2,010,000	r 1,953,000	1,994,000	1,925,000
Electric .. ..	798,000	824,000	1,045,000	r 1,285,000	1,378,000	1,696,000
Oxygen .. ..	101,000	330,000	405,000	r 548,000	907,000	1,241,000
Sweden—						
Open hearth, acid .. ..	348,458	412,217	455,955	445,684	418,118	459,000
do. basic .. ..	866,142	989,384	1,040,939	1,013,869	1,013,338	900,000
Bessemer, basic .. ..	437,336	456,704	364,410	140,908	94,550	46,000
Electric .. ..	1,658,952	1,861,594	1,765,118	1,708,534	1,717,866	1,957,000
Other .. ..	528,077	719,039	1,010,868	1,369,731	1,534,434	1,652,000
U.S.S.R.—						
Open hearth .. ..	66,994,000	70,496,000	75,321,000	78,378,000	80,476,000	82,498,000
Bessemer .. ..	1,940,000	1,954,000	2,060,000	1,930,000	1,851,000	1,811,000
Electric .. ..	7,346,000	8,043,000	8,420,000	8,736,000	9,082,000	9,380,000
Other .. ..	2,679,000	3,198,000	3,762,000	6,332,000	9,211,000	11,160,000
of which—						
Ingots .. ..	73,236,000	77,675,000	n.a.	89,063,000	94,438,000	98,166,000
Castings .. ..	5,723,000	6,016,000	n.a.	6,313,000	6,478,000	6,684,000
Yugoslavia—						
Open hearth .. ..	1,369,682	1,459,240	1,515,310	1,547,713	1,525,519	1,572,000
Electric .. ..	193,094	191,439	225,988	289,213	277,546	320,000
South Africa—						
Ingots—						
Open hearth (including duplex) .. ..	1,656,200	1,675,200	1,638,500	1,649,400	1,747,200	1,884,700
Oxygen .. ..	675,000	873,700	971,100	1,002,800	1,256,900	1,371,400
Electric .. ..	376,200	405,500	470,500	440,100	517,200	613,700
Castings (a) .. ..	82,000	93,200	106,900	99,700	97,400	117,500

(a) Produced for sale.

## DETAILS OF PRODUCTION OF STEEL INGOTS AND CASTINGS (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>United States—</b>						
<b>Ingots and castings (a)—</b>						
Open hearth, acid ..	354,656	395,298	292,246	197,300	125,000	} 58,782,000
do. basic ..	78,961,348	87,191,754	83,808,848	75,718,100	62,991,000	
Bessemer .. ..	859,517	765,702	523,183	248,200	(b)	
Oxygen .. ..	7,628,641	13,787,666	20,427,326	30,293,000	36,995,000	43,582,000
Electric .. ..	9,750,256	11,320,086	12,324,827	13,276,800	13,473,000	15,013,000
<b>Of which—</b>						
Ingots .. ..	97,395,545	113,261,201	117,137,796	119,450,400	113,410,000	117,223,000
Castings .. ..	158,873	199,305	238,634	283,000	173,000	155,000
<b>Japan—</b>						
Open hearth .. ..	12,001,986	13,634,591	10,003,800	8,498,500	8,899,100	5,344,000
Bessemer, basic ..	11,854,960	17,303,032	22,271,100	29,439,900	40,000,000	48,494,000
Electric .. ..	7,146,967	8,232,965	8,236,100	9,090,700	11,181,500	11,996,000

(a) Excluding steel castings produced by companies not manufacturing steel ingots.

(b) Included with open hearth.



## EXPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
<b>Pig-iron—</b>						
Forge and foundry ..	20,780	10,877	24,189	6,856	8,637	15,783
Refined .. ..	16,155	7,422	9,228	7,000	6,516	5,798
Other .. ..	49,656	19,922	54,161	26,078	116,924	43,750
<b>Iron and steel powders, shot and sponge</b>						
Spiegeleisen .. ..	18,078	18,907	20,022	18,122	15,614	18,163
Ferro-manganese .. ..	76	60	93	—	10	31
Ferro-tungsten .. ..	940	10,036	13,076	22,101	17,794	22,463
Ferro-molybdenum .. ..	1,225	896	1,005	1,175	1,176	1,366
Ferro-titanium .. ..	160	130	277	478	209	671
Ferro-vanadium .. ..	1,024	1,076	1,281	1,085	977	1,456
Ferro-niobium and ferro-niobium-tantalum .. ..	3	5	117	61	41	42
Other ferro-alloys .. ..	173	153	212	196	175	152
Ingots, blooms, billets .. ..	3,240	3,371	2,966	3,173	4,721	3,432
Old and scrap (a) .. ..	32,579	81,053	89,983	82,742	277,071	208,488
Channel Islands—	1,066,609	703,085	422,811	274,490	1,116,374	901,339
Scrap .. ..	4,336	(c) 1,329	(c) 3,066	(c) 1,864	(c) 2,518	(c) 2,930
<b>Malta—</b>						
Scrap .. ..	5,879	9,749	8,935	5,624	7,142	6,331
<b>Kenya—</b>						
Scrap .. ..	2,908	22,562	8,618	5,628	5,490	2,368
<b>Nigeria—</b>						
Scrap .. ..	5,232	10,755	6,110	9,519	6,656	7,409
<b>Rhodesia (d)—</b>						
Pig-iron .. ..	213,277	214,947	211,046	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-alloys .. ..	13,728	22,341	20,990	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ingots, etc. .. ..	184	33,421	22,847	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Scrap .. ..	21,376	<i>n.a.</i>	30	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Tanzania—</b>						
Scrap .. ..	1,599	8,148	2,317	2,283	3,633	1,273
<b>Barbados—</b>						
Scrap .. ..	643	300	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Jamaica—</b>						
Scrap .. ..	5,048	20	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Trinidad and Tobago—</b>						
Old and scrap .. ..	742	3,891	3,447	6,644	2,877	461
<b>Canada—</b>						
Pig-iron .. ..	435,745	527,711	522,210	452,892	433,656	489,860
Ferro-chrome .. ..	2,598	154	183	31	—	1
Ferro-manganese .. ..	9	2,999	3,408	5,109	3,874	909
Ferro-silicon .. ..	32,800	41,060	41,453	33,949	37,437	42,156
Other ferro-alloys .. ..	1,271	214	1,654	5,314	1,056	571
Ingots, blooms, billets .. ..	336,884	394,853	271,220	197,307	156,988	266,297
Old and scrap .. ..	383,919	554,071	214,029	266,639	389,044	385,976
Tin-plate scrap .. ..	21,776	25,033	19,605	20,903	21,055	14,683
<b>Hong Kong—</b>						
Old and scrap .. ..	132,388	148,947	126,773	92,968	115,310	109,773
Tinplate scrap .. ..	3,462	4,699	4,027	1,230	1,276	3,923
<b>India(b)—</b>						
Pig-iron .. ..	—	—	6	168,165	550,724	756,153
Ferro-manganese .. ..	21,581	85,398	55,532	10,127	28,833	69,150
Ingots, blooms, billets .. ..	—	—	2,115	2,231	47,750	116,873
Old and scrap .. ..	377,863	442,780	439,378	444,917	563,398	395,444
<b>Malaysia (West)—</b>						
Scrap .. ..	<i>n.a.</i>	<i>n.a.</i>	34,370	31,939	36,642	25,121

(a) Excluding ships intended for breaking up as follows (gross tonnage): 1963—105,581; 1964—67,390; 1965—99,820; 1966—59,960; 1967—89,130; 1968—39,730

(b) Years ended March 31 following that stated.

(d) Figures for the year 1963 relate to Rhodesia and Nyasaland.

(c) Jersey only.

EXPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)  
Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
<b>Singapore—</b>						
Pig-iron .. ..	880	853	342	2,359	1,433	909
Ingots, blooms, etc. ..	85	25	377	2,044	1,100	3,266
Scrap .. ..	27,103	23,113	11,376	8,455	3,535	592
<b>Australia (a)—</b>						
Pig-iron .. ..	159,359	73,408	59,607	49,831	(b) 129,751	(b) 182,929
Ferro-alloys .. ..	8	8	131	51	(b) 16,922	(b) 314
Ingots, blooms, billets..	23,885	20,291	5,843	80,768	(b) 365,359	(b) 343,461
Old and scrap .. ..	196,453	336,041	353,963	250,082	338,005	344,917
Tin-plate scrap .. ..	22,629	15,576	14,518	14,989	65,123	78,231
<b>New Zealand (a)—</b>						
Scrap .. ..	285	578	529	4,985	5,448	5,532
<b>Irish Republic—</b>						
Old and scrap .. ..	26,032	44,875	34,558	18,346	31,533	20,056
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Pig-iron .. ..	1,022	729	49,898	660	8,811	14,403
Ferro-silicon .. ..	} 2,361	3,354	3,659	3,903	4,317	5,034
Other ferro-alloys .. ..						
Ingots and blooms .. ..	11,642	3,665	1,744	5,123	6,052	42,353
Scrap .. ..	3,386	3,825	3,686	5,441	11,377	6,021
<b>Belgium-Luxemburg E.U.—</b>						
Pig-iron .. ..	137,478	64,931	78,582	73,693	89,882	79,021
Spiegeleisen .. ..	1,964	4,080	1,076	2,066	3,150	2,542
Ferro-manganese .. ..	29,017	36,731	43,021	63,070	64,106	60,164
Other ferro-alloys .. ..	5,467	1,468	2,305	2,954	2,179	2,728
Ingots .. ..	45,910	41,290	7,436	20,520	6,948	7,391
Blooms, billets, etc. ..	400,985	647,265	747,398	641,885	552,521	639,173
Old and scrap .. ..	512,353	161,640	165,751	728,682	805,505	774,821
<b>Bulgaria—</b>						
Pig-iron .. ..	8,292	128,851	296,243	r 363,006	75,587	n.a.
Steel ingots .. ..	15,255	3,875	6,566	n.a.	n.a.	n.a.
<b>Denmark—</b>						
Blooms, billets, etc. ..	3,742	3,329	3,085	3,042	2,344	2,485
Old and scrap .. ..	38,174	48,868	41,038	37,252	61,589	70,922
<b>Finland—</b>						
Pig-iron .. ..	229,944	473,189	784,588	771,419	779,296	674,116
Ferro-alloys .. ..	16,844	39	—	—	—	6
Blooms, billets, etc. ..	n.a.	n.a.	5,950	5,395	1,433	39
Old and scrap .. ..	2,974	4,173	3,036	3,566	4,828	10,231
<b>France—</b>						
Pig-iron .. ..	149,744	99,370	98,501	55,865	70,546	45,756
Spiegeleisen .. ..	12,733	15,821	16,872	12,073	7,492	7,162
Ferro-manganese .. ..	147,755	192,878	200,442	184,815	167,227	204,910
Ferro-silicon .. ..	18,677	23,653	20,409	20,470	23,557	29,469
Ferro-chrome .. ..	16,112	15,980	18,175	22,727	19,536	21,318
Other ferro-alloys .. ..	7,074	8,428	13,225	19,693	23,067	30,066
Ingots .. ..	18,264	130,989	79,475	91,797	109,488	105,305
Blooms, billets, etc. ..	345,805	513,941	354,357	406,003	448,157	286,278
Old and scrap .. ..	1,176,547	1,478,046	1,802,489	1,793,996	2,156,413	2,157,290
<b>Germany (Federal)—</b>						
Pig-iron .. ..	796,781	636,879	421,683	497,591	1,114,137	708,405
Spiegeleisen .. ..	17,619	10,034	9,214	11,533	12,278	13,804
Ferro-alloys .. ..	77,314	74,149	72,023	118,102	69,465	112,492
Ingots, blooms, billets..	1,080,268	942,089	1,045,167	892,747	1,333,789	1,095,943
Old and scrap .. ..	1,278,191	1,287,500	1,929,245	1,948,780	2,091,848	1,817,670

(a) Years ended June 30 of that stated.

(b) Owing to reclassification, not comparable with earlier years (includes cast iron).

## EXPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Hungary—</b>						
Pig iron .. .. .	14,588	61,754	81,531	78,318	78,240	62,431
<b>Iceland—</b>						
Scrap .. .. .	<i>n.a.</i>	3,223	1,219	1,399	1,760	<i>n.a.</i>
<b>Italy—</b>						
Pig-iron .. .. .	143	63	203	195	157	470
Spiegeleisen .. .. .	8	37	516	29	6	67
Ferro-manganese .. .. .	2,008	7,497	6,969	9,125	8,478	17,042
Ferro-molybdenum .. .. .	(a)	13	1	1	1	129
Ferro-silicon .. .. .	1,682	572	1,500	1,854	1,442	1,336
Ferro-silico-manganese .. .. .	59	9	38	540	117	139
Ferro-chrome .. .. .	1,942	4,137	7,011	7,941	7,498	7,116
Ferro-vanadium .. .. .	(a)	39	18	5	<i>n.a.</i>	1
Other ferro-alloys .. .. .	20	99	2	249	595	279
Ingots .. .. .	100,397	111,073	84,723	34,157	14,588	30,701
Blooms, billets, etc. .. .. .						
Scrap .. .. .	1,709	4,829	1,798	2,030	2,504	6,819
<b>Netherlands—</b>						
Pig-iron .. .. .	142,883	93,188	83,196	97,069	291,919	118,919
Sponge iron .. .. .	154	209	80	61	18	2
Ferro-alloys .. .. .	333	257	221	727	658	788
Ingots, blooms and billets .. .. .	34,074	81,557	193,728	266,145	800,116	725,177
Old and scrap .. .. .	277,612	415,942	442,971	387,647	556,792	699,557
<b>Norway—</b>						
Pig-iron .. .. .	172,507	121,942	135,528	180,263	152,893	189,673
Ferro-chrome .. .. .	27,043	33,672	30,384	28,797	27,065	33,690
Ferro-manganese .. .. .	59,499	72,177	100,180	112,460	118,611	141,483
Ferro-silicon .. .. .	151,627	215,382	236,363	216,214	263,125	323,615
Ferro-silico-manganese .. .. .	83,022	105,999	116,953	106,830	111,466	129,790
Other ferro-alloys .. .. .	6,550	10,244	6,694	3,423	4,714	12,771
Ingots, blooms, billets .. .. .	86,990	103,908	104,188	110,951	172,273	30,162
Old and scrap .. .. .	4,574	8,661	11,067	14,860	6,267	29,166
<b>Poland—</b>						
Pig-iron .. .. .	57,576	15,200	1,118	9,842	262,883	423,611
Ferro-alloys .. .. .	3,536	6,239	4,334	3,024	284	1,042
<b>Portugal—</b>						
Pig-iron .. .. .	19,090	17,309	51	535	8	197
Ferro-alloys .. .. .	3,464	5,627	4,316	6,282	7,789	123
Old and scrap .. .. .	18,089	56,817	30,389	11,562	13,295	35,391
<b>Spain—</b>						
Pig-iron .. .. .	148,192	145,569	107,969	88,944	14,418	111,972
Ferro-silicon .. .. .	9,854	7,888	3,123	8,537	9,275	11,476
Other ferro-alloys .. .. .	9,816	9,680	6,477	2,715	4,399	12,004
Ingots, blooms, billets .. .. .	49,273	49,165	<i>n.a.</i>	23,583	—	1,173
<b>Sweden—</b>						
Pig-iron .. .. .	56,000	37,134	30,208	13,616	81,342	40,866
Sponge iron .. .. .	35,577	44,127	62,213	64,152	51,189	55,009
Ferro-manganese .. .. .	4,183	2,913	3,130	8,028	12,561	15,052
Ferro-silicon .. .. .	2,835	3,663	1,131	1,529	3,907	6,074
Ferro-silico-manganese .. .. .	r 20	r 1,004	r 25	r 15	r 471	r 29
Ferro-chrome .. .. .	22,613	20,231	18,685	22,555	22,979	22,591
Ferro-tungsten .. .. .	169	71	86	147	104	142
Other ferro-alloys .. .. .	2,318	2,321	2,341	2,600	9,425	5,804
Ingots .. .. .	103,498	118,742	99,725	57,180	55,114	54,667
Blooms, billets, etc. .. .. .						
Old and scrap .. .. .	11,616	21,469	18,443	18,367	16,975	11,244
<b>Switzerland—</b>						
Pig-iron and steel, etc. .. .. .	437	—	2	—	3	185
Ferro-alloys .. .. .	13,911	15,086	12,807	9,790	11,761	9,260
Old and scrap .. .. .	14,622	30,562	32,174	16,575	30,027	28,713

(a) Included, if any, with "Other ferro-alloys".

## EXPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>U.S.S.R.—</b>						
Pig iron .. ..	2,498,100	3,147,900	3,601,300	4,314,500	4,362,100	4,450,700
Ferro-manganese .. ..	56,000	58,700	66,200	86,000	85,626	95,665
Ferro-silicon .. ..	13,900	65,600	82,700	90,000	98,800	110,000
Other ferro-alloys .. ..	61,000	22,200	30,900	30,800	32,800	34,700
Steel ingots and billets	782,600	802,300	837,600	1,010,000	1,025,937	943,460
Scrap .. ..	266,800	464,200	555,600	605,600	666,900	653,600
<b>Yugoslavia—</b>						
Pig-iron .. ..	—	—	—	1,377	75,746	—
Ferro-chrome .. ..	7,184	6,906	9,948	9,090	8,028	8,303
Ferro-manganese .. ..	8,130	4,631	3,038	701	389	20
Silico-manganese .. ..	4,564	1,812	2,105	8,960	11,215	16,484
Ferro-silicon .. ..	16,168	7,191	10,198	10,481	16,312	24,254
Steel ingots .. ..	27,397	46	—	1,911	7,366	37,337
Scrap .. ..	682	281	2,270	720	32,664	18,564
<b>Algeria—</b>						
Old and scrap .. ..	92,000	<i>n.a.</i>	18,000	—	<i>n.a.</i>	<i>n.a.</i>
<b>Morocco—</b>						
Old and scrap .. ..	27,152	30,884	31,634	27,811	34,353	25,026
<b>Mozambique—</b>						
Scrap .. ..	4,701	8,479	8,724	5,304	<i>n.a.</i>	<i>n.a.</i>
<b>South Africa—</b>						
Pig-iron .. ..	215,365	348,027	554,386	757,757	918,499	661,975
Ferro-manganese .. ..	77,444	120,310	155,110	154,400	125,816	127,603
Other ferro-alloys .. ..	38,322	52,988	78,183	110,545	117,787	242,742
Ingots, blooms, billets..	2,889	3,493	909	3,855	792	1,129
<b>Sudan—</b>						
Scrap .. ..	1,705	2,021	1,653	8,969	7,733	1,565
<b>Tunisia—</b>						
Scrap .. ..	7,978	10,926	7,894	5,180	21,489	18,922
<b>Mexico—</b>						
Ferro-alloys .. ..	1,260	—	—	3,792	—	—
<b>United States—</b>						
Pig-iron .. ..	62,637	157,193	25,201	10,823	6,653	9,769
Spiegeleisen .. ..	1,050	701	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Powders and sponge .. ..	333	766	4,611	5,020	7,178	6,869
Ferro-phosphorus .. ..	36,930	145,684	71,349	56,198	20,447	32,775
Ferro-manganese .. ..	605	3,485	2,922	487	1,662	3,312
Ferro-chrome .. ..	2,102	8,957	10,716	6,828	12,012	24,221
Ferro-molybdenum .. ..	107	779	1,001	982	684	385
Ferro-vanadium .. ..	164	92	197	430	314	247
Ferro-silicon .. ..	2,795	5,165	4,094	5,189	10,512	16,404
Ferro-tungsten .. ..	1	—	—	—	—	—
Ferro-titanium .. ..	188	483	7,539	6,519	7,122	10,078
Other ferro-alloys .. ..	384	568	—	—	—	—
Steel ingots, slabs, blooms, billets and sheet bars .. ..	271,889	882,731	605,542	304,610	275,337	496,580
Scrap (a) .. ..	5,681,801	6,948,033	6,619,765	5,230,523	6,816,662	5,867,815
<b>Argentina—</b>						
Ingots, blooms, billets..	43,876	11,725	4,142	11,941	3,823	<i>n.a.</i>
<b>Brazil—</b>						
Pig-iron .. ..	—	146,601	99,696	1,968	259,564	65,531
Ferro-manganese .. ..	—	—	7,145	764	305	79
Other ferro-alloys .. ..	<i>n.a.</i>	1,561	3,070	1,282	2,439	1,536
<b>Chile—</b>						
Ferro-manganese .. ..	10,818	5,537	2,796	<i>n.a.</i>	1,436	<i>n.a.</i>
<b>Formosa—</b>						
Pig-iron .. ..	3,160	4,461	5,851	9,551	4,168	<i>n.a.</i>
Ferro-manganese .. ..	1,548	168	132	1,487	62	<i>n.a.</i>
Ferro-silicon .. ..	2,196	1,277	1,138	—	305	<i>n.a.</i>
<b>Indonesia—</b>						
Scrap .. ..	1,673	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Including tin-plate and terne-plate scrap.

## EXPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Israel—						
Scrap .. .. .	1,199	1,418	1,253	351	952	1,245
Japan—						
Pig-iron .. .. .	288	514	3,444	20,503	5,668	676
Ferro-chrome .. .. .	7,840	3,800	23,358	21,904	6,228	5,515
Ferro-manganese .. .. .	14,158	8,724	15,072	14,808	4,736	7,043
Ferro-silicon .. .. .	557	157	993	1,341	2,350	1,480
Ferro-silico-manganese .. .. .	3,701	427	712	589	343	1,275
Other ferro-alloys .. .. .	767	738	1,405	1,956	1,022	3,788
Ingots, blooms, billets .. .. .	56,443	57,994	451,273	161,881	49,853	49,582
Scrap .. .. .	1,715	4,239	2,757	2,767	4,424	42,982
Korea (South)—						
Scrap .. .. .	90	30	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Lebanon—						
Scrap .. .. .	154	795	764	4,356	30,032	<i>n.a.</i>
Philippine Republic—						
Scrap .. .. .	492	—	—	—	—	<i>n.a.</i>
Southern Yemen						
Scrap .. .. .	1,627	1,688	848	<i>n.a.</i>	507	333
Thailand—						
Scrap .. .. .	2,847	2,526	3,225	202	—	—
Turkey—						
Pig iron .. .. .	<i>n.a.</i>	—	492	—	—	—
Old and scrap .. .. .	276	133	492	365	1,838	883
Ferro-chrome .. .. .	1,348	5,770	5,852	7,251	5,123	9,678

## IMPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
<b>Pig-iron—</b>						
Forge and foundry ..	22,234	88,608	69,212	71,738	28,292	28,975
Hematite .. ..	122,336	166,869	160,502	232,514	197,735	151,907
Basic .. ..	42,139	77,854	83,476	78,853	35,971	38,790
Other (vanadium-titanium pig-iron produced in electric furnace)	2,558	2,395	2,859	1,922	1,948	<i>n.a.</i>
Sponge-iron .. ..	7,769	9,856	9,276	9,325	8,686	11,053
Spiegeleisen .. ..	345	35	151	49	—	—
Ferro-manganese ..	54,205	62,037	80,387	75,849	73,324	66,381
Ferro-silicon .. ..	87,825	109,673	117,817	98,290	94,732	110,756
Ferro-silicon-chrome ..	3,848	4,473	4,495	4,133	5,998	4,299
Ferro-chrome .. ..	34,458	47,254	60,894	50,065	44,627	58,464
Ferro-vanadium .. ..	59	85	239	81	141	482
Silico-manganese ..	27,297	35,837	32,722	27,847	24,390	26,632
Other ferro-alloys ..	2,578	4,339	6,740	5,662	7,365	8,846
Iron and steel ingots, etc.	556	15,019	13,229	32,697	113,298	88,925
<b>Blooms, billets, slabs—</b>						
Iron .. ..	1	11,089	13,894	68,960	166,220	376,329
Steel .. ..	255,428	430,383				
Old and scrap (a) ..	4,201	5,004	72,430	5,261	3,154	3,118
<b>Malta—</b>						
Ingots, etc. .. ..	1,093	2,590	22	79	10	5
<b>Ghana—</b>						
Pig-iron .. ..	288	231	241	1,213	394	1,236
Ferro-manganese ..	—	21	25	4	45	75
Ingots, blooms, etc. ..	22	2,031	3,098	160	315	83
<b>Kenya—</b>						
Pig-iron .. ..	493	619	997	1,499	1,340	946
Ferro-alloys .. ..	37					
Ingots, blooms, etc. ..	2,554	33	82	27	148	266
<b>Mauritius—</b>						
Pig-iron, ingots, etc. ..	33	43	28	22	53	1,076
<b>Rhodesia (b)—</b>						
Pig-iron, ingots, etc. ..	42	371	262	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-alloys .. ..	1,904	1,164	1,370	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Tanzania—</b>						
Pig-iron .. ..	94	240	807	1,433	1,607	998
Ferro-alloys .. ..	860					
Ingots, blooms, etc. ..	282	<i>n.a.</i>	—	—	202	1
<b>Uganda—</b>						
Pig-iron .. ..	50	86	518	571	567	543
Ferro-alloys .. ..	162					
Ingots, blooms, etc. ..	182	<i>n.a.</i>	73	—	492	1,568
<b>Zambia—</b>						
Pig-iron .. ..	<i>n.a.</i>	2,472	6,800	5,084	2,311	1,234
Ferro-alloys .. ..	<i>n.a.</i>	389	1,282	28	478	354
Ingots .. ..	<i>n.a.</i>	33	1	123	95	142
<b>Canada—</b>						
Pig-iron .. ..	15,751	14,188	29,887	28,979	25,663	32,837
Sponge iron .. ..	1,096	2,046	1,673	1,753	1,771	1,918
Ferro-manganese and spiegeleisen .. ..	20,211	19,491	30,859	43,855	14,325	24,947
Ferro-chrome .. ..	(c)	9,359	13,693	11,193	19,411	13,433
Ferro-silicon .. ..	3,415	3,065	5,589	5,247	5,182	8,764
Ferro-tungsten .. ..	279	77	158	86	86	53
Ferro-vanadium .. ..	(c)	232	290	427	346	237
Silico-manganese and silico-spiegel .. ..	2,102	1,557	703	1,724	3,752	1,200

(a) Excluding ships intended for breaking up as follows (gross tonnage): 1963—14,956; 1964—13,511; 1965—25,316; 1966—*n.a.*; 1967—1,048; 1968—8,342.

(b) Figures for 1963 relate to Rhodesia and Nyasaland.

(c) Included with "Other ferro-alloys".

## IMPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
Canada (cont.)—						
Other ferro-alloys ..	8,144	1,334	2,565	2,029	3,168	4,020
Ingots, blooms, billets ..	3,743	5,715	26,433	33,816	29,190	8,646
Scrap .. .. .	580,971	766,296	911,427	640,819	503,276	572,507
Jamaica—						
Pig-iron .. .. .	210	587	238	350	429	362
Trinidad and Tobago—						
Pig-iron .. .. .	14	11	4	20	28	8
Ingots, etc. .. .. .	930	275	162	591	595	990
Guyana—						
Pig-iron, ingots, etc. ..	n.a.	229	1,369	715	853	26
Ceylon—						
Pig-iron .. .. .	519	1,091	777	1,384	997	2,016
Ingots, blooms, billets etc. .. .. .	2,142	3,714	1,302	6,963	5,822	3,026
Cyprus—						
Pig-iron .. .. .	199	145	59	255	355	372
Ingots, etc. .. .. .	961	972	778	356	388	1,267
Hong Kong—						
Pig-iron .. .. .	9,576	7,080	9,328	12,101	2,810	8,074
Ingots, blooms, billets ..	2,982	813	7,377	10,542	25,961	2,177
Old and scrap .. .. .	39,974	58,872	90,012	35,915	47,389	61,746
Tinplate scrap .. .. .	14,347	16,992	15,780	16,806	55	560
India (b)—						
Pig-iron .. .. .	207	104,690	75,161	1,839	315	320
Ingots, blooms, billets ..	50,397	53,069	40,970	23,929	20,759	20,812
Ferro-chrome .. .. .	477	1,280	861	519	1,185	459
Ferro-manganese .. .. .	677	462	534	539	317	114
Ferro-silicon .. .. .	118	403	97	57	89	51
Other ferro-alloys .. .. .	2,486	1,318	628	675	1,339	885
Old and scrap .. .. .	1,213	686	4,219	7,008	10,444	11,373
Malaysia (West)—						
Pig-iron .. .. .	n.a.	n.a.	5,568	7,805	5,602	3,035
Ingots, slabs, etc. .. .. .	n.a.	n.a.	401	215	11,906	17,901
Scrap .. .. .	n.a.	n.a.	1,119	4,268	5,593	219
Pakistan—						
Pig-iron .. .. .	50,714	64,364	n.a.	n.a.	n.a.	n.a.
Ferro-alloys .. .. .	573	289	n.a.	n.a.	n.a.	n.a.
Ingots, blooms, billets ..	226,273	340,786	n.a.	n.a.	n.a.	n.a.
Old and scrap .. .. .	872	972	n.a.	n.a.	n.a.	n.a.
Sabah—						
Ingots, etc. .. .. .	1,954	248	116	215	116	93
Singapore—						
Pig-iron .. .. .	10,303	5,778	8,163	10,445	20,512	19,962
Ferro-alloys .. .. .	88	143	422	606	1,552	791
Ingots, blooms, etc. .. .. .	6,936	5,826	16,094	4,945	22,449	27,813
Scrap .. .. .	10,763	18,134	23,918	24,005	35,260	24,298
Australia—						
Ferro-manganese .. .. .	12,897	5,893	9,896	7,832	4,955	10,482
Ferro-chrome .. .. .	2,713	2,993	5,864	2,420	3,430	3,487
Ferro-molybdenum .. .. .	149	249	279	366	131	163
Ferro-silicon .. .. .	9,558	7,630	13,002	7,500	9,291	6,227
Other ferro-alloys .. .. .	3,461	2,506	3,546	1,889	5,684	3,059
Ingots and billets, etc.(c)	117	245	54,195	187	79	791
Scrap (c) .. .. .	81	224	527	(a) 8	(a) 8	112
New Zealand (c)—						
Pig-iron .. .. .	7,235	6,336	8,362	7,142	6,794	7,096
Ferro-manganese .. .. .	603	524	525	840	742	n.a.
Other ferro-alloys .. .. .	266	352	281	576	622	n.a.
Billets and blooms .. .. .	2,817	47	97	240	41	52
Solomon Islands—						
Billets and blooms .. .. .	—	—	—	1,094	806	1,098

(a) Excess of re-exports.

(b) Years ended March 31 following that stated.

(c) Years ended June 30 of that stated.

## IMPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>Irish Republic—</b>						
Pig-iron and sponge iron .. .. .	8,507	27,158	20,965	19,998	27,490	21,188
Ferro-alloys .. .. .	541	950	1,053	884	646	1,351
Ingots, blooms, billets, etc. .. .. .	1,403	20,096	51,027	10,503	1,703	8,497
<b>OTHER COUNTRIES</b>						
<b>Albania—</b>						
Pig-iron .. .. .	2,904	2,642	1,806	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Austria—</b>						
Pig-iron .. .. .	95,090	188,679	230,527	151,170	94,954	108,074
Spiegeleisen .. .. .	2,331	2,654	3,063	2,485	1,765	2,650
Ferro-manganese .. .. .	9,407	11,784	11,230	12,095	11,291	13,842
Ferro-silicon .. .. .	7,825	8,410	9,151	9,130	9,400	11,022
Other ferro-alloys .. .. .	16,300	20,097	25,027	25,186	20,262	24,394
Ingots and blooms .. .. .	8,531	5,647	27,893	47,894	88,626	153,886
Scrap .. .. .	52,361	141,326	106,150	53,719	12,366	60,443
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Pig-iron .. .. .	465,048	281,271	227,560	206,274	167,748	193,034
Sponge-iron .. .. .	40	30	572	1,348	3,152	1,758
Spiegeleisen .. .. .	19,010	18,284	13,768	12,672	14,749	19,382
Ferro-chrome, etc. .. .. .	4,469	6,950	6,325	6,571	6,721	7,077
Ferro-manganese .. .. .	37,914	74,556	67,986	67,754	73,062	74,031
Ferro-silico-manganese .. .. .	3,601	4,488	7,523	4,643	5,924	10,066
Ferro-molybdenum .. .. .	297	379	152	100	83	85
Ferro-silicon .. .. .	14,311	17,808	20,028	20,574	17,631	26,159
Ferro-tungsten .. .. .	82	57	14	22	33	10
Other ferro-alloys .. .. .	1,115	1,771	1,034	2,033	2,273	3,222
Ingots .. .. .	25,175	196,335	145,147	182,553	219,193	110,287
Blooms, billets, etc. .. .. .	125,637	167,059	89,124	99,827	150,920	149,705
Old and scrap .. .. .	85,966	61,962	56,747	190,389	193,770	278,861
<b>Bulgaria—</b>						
Pig-iron .. .. .	146,720	131,990	162,247	142,710	157,781	<i>n.a.</i>
<b>Czechoslovakia—</b>						
Pig iron .. .. .	186,000	116,000	116,000	106,000	200,000	<i>n.a.</i>
<b>Denmark—</b>						
Pig-iron .. .. .	80,361	117,078	106,421	92,401	30,555	20,754
Ferro-chrome .. .. .	308	347	414	480	401	593
Ferro-manganese, etc. .. .. .	2,932	2,896	2,760	4,159	2,197	5,704
Ferro-silicon .. .. .	2,557	3,756	3,328	4,275	3,967	5,694
Other ferro-alloys .. .. .	118	37	84	104	126	122
Ingots, blooms, billets .. .. .	12,163	36,362	65,813	47,307	91,470	153,782
Old and scrap .. .. .	1,172	2,212	271	583	593	1,018
<b>Finland—</b>						
Pig-iron .. .. .	6,945	13,063	1,241	2,730	4,720	714
Billets .. .. .	58,989	36,024	59,495	65,167	50,354	20,023
Ferro-manganese and spiegeleisen .. .. .	2,598	1,530	1,789	1,258	2,153	3,194
Other ferro-alloys .. .. .	7,266	5,576	9,056	8,111	8,588	6,836
Old and scrap .. .. .	81,072	138,641	136,709	120,548	108,873	66,789
<b>France—</b>						
Pig-iron—hematite .. .. .	169,837	158,757	90,765	120,169	132,084	205,635
do. other .. .. .	41,134	30,815	22,658	25,280	24,205	23,732
Sponge-iron .. .. .	2,275	2,674	3,685	1,629	7,381	1,823
Spiegeleisen .. .. .	2,658	2,046	1,387	2,262	4,303	2,395
Ferro-manganese .. .. .	9,963	10,098	8,819	16,421	21,546	20,128
Ferro-silicon .. .. .	915	545	356	834	687	1,415
Ferro-chrome .. .. .	889	1,218	449	356	3,061	4,311
Ferro-nickel .. .. .	19,587	22,349	32,388	28,202	44,100	49,470
Other ferro-alloys .. .. .	1,716	3,083	3,672	2,755	1,965	3,037
Ingots .. .. .	145,552	154,117	109,695	132,133	129,311	81,119
Blooms, billets, etc. .. .. .	495,417	499,818	448,246	449,057	481,273	463,191
Old and scrap .. .. .	568,078	575,246	485,875	502,989	456,607	366,314



## IMPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Germany (Federal)—</b>						
Pig-iron .. ..	457,467	253,542	124,034	133,805	105,910	162,259
Spiegeleisen .. ..	13,697	16,002	9,859	10,013	3,331	3,159
Ferro-alloys .. ..	207,646	274,844	276,378	182,007	250,946	366,948
Rough blooms, ingots, bars, etc. .. ..	222,085	503,911	351,255	425,374	342,746	646,436
Old and scrap .. ..	628,197	1,736,761	1,070,560	659,187	1,086,015	1,617,604
<b>Germany (East)—</b>						
Pig-iron .. ..	647,300	779,700	757,200	638,800	708,600	<i>n.a.</i>
<b>Greece—</b>						
Pig-iron .. ..	28,671	15,128	26,247	26,960	27,310	32,464
Spiegeleisen .. ..	189	60	147	<i>n.a.</i>	572	80
Ferro-alloys .. ..	836	1,170	1,425	1,920	1,866	1,923
Ingots, blooms, slabs, etc. .. ..	69,327	41,875	70,674	79,488	48,216	124,233
Old and scrap .. ..	534	1,100	1,155	635	732	10,807
<b>Hungary—</b>						
Pig iron .. ..	87,394	76,289	103,000	129,000	160,426	192,800
Ferro-chrome .. ..	5,632	4,215	4,556	10,254	9,303	8,108
Ferro-manganese .. ..	11,208	11,651	11,774	14,634	12,233	25,454
Ferro-silicon .. ..	2,466	2,647	3,024	2,393	2,371	2,406
Other ferro-alloys .. ..	355	343	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ingots .. ..	366,817	370,803	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Italy—</b>						
Pig-iron .. ..	876,391	526,675	641,875	799,585	1,030,248	830,254
Spiegeleisen .. ..	19,064	6,524	5,223	13,716	24,861	29,025
Ferro-chrome .. ..	14,753	16,711	14,673	24,291	23,336	19,607
Ferro-manganese .. ..	53,853	53,145	77,451	76,652	85,550	86,054
Ferro-molybdenum .. ..	(a)	453	616	722	797	625
Ferro-silicon .. ..	7,386	7,241	9,554	13,956	19,979	25,477
Ferro-silico-manganese .. ..	5,535	3,203	5,914	6,710	12,005	15,638
Ferro-titanium .. ..	401	528	866	607	502	626
Ferro-tungsten .. ..	129	107	96	178	165	596
Ferro-vanadium .. ..	(a)	179	334	334	616	254
Other ferro-alloys .. ..	1,672	1,000	2,708	5,825	6,664	4,022
Ingots .. ..	712,099	1,372,133	843,731	281,136	460,633	368,489
Blooms, billets, etc. .. ..						
Old and scrap .. ..						
	3,783,838	3,103,493	4,520,086	4,035,596	4,891,020	5,014,093
<b>Netherlands—</b>						
Pig-iron .. ..	31,940	84,425	32,112	70,154	19,408	23,184
Sponge iron .. ..	1,887	1,730	2,144	2,928	2,456	2,856
Spiegeleisen .. ..	1,075	708	458	915	317	201
Ferro-manganese .. ..	12,009	16,649	19,824	17,236	23,255	24,020
Ferro-chrome .. ..	396	820	2,207	2,551	1,106	2,294
Ferro-silicon .. ..	4,556	5,964	6,922	6,900	6,460	7,824
Ferro-silico-manganese .. ..	282	372	252	323	899	1,147
Ferro-molybdenum .. ..	56	50	87	87	55	34
Other ferro-alloys .. ..	1,018	1,142	1,464	1,990	979	708
Ingots, blooms, billets .. ..	257,322	219,732	134,003	214,439	420,298	318,033
Old and scrap .. ..	88,131	42,920	96,763	50,250	161,518	150,761
<b>Norway—</b>						
Pig-iron .. ..	10,036	8,679	12,100	17,505	15,400	15,991
Ferro-alloys .. ..	212	274	2,101	486	2,461	1,651
Ingots, blooms, billets .. ..	76,022	77,808	80,932	68,898	55,722	62,965
Old and scrap .. ..	33,398	26,885	60,471	38,486	23,642	12,750
<b>Poland—</b>						
Pig-iron .. ..	63,186	308,500	780,541	763,184	683,136	928,826
Ferro-alloys .. ..	1,884	2,504	1,819	3,855	5,836	7,838
Scrap .. ..	1,128	1,690	2,811	3,787	2,999	3,732
<b>Portugal—</b>						
Iron and steel ingots .. ..	224	131	1,105	3,228	39	800
Old and scrap .. ..	1,340	1,371	4,597	4,246	4,501	3,675

(a) Included, if any, with "Other ferro-alloys".

## IMPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Roumania—						
Ferro-alloys .. ..	33,300	42,300	51,800	50,600	67,418	74,800
Spain—						
Pig-iron .. ..	3,204	1,801	15,242	14,167	13,474	12,744
Ferro-manganese ..	1,483	1,610	1,558	1,324	949	950
Other ferro-alloys ..	3,468	5,252	5,322	6,099	4,161	7,450
Ingots and blooms ..	138,083	271,775	936,868	597,585	677,387	531,175
Old and scrap .. ..	145,188	303,755	423,961	376,939	345,758	587,595
Sweden—						
Pig-iron .. ..	185,024	225,753	330,193	418,530	230,830	273,640
Sponge iron .. ..	854	—	—	49	—	—
Spiegeleisen .. ..	200	167	492	—	108	—
Ferro-manganese ..	12,170	12,347	16,052	22,727	20,834	30,458
Ferro-chrome .. ..	5,059	7,516	23,407	16,889	13,744	18,643
Ferro-silico .. ..	7,354	5,769	6,806	6,989	8,056	8,721
Ferro-silico-manganese	7,277	6,214	8,626	8,567	7,382	11,847
Ferro-tungsten ..	256	402	693	709	380	272
Other ferro-alloys ..	3,568	6,775	12,770	15,897	10,910	14,406
Blooms, billets, etc. ..	6,862	5,497	23,361	11,622	9,796	14,126
Old and scrap .. ..	121,059	235,680	244,348	215,562	92,963	77,402
Switzerland—						
Pig-iron .. ..	63,997	53,483	61,656	59,698	51,881	56,903
Ferro-alloys .. ..	13,019	12,798	12,971	16,266	10,930	17,690
Ingots, blooms, billets ..	299,047	214,904	185,767	166,442	156,999	178,725
Old, filings and scrap	10,998	5,307	4,923	52,107	22,436	26,491
U.S.S.R.—						
Pig-iron .. ..	226,000	192,300	145,600	136,300	151,568	62,399
Ferro-alloys .. ..	12,200	2,900	5,900	7,200	7,086	8,464
Ingots .. ..	55,300	76,000	30,100	—	—	—
Yugoslavia—						
Pig-iron .. ..	78,791	187,952	221,336	240,579	138,700	141,414
Ferro-alloys .. ..	1,460	1,449	1,971	1,559	1,597	4,378
Ingots, blooms and billets	20,302	3,723	26,078	44,406	84,016	107,819
Scrap .. ..	48,026	118,572	97,495	118,487	32,427	105,159
Egypt—						
Pig-iron and spiegeleisen	49,158	46,253	129,182	73,294	24,811	84,442
Ferro-alloys .. ..	5,021	3,751	7,277	4,461	13,730	9,862
Ingots, billets, etc. ..	<i>n.a.</i>	105,045	40,038	104,442	89,236	48,743
Scrap .. ..	50,962	43,653	29,767	139,465	51,055	34,904
Morocco—						
Pig-iron .. ..	1,408	1,046	880	1,034	923	1,417
Ferro-alloys .. ..	232	222	289	240	193	179
Scrap, etc. .. ..	342	44	75	81	5	—
South Africa—						
Pig-iron (b) .. ..	<i>n.a.</i>	<i>n.a.</i>	22	10	87,348	144,991
Ferro-silicon .. ..	843	1,822	1,335	1,393	1,560	3,509
Ingots, blooms, etc. ..	<i>n.a.</i>	16,933	20,612	19,757	36,053	80,923
Other ferro-alloys ..	141	234	265	308	335	3,895
Sudan—						
Crude iron and steel ..	<i>n.a.</i>	<i>n.a.</i>	56	<i>n.a.</i>	39	12
Tunisia—						
Pig-iron .. ..	99	480	605	72	104	983
Old and scrap .. ..	545	103	104	36	64	<i>n.a.</i>
Cuba—						
Pig-iron .. ..	24,461	25,700	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-alloys .. ..	633	304	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Honduras—						
Ingots, blooms, etc. ..	950	1,865	3,953	5,884	10,636	7,279
Mexico—						
Pig-iron .. ..	38	546	(a) 29,792	(a) 34,480	(a) 9,787	(a) 3,520
Ferro-manganese .. ..	530	424	326	308	423	410
Other ferro-alloys ..	1,413	2,547	1,186	972	2,743	1,448
Ingots, blooms, billets ..	1	1	29,085	(a) 58,273	(a) 113,993	(a) 137,651

(a) Owing to reclassification not strictly comparable with earlier years.

(b) Including cast iron.

## IMPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Mexico (cont.)—</b>						
Scrap .. .. .	142,531	696,494	} 751,477	709,296	686,227	451,042
Tin-plate scrap .. .. .	15,163	13,108				
<b>Salvador—</b>						
Ingots, blooms, billets	337	1,378	5,326	19,457	24,845	35,749
Scrap .. .. .	401	106	667	706	1,003	1,462
<b>United States—</b>						
Pig-iron .. .. .	576,191	657,564	787,524	1,059,589	540,388	701,695
Ferro-chrome .. .. .	25,931	23,321	49,216	59,151	34,350	31,946
Ferro-manganese .. .. .	132,705	189,847	229,767	173,717	149,596	142,043
Ferro-silicon .. .. .	13,055	11,751	14,726	11,726	13,695	9,484
Ferro-titanium .. .. .	37	25	15	27	137	178
Ferro-tungsten .. .. .	487	108	172	169	151	—
Sponge iron .. .. .	4,338	11,138	15,292	46,558	10,416	8,270
Bar-iron, slabs, blooms, etc. .. .. .	237	222	} 185,078	200,300	196,960	267,104
Steel ingots, blooms, etc. .. .. .	232,460	307,822				
Scrap .. .. .	174,449	231,409	172,752	348,397	192,531	246,000
Tin-plate scrap .. .. .	19,486	20,143	16,954	14,687	12,078	16,000
<b>Argentina—</b>						
Pig-iron .. .. .	35	22,937	139,686	105,692	94,593	201,846
Ferro-manganese .. .. .	178	292	2,294	474	298	624
Ferro-silicon .. .. .	173	1,143	2,593	878	207	131
Ingots .. .. .	81,147	149,160	599,146	1,336	146,505	4,909
Blooms and billets	160,271	312,691	422,915	302,176	349,209	323,542
Old and scrap .. .. .	9,195	141	156	24,980	29,413	182
<b>Brazil—</b>						
Ferro-manganese .. .. .	58	24	37	319	479	142
Ferro-silicon .. .. .	82	85	44	538	353	186
Ferro-chrome .. .. .	985	472	243	1,174	777	1,573
Other ferro-alloys .. .. .	113	210	243	677	188	518
<b>Chile—</b>						
Pig-iron .. .. .	} 6	74	939	n.a.	1,991	n.a.
Ferro-alloys .. .. .						
<b>Colombia—</b>						
Pig-iron .. .. .	—	—	633	1,302	1,327	1,569
Ingots, etc. .. .. .	1,124	—	} 16,682	35,046	n.a.	984
Blooms, billets, etc. .. .. .	10	44,658				
Ferro-alloys .. .. .	3,634	3,447	2,609	3,322	2,628	5,552
<b>Peru—</b>						
Pig-iron .. .. .	81	1,053	168	n.a.	214	n.a.
Ferro-alloys .. .. .	429	620	1,049	1,454	1,218	n.a.
<b>Uruguay—</b>						
Ingots etc. .. .. .	n.a.	n.a.	26,094	35,422	23,246	n.a.
Ferro-alloys .. .. .	n.a.	n.a.	233	154	195	n.a.
<b>Venezuela—</b>						
Pig-iron .. .. .	6,355	97	1,263	161	62	89
Ferro-alloys .. .. .	1,973	3,959	8,939	5,850	3,527	8,249
Scrap .. .. .	n.a.	n.a.	5,781	4,008	4,635	30,603
Ingots, blooms and billets	6,503	1,007	1,976	363	5,222	6,608
<b>Formosa—</b>						
Blooms, billets, etc. .. .. .	994	3,007	6,234	14,298	48,814	n.a.
Ferro-alloys .. .. .	125	240	178	329	253	n.a.
Old and scrap .. .. .	170,944	246,196	432,437	268,138	200,221	n.a.
<b>Iran (a)—</b>						
Pig-iron .. .. .	2,591	19,045	20,796	9,210	22,305	25,104
Old and scrap .. .. .	5,012	5,547	5,972	4,307	5,088	5,935
<b>Israel—</b>						
Pig-iron .. .. .	19,854	42,748	11,376	9,918	3,994	16,600
Spiegeleisen .. .. .	984	980	n.a.	n.a.	n.a.	n.a.
Ferro-alloys .. .. .	4,467	2,106	1,091	475	546	1,337

(a) Years ended March 20 of year following that stated.

## IMPORTS OF PIG-IRON, FERRO-ALLOYS, STEEL INGOTS AND CASTINGS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Japan—						
Pig-iron .. ..	1,524,730	3,305,559	2,582,652	2,814,460	6,347,989	4,385,734
Ferro-alloys .. ..	2,081	25,303	8,932	3,056	72,165	12,040
Ingots, blooms, billets ..	4,206	7,299	1,977	4,452	278,554	95,256
Old and scrap .. ..	4,518,587	5,018,222	3,352,764	3,478,335	6,602,009	3,877,196
Jordan—						
Ingots, blooms, billets ..	40,858	43,122	49,301	64,613	66,981	40,086
Korea (South)—						
Pig iron .. ..	2,276	18,488	9,106	50,418	45,682	<i>n.a.</i>
Ferro-alloys .. ..	4,778	3,081	417	170	10,424	<i>n.a.</i>
Scrap .. ..	60,074	43,779	75,911	192,534	308,129	<i>n.a.</i>
Ingots, blooms, etc. ..	43,719	25,207	13,146	56,965	41,642	<i>n.a.</i>
Lebanon—						
Pig-iron .. ..	6,016	7,037	10,697	10,207	5,110	<i>n.a.</i>
Ferro-alloys .. ..	540	1,274	552	69	18	<i>n.a.</i>
Old and scrap .. ..	2,665	11,406	5,261	689	2,133	<i>n.a.</i>
Ingots, blooms, etc. ..	41,420	29,139	31,975	72,311	85,049	<i>n.a.</i>
Philippine Republic—						
Pig-iron .. ..	9,944	20,758	14,325	<i>n.a.</i>	12,463	<i>n.a.</i>
Ferro-alloys .. ..	958	1,959	1,428	<i>n.a.</i>	1,959	<i>n.a.</i>
Ingots, blooms, billets ..	30,315	65,265	102,157	<i>n.a.</i>	181,032	<i>n.a.</i>
Syria—						
Pig-iron .. ..	968	1,913	311	1,308	1,038	1,412
Scrap .. ..	2,086	1,626	1,560	931	312	<i>n.a.</i>
Thailand—						
Pig-iron .. ..	298	—	90	694	950	91
Ferro-alloys .. ..	607	1,122	1,000	1,829	1,706	3,432
Turkey—						
Pig-iron .. ..	12,819	27,040	25,237	21,453	20,977	25,670
Ferro-alloys .. ..	1,077	6,258	8,359	10,376	7,615	8,634
Blooms, billets, etc. ..	73,695	88,333	99,919	175,036	124,463	164,621
Scrap .. ..	9,535	25,384	28,577	31,476	38,411	63,357

**LEAD**  
**PRODUCTION OF LEAD ORE**  
*(Metal content)*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. ..	1,600	1,500	2,400	2,900	3,200	3,200
Nigeria (a) .. ..	—	—	700	690	<i>n.a.</i>	<i>n.a.</i>
Zambia (b) .. ..	19,300	12,953	21,008	18,464	19,100	23,745
Canada (d) .. ..	179,611	181,890	260,542	267,520	283,984	309,714
India .. ..	4,248	4,421	3,918	3,675	3,932	3,700
Australia .. ..	410,291	374,856	362,137	364,898	375,779	381,250
<b>TOTAL .. ..</b>	<b>615,100</b>	<b>575,600</b>	<b>650,700</b>	<b>657,500</b>	<b>685,700</b>	<b>722,300</b>
Irish Republic .. ..	—	—	2,311	37,481	58,704	61,240
<b>OTHER COUNTRIES</b>						
Austria .. ..	5,442	5,830	5,798	5,595	5,549	6,673
Bulgaria .. ..	87,500	89,800	89,600	(e) 100,000	101,000	(e) 104,000
Czechoslovakia (e) .. ..	13,300	13,300	14,000	14,000	14,000	14,000
Finland (f) .. ..	1,127	1,860	6,207	4,560	4,711	4,453
France .. ..	8,263	11,997	17,766	26,331	26,924	26,689
Germany—						
Federal Republic .. ..	51,069	48,164	47,880	54,804	58,704	51,936
East (g) .. ..	10,000	10,000	10,000	10,000	11,000	10,000
Greece .. ..	8,709	7,999	9,485	9,596	8,200	8,220
Hungary .. ..	1,000	1,200	1,400	(e) 1,400	1,400	<i>n.a.</i>
Italy .. ..	32,274	30,622	31,951	32,209	33,398	34,889
Norway .. ..	2,944	3,522	3,448	3,470	3,268	3,475
Poland .. ..	38,100	37,700	40,500	44,400	44,000	48,000
Portugal .. ..	220	193	150	1,688	1,569	1,931
Roumania (b) (g) .. ..	12,000	12,000	15,000	20,000	20,000	30,000
Spain .. ..	61,212	57,363	55,745	r 62,431	61,710	69,879
Sweden .. ..	69,904	66,404	67,861	69,766	72,456	70,894
U.S.S.R. (b) (g) .. ..	400,000	400,000	410,000	410,000	400,000	400,000
Yugoslavia .. ..	r 112,085	r 111,319	104,571	r 100,980	106,371	110,002
Algeria .. ..	(g) 8,000	9,514	10,275	4,872	3,523	3,170
Congo (Republic of) .. ..	325	2,135	(e) 2,800	(e) 3,500	(e) 3,500	(g) 1,000
Egypt (e) .. ..	500	—	—	15	<i>n.a.</i>	<i>n.a.</i>
Morocco .. ..	72,804	70,164	75,893	78,360	76,466	78,800
South Africa .. ..	14	—	3	—	18	—
South West Africa .. ..	81,000	94,730	86,000	85,000	(g) 70,000	(g) 60,000
Tunisia .. ..	13,620	12,450	15,620	13,965	12,665	(g) 14,476
Guatemala (f) .. ..	735	r 1,188	r 908	r 887	1,142	464
Honduras .. ..	(e) 8,200	7,366	9,502	10,899	11,500	12,967
Mexico (f) .. ..	186,986	172,063	167,406	179,195	165,048	165,142
United States (f) .. ..	226,222	255,366	268,880	292,293	282,974	320,675
Argentina .. ..	26,047	25,515	29,178	29,017	31,789	26,130
Bolivia (c) .. ..	19,622	16,951	16,404	19,815	19,623	20,000
Brazil (e) .. ..	17,100	14,500	14,500	22,000	23,088	20,850
Chile .. ..	1,135	989	1,000	1,000	400	970
Colombia .. ..	295	476	453	588	1,068	<i>n.a.</i>
Ecuador .. ..	159	137	112	68	—	<i>n.a.</i>

(a) Excluding native production.

(b) Smelter.

(c) Exports of ore (metal content) and metal.

(d) Lead in base bullion plus recoverable lead in ores exported.

(e) United States Bureau of Mines' estimate.

(f) Amount estimated as recoverable.

(g) Estimated.

PRODUCTION OF LEAD ORE (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Peru (a) .. .. .	144,882	148,294	151,906	142,474	163,471	165,141
Burma .. .. .	19,700	18,500	19,700	18,200	14,800	16,964
China (c) .. .. .	100,000	100,000	100,000	100,000	90,000	100,000
Iran (c) (d) .. .. .	10,000	r 10,472	r 11,496	r 14,448	14,554	14,700
Japan .. .. .	51,884	53,218	54,062	62,099	62,473	61,900
Korea (South) .. .. .	1,900	3,300	4,400	6,800	8,700	9,800
Korea (North) (b) .. .. .	50,000	55,000	60,000	60,000	65,000	70,000
Philippine Republic .. .. .	70	102	102	90	88	83
Thailand .. .. .	2,200	3,600	5,500	6,600	3,500	3,000
Turkey .. .. .	976	1,600	1,655	921	2,321	2,181
<b>TOTAL .. .. .</b>	<b>1,900,000</b>	<b>2,000,000</b>	<b>2,000,000</b>	<b>2,100,000</b>	<b>2,200,000</b>	<b>2,200,000</b>
<b>WORLD'S TOTAL .. .. .</b>	<b>2,600,000</b>	<b>2,500,000</b>	<b>2,700,000</b>	<b>2,800,000</b>	<b>2,900,000</b>	<b>3,000,000</b>

(a) Amount estimated as recoverable.

(b) Estimated.

(c) United States Bureau of Mines' estimate.

(d) Years ended March 20 of year following that stated.

## METAL PRODUCTION OF LEAD

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (h) ..	27,942	24,428	22,594	15,890	26,400	31,386
Zambia .. .. .	19,300	12,953	21,008	18,464	18,799	23,745
Canada .. .. .	138,393	135,154	166,504	165,063	172,530	180,446
India .. .. .	3,481	3,567	2,347	2,599	2,435	1,347
Australia (c) ..	305,266	281,404	260,213	267,423	292,030	291,870
<b>TOTAL .. .. .</b>	<b>494,382</b>	<b>457,506</b>	<b>472,666</b>	<b>469,243</b>	<b>511,123</b>	<b>528,794</b>
<b>OTHER COUNTRIES</b>						
Austria (b) .. ..	8,820	11,962	11,648	9,509	10,544	11,156
Belgium (b) .. ..	96,878	82,001	109,008	91,196	106,097	108,324
Bulgaria .. .. .	50,521	86,118	91,946	r 91,380	95,000	95,500
Czechoslovakia (a) ..	15,000	15,000	20,000	20,000	20,000	20,000
France .. .. .	76,401	88,372	96,803	106,922	112,209	98,356
Germany—Federal	108,496	105,805	102,388	107,894	134,152	118,123
do. East (a) (b) ..	25,000	25,000	25,000	25,000	25,000	25,000
Greece .. .. .	3,500	5,000	(d) 5,100	5,400	6,400	6,400
Hungary .. .. .	400	200	200	(d) 200	n.a.	n.a.
Italy .. .. .	41,275	37,576	38,803	52,709	59,544	56,645
Norway .. .. .	—	4,000	1,700	n.a.	1,400	1,300
Poland .. .. .	38,300	40,800	40,700	42,800	43,600	41,300
Portugal .. .. .	1,100	1,344	1,287	1,041	1,056	1,208
Roumania (a) .. ..	12,000	12,000	15,000	20,000	40,000	40,000
Spain .. .. .	61,103	57,078	52,965	r 64,860	51,730	63,186
Sweden .. .. .	40,124	39,725	39,614	43,010	41,000	43,000
U.S.S.R. (a) .. ..	400,000	400,000	410,000	410,000	410,000	410,000
Yugoslavia .. .. .	r 115,626	r 115,373	r 114,331	r 110,155	100,281	n.a.
Morocco .. .. .	18,464	18,541	16,960	18,479	21,021	23,784
South West Africa	1,783	47,040	64,992	74,087	(d) 72,000	(d) 61,000
Tunisia .. .. .	12,600	11,890	14,000	14,000	14,000	14,000
Guatemala .. .. .	46	74	112	212	70	196
Mexico .. .. .	179,438	167,321	169,677	178,238	165,712	177,420
United States (e) ..	352,439	401,276	373,430	393,513	339,191	417,241
Argentina .. .. .	23,621	22,637	31,495	21,652	21,652	24,643
Bolivia (f) .. .. .	—	1	67	11	13	n.a.
Brazil .. .. .	15,740	12,995	5,232	9,781	4,085	n.a.
Chile .. .. .	217	—	—	—	—	—
Peru .. .. .	79,845	88,307	85,436	87,360	80,523	82,054
Burma .. .. .	17,458	17,768	(d) 16,000	(d) 14,000	(d) 13,000	(d) 8,000
China (a) (b) .. ..	85,000	100,000	100,000	100,000	90,000	100,000
Iran (g) .. .. .	(d) 500	369	(d) 400	(d) 400	n.a.	n.a.
Japan .. .. .	r 99,509	r 106,256	106,637	116,710	147,604	161,974
Korea (North) (a) ..	40,000	45,000	50,000	50,000	55,000	55,000
Turkey .. .. .	1,851	1,929	904	500	500	500
<b>TOTAL .. .. .</b>	<b>2,000,000</b>	<b>2,100,000</b>	<b>2,200,000</b>	<b>2,300,000</b>	<b>2,200,000</b>	<b>2,400,000</b>
<b>WORLD'S TOTAL ..</b>	<b>2,500,000</b>	<b>2,600,000</b>	<b>2,600,000</b>	<b>2,700,000</b>	<b>2,700,000</b>	<b>2,900,000</b>

(a) Estimated.

(b) Including secondary metal.

(c) Including lead in base bullion as follows:

Year	Long tons	Year	Long tons
1963 .. .. .	80,661	1966 .. .. .	74,295
1964 .. .. .	78,304	1967 .. .. .	101,167
1965 .. .. .	66,907	1968 .. .. .	116,638

(d) United States Bureau of Mines' estimate.

(e) In addition the recovery of secondary lead was as follows:

Year	Long tons	Year	Long tons
1963 .. .. .	440,599	1966 .. .. .	511,459
1964 .. .. .	483,555	1967 .. .. .	494,439
1965 .. .. .	514,214	1968 .. .. .	491,856

(f) Exports.

(g) Years ended March 20 of year following that stated.

(h) Source: World Bureau of Non-Ferrous Metal Statistics.

## EXPORTS OF LEAD, ETC.\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Unwrought .. .. .	38,657	35,781	37,599	34,959	61,028	90,931
do. alloys .. .. .	3,657	3,729	4,810	8,013	10,153	10,202
Semi-manufactures (a)	1,963	1,887	1,827	1,740	1,901	1,897
White lead .. .. .	1,690	1,510	1,146	1,171	920	1,209
Red lead, etc. .. ..	4,050	4,269	4,699	4,757	5,145	5,001
<b>Nigeria—</b>						
Ore and concentrates ..	195	938	1,575	1,282	908	51
<b>Zambia (c)—</b>						
Unwrought .. .. .	14,029	13,177	15,401	24,265	17,141	16,096
<b>Canada—</b>						
Ore (Pb content) .. ..	47,996	71,747	95,504	100,834	112,673	128,440
Unwrought .. .. .	86,736	85,596	115,237	95,061	118,143	123,912
Scrap (a) .. .. .	3,561	4,712	8,214	4,005	5,387	5,115
<b>Hong Kong—</b>						
Scrap .. .. .	13	4	110	379	892	549
<b>Singapore—</b>						
Semi-manufactures (a)	147	193	214	368	238	234
<b>Australia (b)—</b>						
Ores and concentrates (Pb content) .. ..	106,289	95,928	74,104	69,464	81,830	89,158
Base bullion (Pb content)	77,564	82,715	56,380	89,140	80,889	106,075
Unwrought .. .. .	169,264	169,035	151,211	159,811	152,145	151,042
do. alloys .. .. .	1,495	6,829	2,701	4,370	3,311	3,420
Scrap (a) .. .. .	73	2,547	2,575	1,642	97	210
Semi-manufactures ..	1,106	2,226	2,881	1,248	287	634
Red and white lead, etc.	2,373	1,981	2,503	2,072	1,419	1,304
<b>Irish Republic—</b>						
Ore and concentrates ..	—	—	—	87,178	133,435	153,966
Scrap .. .. .	283	310	871	796	401	318
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Unwrought (a) .. ..	1,733	3,751	2,719	1,950	2,690	1,568
Scrap .. .. .	6	14	19	1	66	—
Red and white lead, etc.	1,078	655	170	1,522	1,310	1,404
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Ore .. .. .	7	590	259	6,418	1,034	15
Unwrought .. .. .	63,833	41,769	61,598	49,832	48,254	52,601
do. alloys .. .. .	5,610	7,061	9,078	6,219	8,899	10,488
Scrap .. .. .	2,088	3,298	2,204	2,228	2,226	5,209
Semi-manufactures (a)	6,351	6,209	7,739	7,986	7,164	6,676
Red and white lead, etc.	4,406	3,682	3,605	5,147	5,718	7,063
<b>Denmark—</b>						
Unwrought .. .. .	1,443	2,623	3,209	2,882	2,247	2,728
do. alloys .. .. .	2,566	2,188	1,403	2,762	3,341	2,921
Scrap .. .. .	—	—	5	—	20	—
Semi-manufactures (a)	314	303	272	144	39	76

\*In these tables the description "unwrought" lead corresponds to item 685.1 of the Standard International Trade Classification (Revised) and comprises base bullion, pigs, unwrought bars, etc. "Semi-manufactures" corresponds to S.I.T.C.(R). 685.2 and includes foil and powder as well as wrought bars, wire, sheets, tubes, pipes, etc.

(a) Including alloys.

(b) Years ended June 30 of that stated.

(c) Figure for 1963 relates to Rhodesia and Nyasaland.



## EXPORTS OF LEAD, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Finland—						
Unwrought (a) ..	2	67	—	1	1	82
France—						
Ore .. ..	123	4,976	3,130	1,613	3,833	3,555
Unwrought .. ..	2,792	3,316	10,532	6,229	15,171	13,864
do. alloys .. ..	1,340	2,570	4,156	2,849	2,567	2,645
Scrap .. ..	8,237	9,568	11,939	2,240	9,463	10,369
Semi-manufactures (a)	709	1,376	1,137	988	886	1,118
Red and white lead, etc.	4,897	6,334	5,784	7,073	7,661	8,082
Germany (Federal)—						
Ore .. ..	10,054	941	6,918	3,870	5,548	5,312
Unwrought (a) ..	17,684	21,251	12,629	40,897	79,081	43,584
Scrap (a) .. ..	8,690	9,215	14,639	25,620	19,854	10,003
Semi-manufactures (a)	2,950	3,855	5,432	8,678	7,070	7,286
Red and white lead ..	9,943	9,334	8,147	7,963	9,325	8,507
Greece—						
Ore .. ..	9,430	6,800	10,273	10,088	10,937	12,959
Italy—						
Ore .. ..	4,370	5,321	4,588	2,860	3,403	3,245
Unwrought (a) ..	112	190	125	101	18	3
Semi-manufactures (a)	400	53	61	153	245	65
Red and white lead ..	942	1,371	1,546	1,678	258	1,425
Netherlands—						
Unwrought .. ..	5,381	7,243	7,595	7,912	6,291	6,356
do. alloys .. ..	1,843	1,827	2,088	3,516	4,914	9,990
Scrap (a) .. ..	3,196	8,297	7,484	4,599	6,545	8,024
Semi-manufactures (a)	2,882	1,817	1,230	2,006	1,981	1,594
Red and white lead ..	1,664	1,502	1,467	2,406	2,947	3,792
Norway—						
Ore .. ..	3,378	7,338	5,810	7,293	7,006	6,317
Unwrought (a) ..	183	171	354	576	524	513
Semi-manufactures (a)	412	338	275	255	192	396
Scrap .. ..	2,692	3,297	2,898	2,944	3,952	4,733
Poland—						
Concentrates .. ..	5,814	6,042	12,170	16,025	18,604	9,092
Portugal—						
Unwrought (a) ..	11	13	34	31	29	35
Semi-manufactures (a)	37	52	88	100	157	184
Red and white lead ..	10	133	72	98	99	10
Spain—						
Ore .. ..	20	—	—	—	—	—
Unwrought (a) ..	11,444	1,879	312	153	16	—
Semi-manufactures (a)	42	32	20	19	20	71
Sweden—						
Ore .. ..	41,385	48,282	40,814	44,141	35,355	47,742
Unwrought .. ..	11,820	6,396	8,109	9,795	13,579	12,484
do. alloys .. ..	2,111	1,766	905	200	37	869
Scrap .. ..	170	238	158	91	49	83
Semi-manufactures (a)	27	19	25	38	4	20
Red and white lead, etc.	1,469	1,879	1,572	1,506	1,932	2,557
Switzerland—						
Unwrought .. ..	15	854	345	36	19	376
Scrap .. ..	3,405	6,929	10,452	5,396	5,203	5,321
Semi-manufactures ..	105	83	133	160	252	607
U. S. S. R.—						
Unwrought .. ..	108,500	94,600	100,900	86,500	85,528	89,460
Yugoslavia—						
Unwrought .. ..	51,766	52,577	53,289	51,591	45,393	47,773
do. alloys .. ..	828	4,437	4,907	6,587	8,189	6,502
Semi-manufactures (a)	7,652	4,971	2,921	2,309	1,525	609
Red lead .. ..	695	736	704	1,012	351	657

(a) Including alloys.

## EXPORTS OF LEAD, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Algeria—						
Ore .. .. .	11,867	10,868	12,594	8,210	6,531	6,675
Congo (Republic of)—						
Ore .. .. .	—	<i>n.a.</i>	—	—	5	<i>n.a.</i>
Morocco—						
Ore .. .. .	135,410	94,272	140,943	90,545	85,066	86,697
Unwrought .. .. .	11,034	16,806	13,930	15,331	19,744	22,388
do. alloys .. .. .	2,760	—	48	—	—	—
Scrap .. .. .	—	20	40	—	—	—
South Africa—						
Unwrought .. .. .	375	37,181	57,076	58,908	64,552	48,131
Semi-manufactures .. .. .	<i>n.a.</i>	96	65	27	50	170
South West Africa—						
Complex concentrates						
<i>(Pb content)</i> .. .. .	67,008	34,977	36,143	20,287	<i>n.a.</i>	<i>n.a.</i>
Lead-vanadium concentrates .. .. .	10,510	10,548	9,762	12,286	<i>n.a.</i>	<i>n.a.</i>
Tunisia—						
Unwrought (a) .. .. .	13,069	10,653	14,076	12,797	12,036	12,442
Scrap .. .. .						
Guatemala—						
Ore .. .. .	1,392	902	29	851	198	266
Honduras—						
Ore and concentrates .. .. .	9,743	10,223	15,452	8,236	10	19,878
Mexico—						
Ores and concentrates .. .. .	2,894	3,125	<i>n.a.</i>	2,454	905	1,270
Unwrought—						
Refined .. .. .	122,433	91,943	95,199	97,003	83,440	83,400
Base bullion .. .. .	11,752	10,983	10,202	14,991	11,893	12,950
Antimonial .. .. .	368	363	<i>n.a.</i>	127	16	—
Semi-manufactures .. .. .	—	375	<i>n.a.</i>	—	—	—
Red and white lead .. .. .	29,114	32,131	32,836	31,048	33,393	36,053
United States—						
Ore, mattes and base bullion ( <i>Pb content</i> ) .. .. .	4	17	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	7
Unwrought (a) .. .. .	972	9,470	5,143	3,114	3,806	4,363
Scrap .. .. .	2,162	11,739	3,387	444	351	837
Semi-manufactures (a) .. .. .	710	1,189	1,830	1,739	2,030	3,031
Red and white lead, etc. .. .. .	<i>n.a.</i>	1,500	2,041	2,321	1,705	1,676
Argentina—						
Ore .. .. .	266	309	150	215	56	623
Unwrought .. .. .	2	—	—	—	—	—
Bolivia—						
Ore, etc. ( <i>Pb content</i> ) .. .. .	19,622	16,950	16,337	19,815	19,623	22,000
Unwrought .. .. .	—	1	67	11	13	<i>n.a.</i>
Brazil—						
Ore .. .. .	<i>n.a.</i>	<i>n.a.</i>	12,721	4,921	<i>n.a.</i>	<i>n.a.</i>
Chile—						
Ore and concentrates .. .. .	2,819	1,601	433	<i>n.a.</i>	2,046	<i>n.a.</i>
Colombia—						
Ore .. .. .	—	216	714	1,117	423	<i>n.a.</i>
Ecuador—						
Concentrates .. .. .	997	2,455	696	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru—						
Ore and concentrates						
( <i>Pb content</i> ) .. .. .	64,496	63,604	64,523	64,865	138,478	153,000
Unwrought ( <i>Pb content</i> )						
Refined .. .. .	54,103	100,451	84,052	79,553	77,932	<i>n.a.</i>
Unrefined .. .. .	37	48	53	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Including alloys.

## EXPORTS OF LEAD, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Burma—						
Ore .. .. .	576	360	162	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Unwrought .. .. .	16,579	11,263	11,778	} 4,500	<i>n.a.</i>	<i>n.a.</i>
do. alloys .. .. .	486	854	227		<i>n.a.</i>	<i>n.a.</i>
Iran (b)—						
Ore .. .. .	28,048	43,590	50,737	44,225	46,735	35,606
Japan—						
Unwrought (a) .. .. .	108	313	8,406	7,430	867	3,053
Semi-manufactures (a) .. .. .	3,727	968	2,947	325	6,986	1,693
Red lead .. .. .	4	12	219	283	21	234
Korea (South)—						
Ore .. .. .	4,903	10,817	6,978	11,586	12,619	<i>n.a.</i>
Thailand—						
Ore .. .. .	4,998	7,022	10,367	12,209	9,074	7,633
Turkey—						
Ore .. .. .	5,008	2,500	1,476	4,489	3,476	8,232

(a) Including alloys.

(b) Years ended March 20 following that stated.

## IMPORTS OF LEAD, ETC.\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Ore and concentrates (Pb content) (c) ..	25,404	29,258	20,829	21,983	24,551	48,223
Unwrought (a) ..	179,622	189,767	169,170	203,863	176,913	210,848
Scrap (a) ..	1,593	4,173	2,672	2,821	2,679	1,884
Semi-manufactures (a)	232	202	17	77	424	1,006
Channel Islands—						
Unwrought and semi-manufactures (a) ..	78	1,262	184	111	1,581	202
Ghana—						
Unwrought (a) ..	18	3	10	4	1	40
Semi-manufactures (a)	383	36	455	1,330	379	117
Kenya—						
Unwrought (a) ..	104	94	200	197	299	247
Semi-manufactures (a)	7	10	1	10	9	28
Mauritius—						
Unwrought (a) ..	1	28	13	24	6	12
Semi-manufactures (a)	25	29	28	36	57	7
Nigeria—						
Unwrought and semi-manufactures (a) ..	414	1,123	519	149	456	365
Rhodesia (d)—						
Semi-manufactures (a)	84	728	836	n.a.	n.a.	n.a.
Red and white lead, etc.	117	n.a.	n.a.	n.a.	n.a.	n.a.
Sierra Leone—						
Semi-manufactures (a)	36	30	44	44	62	n.a.
Tanzania—						
Unwrought (a) ..	64	22	55	26	24	54
Semi-manufactures (a)	6	6	3	11	5	10
Uganda—						
Unwrought (a) ..	8	43	56	105	118	29
Semi-manufactures (a)	5	12	14	12	2	10
Barbados—						
Unwrought (a) ..	4	10	(b) 56	(b) 25	—	6
Semi-manufactures (a)	80	63	107	117	145	84
Jamaica—						
Unwrought (a) ..	134	156	111	47	29	(b) 6
Semi-manufactures (a)	76	85	93	76	53	n.a.
Trinidad and Tobago—						
Unwrought (a) ..	9	4	7	2	60	—
Semi-manufactures (a)	119	108	39	56	19	36
Red and white lead, etc.	9	13	13	11	30	10
Canada—						
Unwrought .. ..	1,555	65	63	559	391	136
Scrap .. ..	49	n.a.	n.a.	n.a.	n.a.	n.a.
Semi-manufactures, etc.	87	n.a.	230	203	271	355
Red and white lead, etc.	1,122	1,357	1,058	1,342	2,179	2,352
Guyana—						
Semi-manufactures (a)	n.a.	17	34	47	40	46
Ceylon—						
Unwrought (a) ..	428	243	543	364	525	429
Semi-manufactures (a)	4	34	128	17	22	71
Cyprus—						
Semi-manufactures (a)	63	81	62	277	96	103
Hong Kong—						
Unwrought (a) ..	(b) 409	(b) 355	52	366	321	88
Scrap .. ..	19	19	16	20	3	158
Semi-manufactures (a)	112	227	117	190	103	36
Red and white lead ..	—	77	132	123	104	111

\*See footnote on p. 178 concerning the descriptions "unwrought" lead and "semi-manufactures" used in these tables.

(a) Including alloys.

(b) Excess of re-exports.

(c) Source: World Bureau of Metal Statistics.

(d) Figures for 1963 relate to Rhodesia and Nyasaland.

## IMPORTS OF LEAD, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968					
<b>COMMONWEALTH COUNTRIES</b>											
<i>(cont.)</i>											
India (b)—											
Ore .. .. .	9	6	27	17	27	27					
Unwrought .. .. .	35,955	32,514	33,833	47,750	33,923	31,820					
do. alloys .. .. .	511	732	324	1,225	221	130					
Semi-manufactures (a)	166	322	499	323	249	331					
Malaysia (West)—											
Unwrought (a) .. .. .	<i>n.a.</i>	<i>n.a.</i>	185	184	153	152					
Semi-manufactures (a)	<i>n.a.</i>	<i>n.a.</i>	867	440	301	530					
Pakistan—											
Ore .. .. .	255	333	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>					
Unwrought (a) .. .. .	1,126	6,063	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>					
Semi-manufactures (a)	15	96	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>					
Litharge, red and white lead, etc. .. .. .	124	90	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>					
Sabah—											
Semi-manufactures (a)	90	31	45	38	52	59					
Singapore—											
Semi-manufactures (a)	135	88	135	177	191	248					
Australia (c)—											
Unwrought and semi-manufactures (a) .. .. .	2,283	235	440	(d) 69	(d) 43	(d) 504					
Red and white lead, etc.	97	108	170	167	13	33					
Fiji—											
Unwrought and semi-manufactures (a) .. .. .	80	89	79	52	68	59					
New Zealand (c)—											
Unwrought (a) .. .. .	5,099	5,773	6,110	7,280	5,616	<i>n.a.</i>					
Semi-manufactures (a)							179	28	56	23	<i>n.a.</i>
Red and white lead, etc.							1,156	502	487	955	870
Irish Republic—											
Unwrought (a)	614	420	364	330	334	996					
Semi-manufactures (a)	87	92	97	100	82	134					
<b>OTHER COUNTRIES</b>											
Austria—											
Ore .. .. .	3,642	5,354	4,458	2,559	3,051	2,553					
Unwrought (a) .. .. .	12,698	12,027	12,244	12,700	12,791	14,449					
Scrap .. .. .	43	449	489	1,101	953	1,017					
Semi-manufactures (a)	306	389	198	222	515	809					
Belgium-Luxemburg											
E.U.—											
Ore .. .. .	123,621	100,008	194,331	181,622	128,103	177,869					
Unwrought .. .. .	18,028	16,210	13,860	13,112	6,683	11,318					
do. alloys .. .. .	670	773	544	436	1,331	3,984					
Scrap .. .. .	3,988	17,441	20,634	13,289	8,443	11,715					
Semi-manufactures (a)	812	823	900	1,327	908	875					
Red and white lead, etc.	1,069	1,268	1,627	2,318	2,086	2,659					
Denmark—											
Unwrought .. .. .	13,147	13,819	13,679	12,699	10,546	10,759					
do. alloys .. .. .	581	1,199	592	1,424	623	327					
Scrap .. .. .	3,631	4,574	5,411	5,705	7,824	5,920					
Semi-manufactures (a)	871	794	719	526	621	577					
Red and white lead .. .. .	1,540	1,485	513	517	360	404					

(a) Including alloys.

(c) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

(d) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF LEAD, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Finland—</b>						
Unwrought (a) ..	15,254	10,853	10,063	14,165	8,394	8,352
Semi-manufactures (a)	685	643	541	1,213	912	1,571
Red and white lead, etc.	570	514	570	530	473	509
<b>France—</b>						
Ore .. .. .	130,182	141,813	128,328	119,109	126,427	126,356
Unwrought .. ..	64,404	54,729	26,121	32,679	35,403	42,130
do. alloys .. ..	2,316	2,516	1,543	2,162	3,575	4,171
Scrap .. .. .	3,938	1,425	2,902	4,082	4,444	3,232
Semi-manufactures (a)	136	343	475	687	737	722
Red and white lead, etc.	2,764	2,172	2,605	2,129	2,133	2,530
<b>Germany (Federal)—</b>						
Ore .. .. .	107,473	107,333	137,294	185,610	219,687	245,967
Unwrought (a) ..	98,974	98,468	114,835	86,638	80,187	80,948
Scrap (a) .. ..	1,226	10,184	5,470	1,571	2,581	8,843
Semi-manufactures (a)	1,815	2,115	2,025	2,090	1,569	1,823
Red and white lead, etc.	3,355	3,613	3,739	2,817	2,548	3,206
<b>Greece—</b>						
Ore .. .. .	4,203	3,887	6,823	6,951	8,158	9,316
Unwrought .. ..	495	286	967	2,644	1,842	2,115
Semi-manufactures (a)	185	90	345	104	132	n.a.
Red and White lead ..	553	595	474	822	923	805
<b>Hungary—</b>						
Unwrought .. ..	10,951	12,231	n.a.	n.a.	n.a.	12,772
<b>Iceland—</b>						
Unwrought .. ..	255	262	232	142	155	74
Semi-manufactures (a)	70	85	72	100	90	69
Red and white lead ..	19	14	7	6	6	n.a.
<b>Italy—</b>						
Ore .. .. .	20,635	9,218	32,244	19,677	20,521	53,450
Unwrought (a) ..	38,350	36,047	29,778	45,113	58,652	24,640
Scrap .. .. .	21,044	15,969	30,384	24,598	29,752	10,414
Semi-manufactures (a)	3,752	3,251	3,177	2,578	1,758	6,499
Red and white lead ..	3,839	4,251	3,677	2,894	4,864	5,005
<b>Netherlands—</b>						
Ore .. .. .	2	—	707	5	11	5
Unwrought .. ..	31,846	35,948	42,145	39,441	41,085	36,407
do. alloys .. ..	8,086	12,270	12,681	11,539	13,685	13,147
Scrap (a) .. ..	3,649	5,098	3,402	2,930	5,135	4,464
Semi-manufactures (a)	2,672	3,037	3,063	2,992	3,474	3,449
Red and white lead ..	4,029	4,414	4,291	4,180	4,708	3,827
<b>Norway—</b>						
Unwrought .. ..	9,348	8,017	7,617	8,699	9,377	7,427
do. alloys .. ..	1,692	2,129	1,720	2,507	2,172	2,870
Semi-manufactures (a)	1,041	1,096	1,272	1,416	1,012	1,187
Red and white lead ..	847	785	936	1,025	1,013	1,004
<b>Poland—</b>						
Unwrought .. ..	13,352	20,532	19,163	17,122	16,819	18,382
<b>Portugal—</b>						
Unwrought (a) ..	7,784	8,909	6,665	8,277	7,509	7,487
Scrap .. .. .	44	94	73	131	88	44
Semi-manufactures (a)	10	26	72	77	17	40
Red and white lead, etc.	119	86	93	59	82	51
<b>Spain—</b>						
Ore .. .. .	—	—	210	3,708	—	11
Unwrought .. ..	1	1,632	22,706	13,601	456	39
Scrap .. .. .	15	29	415	887	35	13
Red and white lead ..	350	495	223	95	158	62
<b>Sweden—</b>						
Unwrought .. ..	6,957	6,382	6,711	6,079	6,498	4,865
do. alloys .. ..	1,133	680	836	774	1,076	507
Scrap .. .. .	584	409	655	—	18	896
Semi-manufactures (a)	2,038	2,160	1,973	1,828	1,492	1,868
Red and white lead ..	1,404	1,569	2,302	1,787	1,655	1,746

(a) Including alloys.

## IMPORTS OF LEAD, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Switzerland—						
Unwrought .. ..	19,529	21,063	23,547	20,593	19,918	19,903
Semi-manufactures .. ..	560	439	329	509	558	607
Red and white lead .. ..	598	770	823	318	552	564
U.S.S.R.—						
Unwrought .. ..	38,200	49,100	47,100	30,600	31,789	38,483
Yugoslavia—						
Ore .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	12,536	6,676	12,066
Unwrought .. ..	2,998	1,546	312	1,564	1,351	8,411
Scrap .. ..	<i>n.a.</i>	2,194	2,225	3,413	1,740	150
Angola—						
Semi-manufactures .. ..	74	85	138	124	179	216
Red and white lead .. ..	54	50	39	48	49	62
Egypt—						
Unwrought and scrap .. ..	5,241	5,529	1,357	2,795	6,138	4,643
Red and white lead .. ..	<i>n.a.</i>	1,104	1,269	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Malagasy Republic—						
Unwrought (a) .. ..	126	112	123	211	135	246
Semi-manufactures (a) .. ..	50	33	51	48	64	49
Red and white lead .. ..	25	17	11	10	15	11
Morocco—						
Semi-manufactures (a) .. ..	90	48	36	36	47	59
Red and white lead .. ..	110	105	173	144	145	173
Mozambique—						
Semi-manufactures (a) .. ..	109	120	144	148	<i>n.a.</i>	<i>n.a.</i>
Red and white lead .. ..	42	35	24	37	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Unwrought .. ..	15,241	9,624	8,471	4,631	5,412	4,207
Semi-manufactures .. ..	48	98	1,408	2,610	1,287	2,620
Red and white lead .. ..	80	(b) 72	(b) 74	(b) 47	(b) 83	<i>n.a.</i>
Sudan—						
Semi-manufactures .. ..	144	300	129	144	63	200
Tunisia—						
Ore .. ..	8	6	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Costa Rica—						
Unwrought (a) .. ..	183	40	79	34	30	<i>n.a.</i>
Cuba—						
Ore .. ..	2,908	2,536	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Semi-manufactures .. ..	183	166	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Honduras—						
Unwrought .. ..	12	40	56	79	23	49
Semi-manufactures .. ..	12	4	5	13	33	13
Mexico—						
Unwrought .. ..	9	10	14	9	38	12
Nicaragua—						
Unwrought .. ..	50	90	133	210	109	117
Salvador—						
Unwrought .. ..	101	56	46	113	150	48
Semi-manufactures .. ..	88	135	223	213	219	194
United States—						
Ore, matte and flue dust						
(Pb content) .. ..	120,040	114,345	115,119	57,009	128,711	85,720
Bullion and base bullion						
(Pb content) .. ..	3,355	6,371	505	1,721	511	56
Unwrought (Pb content)	196,784	183,530	199,519	255,168	324,640	301,446
do. alloys (Pb content)	3,966	4,988				
Scrap (Pb content) .. ..	13,764	1,674	3,182	3,102	7,931	3,470
Semi-manufactures .. ..	2,169	2,890	1,828	1,888	2,100	2,019
Red and white lead, etc.	<i>n.a.</i>	19,085	21,753	24,793	24,937	26,109

(a) Including alloys.

(b) Red lead only.

## IMPORTS OF LEAD, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968	
<b>OTHER COUNTRIES</b>							
<i>(cont.)</i>							
Argentina—							
Unwrought .. .. .	3,249	869	3	20	543	1,840	
Brazil—							
Unwrought .. .. .	15,585	4,149	2,136	5,466	6,405	11,575	
do. alloys .. .. .							
Red and white lead ..	1,771	425	266	520	874	1,099	
Chile—							
Unwrought .. .. .	1,536	1,774	1,756	<i>n.a.</i>	842	<i>n.a.</i>	
Bars and sheets .. .	122	57	—	<i>n.a.</i>	658	<i>n.a.</i>	
Red and white lead ..	209	41	97	<i>n.a.</i>	30	<i>n.a.</i>	
Colombia—							
Unwrought (a) .. .	1,275	1,383	468	2,301	1,442	1,760	
Semi-manufactures (a)	43	30	109	194	12	6	
Red and white lead ..	998	1,102	638	1,130	1,081	1,064	
Ecuador—							
Unwrought .. .. .	176	162	209	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Red and white lead ..	106	126	123	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Peru—							
Semi-manufactures (a)	89	51	30	33	37	<i>n.a.</i>	
Red and white lead ..	47	12	34	7	4	<i>n.a.</i>	
Uruguay—							
Unwrought .. .. .	<i>n.a.</i>	<i>n.a.</i>	907	809	1,092	<i>n.a.</i>	
Red and white lead, etc.	<i>n.a.</i>	<i>n.a.</i>	164	270	115	<i>n.a.</i>	
Venezuela—							
Unwrought .. .. .	2,767	2,721	1,666	4,352	4,896	4,560	
Semi-manufactures ..	147	315	490	711	544	447	
Red and white lead ..	1,140	656	1,075	697	970	836	
Burma—							
Semi-manufactures (a)	5	5	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Formosa—							
Unwrought (a) .. .	2,481	2,443	3,129	3,656	5,328	<i>n.a.</i>	
Semi-manufactures (a)	84	142	74	23	35	<i>n.a.</i>	
Red and white lead, etc.	41	25	50	51	93	<i>n.a.</i>	
Iran (b)—							
Unwrought .. .. .	59	367	1,047	2,658	3,315	3,513	
Semi-manufactures ..	26	59	43	29	29	42	
Red and white lead ..	506	692	662	840	593	1,313	
Iraq—							
Semi-manufactures ..	58	7	<i>n.a.</i>	2	28	<i>n.a.</i>	
Israel—							
Unwrought .. .. .	904	1,131	1,111	1,284	1,178	2,285	
Scrap .. .. .	14	65	24	9	—	57	
Semi-manufactures ..	192	125	695	389	408	234	
Red and white lead ..	581	691	683	<i>n.a.</i>	606	733	
Japan—							
Ore .. .. .	67,565	50,886	66,185	79,753	128,072	141,880	
Unwrought .. .. .	23,802	67,896	37,665	22,655	17,854	11,411	
Scrap .. .. .	873	1,409	2,911	470	1,108	768	
Semi-manufactures (a)	13	—	34	21	3	4	
Red and white lead ..	1	5	4	7	14	22	
Jordan—							
Unwrought .. .. .	281	<i>n.a.</i>	222	772	423	441	
Red lead .. .. .	<i>n.a.</i>	<i>n.a.</i>	117	158	175	264	
Korea (South)—							
Unwrought and semi-manufactures ..	3,625	527	1,492	3,551	655	<i>n.a.</i>	
Lebanon—							
Unwrought .. .. .	299	499	655	953	1,252	<i>n.a.</i>	
Semi-manufactures (a)	43	40	31	73	53	<i>n.a.</i>	
Philippine Republic—							
Unwrought (a) .. .	1,911	1,972	3,181	} 5,000 {	{ 4,264	<i>n.a.</i>	
Semi-manufactures (a)	112	421	409			} 299	<i>n.a.</i>
Red and white lead ..	393	96	525				<i>n.a.</i>

(a) Including alloys.

(b) Years ended March 20 of year following that stated.



## IMPORTS OF LEAD, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Syria—						
Unwrought .. ..	594	351	263	218	374	814
Red and white lead ..	<i>n.a.</i>	112	114	120	56	147
Thailand—						
Unwrought (a) .. ..	674	816	969	1,340	1,598	2,884
Semi-manufactures (a)	130	100	216	102	71	251
Turkey—						
Unwrought (a) .. ..	2,303	1,432	16	2,517	4,495	4,273
Scrap .. ..	93	49	65	156	277	236
Semi-manufactures (a)	16	5	6	18	10	1
Red and white lead ..	548	289	119	377	1,236	223

(a) Including alloys.

**LITHIUM MINERALS**  
**PRODUCTION OF LITHIUM MINERALS**

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Rhodesia—						
Amblygonite .. ..	46	—	(b) —	n.a.	n.a.	n.a.
Eucryptite .. ..	1,039	720	(b) 476	n.a.	n.a.	n.a.
Lepidolite .. ..	14,426	20,485	(b) 11,867	n.a.	n.a.	n.a.
Petalite .. ..	26,738	32,544	(b) 20,034	n.a.	n.a.	n.a.
Spodumene .. ..	1,996	6,219	(b) 10,278	n.a.	n.a.	n.a.
Uganda—						
Amblygonite .. ..	47	—	75	—	(a) 50	44
Canada—						
Lithium minerals (Li <sub>2</sub> O content) .. ..	288	472	452	113	195	—
Australia—						
Petalite .. ..	390	208	310	933	} 667	738
Amblygonite .. ..	20	—	—	—		
Spodumene .. ..	22	52	—	—		
<b>OTHER COUNTRIES</b>						
Mozambique—						
Lepidolite .. ..	102	—	75	n.a.	246	856
Rwanda and Burundi—						
Amblygonite .. ..	362	290	—	n.a.	n.a.	n.a.
South Africa—						
Spodumene .. ..	372	160	855	301	—	36
South West Africa—						
Amblygonite .. ..	115	12	35	27	n.a.	n.a.
Lepidolite .. ..	77	363	266	326	n.a.	n.a.
Petalite .. ..	772	712	1,189	1,200	n.a.	n.a.
Argentina—						
Lithium minerals .. ..	1,413	713	612	266	243	n.a.
Brazil—						
Amblygonite (a) .. ..	—	—	25	—	(c) 6,022	—
Spodumene (a) .. ..	25	—	6,707	98	49	—
Surinam—						
Amblygonite (a) .. ..	507	n.a.	n.a.	n.a.	n.a.	n.a.

Lithium minerals are also produced in the United States and lithium chemicals recovered from Searles Lake brines in California.

(a) Exports.

(b) January to September only.

(c) Lithium minerals other than spodumene.

## EXPORTS OF LITHIUM MINERALS

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Rhodesia (a)— .. ..						
Lithium minerals .. ..	35,931	66,325	49,932	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Uganda—						
Amblygonite .. ..	—	20	—	—	50	—
Australia (b)— .. ..						
Lithium minerals .. ..	<i>n.a.</i>	—	—	345	—	—
<b>OTHER COUNTRIES</b>						
Germany (Federal)—						
Lithium minerals .. ..	406	621	606	243	148	126
Mozambique—						
Lepidolite .. ..	102	<i>n.a.</i>	75	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Lithium minerals .. ..	380	335	409	486	—	—
South West Africa—						
Amblygonite .. ..	176	—	597	12	<i>n.a.</i>	<i>n.a.</i>
Lepidolite .. ..	281	484	152	534	<i>n.a.</i>	<i>n.a.</i>
Petalite .. ..	681	1,028	991	1,185	<i>n.a.</i>	<i>n.a.</i>
Brazil—						
Amblygonite .. ..	—	—	25	—	(c) 6,022	—
Spodumene .. ..	25	—	6,707	98	49	—
Surinam—						
Amblygonite .. ..	507	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Figure for 1963 relates to Rhodesia and Nyasaland.

(b) Years ended June 30 of that stated.

(c) Lithium minerals other than spodumene.

## IMPORTS OF LITHIUM MINERALS\*

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (a) ..	4,300	10,300	7,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg E.U.	118	90	227	311	635	753
France .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	4,602	2,498	2,559
Germany (Federal) ..	9,809	14,701	10,766	9,667	6,207	10,621
Italy .. ..	407	2,347	3,551	12,796	992	4,851
Netherlands (a) .. ..	3,200	4,400	6,500	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Spain .. ..	57	60	130	241	360	419
United States .. ..	20,056	24,123	10,040	8,268	23,154	10,172
Japan (a) .. ..	3,100	7,000	3,500	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

\*Imports of lithium minerals are not separately recorded in the trade returns of most importing countries.

(a) Figures represent exports to the country stated from the principal producing countries and are not necessarily complete.

**MAGNESITE AND DOLOMITE**  
**PRODUCTION OF MAGNESITE AND DOLOMITE**

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Dolomite, crude (a) ..	3,000,000	3,700,000	3,800,000	4,200,000	4,700,000	4,900,000
Kenya—						
Magnesite, crude ..	257	167	66	667	415	67
Rhodesia—						
Magnesite, crude ..	10,774	37,867	35,037	(e) 29,000	(e) 39,000	n.a.
Tanzania—						
Magnesite, crude ..	(c) 84	(c) 487	1,404	4,488	2,006	1,424
Canada—						
Magnesitic dolomite (b)	n.a.	n.a.	69,441	n.a.	n.a.	n.a.
	£1,138,999	£1,184,739	£1,330,810	£1,312,306	£1,355,090	£1,048,091
Ceylon—						
Dolomite .. ..	n.a.	n.a.	5,004	n.a.	13,194	7,773
India—						
Magnesite, crude ..	230,861	204,652	234,936	228,000	242,000	249,000
Dolomite .. ..	1,068,300	512,901	953,000	1,037,354	1,125,932	1,240,000
Pakistan—						
Magnesite .. ..	864	607	515	(e) 724	(e) 2,010	(e) 2,000
Australia—						
Magnesite, crude ..	56,946	31,250	26,362	19,556	23,653	23,821
Dolomite .. ..	214,339	236,068	258,661	256,008	290,659	309,023
New Zealand—						
Magnesite, crude ..	781	603	837	557	568	792
Dolomite .. ..	4,387	9,164	7,556	13,251	8,310	8,116
<b>OTHER COUNTRIES</b>						
Austria—						
Magnesite—						
Crude .. ..	1,292,054	1,630,411	1,786,933	1,589,135	1,511,061	1,522,254
Caustic (d) .. ..	129,961	133,355	133,530	135,663	125,099	114,724
do. powder (d) ..	37,721	55,332	61,690	60,330	48,455	58,072
Dead-burned (d) ..	404,598	513,756	556,958	483,533	442,498	474,464
Bricks (d) .. ..	219,540	272,472	277,978	265,125	234,704	275,062
Belgium—						
Dolomite—						
Crude .. ..	681,420	894,140	854,020	r 827,678	939,275	1,133,274
Calcined .. ..	318,450	332,160	312,840	314,075	299,199	365,381
France—						
Dolomite, crude ..	935,076	1,102,505	1,279,800	1,363,674	1,444,989	n.a.
Germany (Federal)—						
Dolomite .. ..	n.a.	133,478	276,360	159,128	179,259	243,842
Greece—						
Magnesite—						
Crude .. ..	262,999	354,513	310,226	336,723	468,281	439,000
Caustic (d) .. ..	47,335	53,977	48,700	35,952	32,671	35,000
Dead-burned (d) ..	41,648	46,048	63,241	89,235	96,394	131,000
Hungary—						
Dolomite .. ..	424,981	474,500	551,000	612,000	640,000	n.a.
Italy—						
Magnesite, crude ..	6,707	6,209	3,480	2,560	4,864	n.a.
Dolomite—						
Metallurgical ..	74,869	80,222	68,474	64,568	n.a.	n.a.
Refractory, etc. ..	772,818	821,303	898,714	950,982	n.a.	n.a.
Norway—						
Dolomite .. ..	251,175	444,512	307,000	360,400	433,645	382,697

(a) Estimated.

(b) Including brucite, dead-burned magnesitic dolomite and serpentine.

(c) Exports.

(d) Derived from crude shown and not additional.

(e) United States Bureau of Mines' estimate.

## PRODUCTION OF MAGNESITE AND DOLOMITE (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Poland—						
Magnesite, crude ..	26,200	37,400	41,300	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Portugal—						
Dolomite .. ..	3,858	5,285	2,928	4,466	5,256	12,003
Spain—						
Magnesite .. ..	83,317	91,852	99,057	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sweden—						
Dolomite—						
Crude .. ..	53,499	72,443	89,983	181,318	200,384	261,504
Calcined (c) .. ..	54,885	58,066	62,665	61,698	49,400	54,427
Yugoslavia—						
Magnesite, crude ..	405,453	489,564	517,634	518,367	418,053	393,993
South Africa—						
Magnesite, crude ..	96,704	83,431	85,526	91,828	78,749	58,853
United States—						
Magnesite—						
Crude .. ..	471,121	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Caustic (a) (b) ..	120,426	143,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Dead-burned (a) (b)	636,370	751,797	800,966	760,829	614,022	590,081
Dolomite—						
Dead-burned (b) ..	1,740,137	1,935,288	1,942,679	1,958,069	1,679,000	1,637,000
Argentina—						
Dolomite .. ..	<i>n.a.</i>	<i>n.a.</i>	97,074	137,362	194,891	<i>n.a.</i>
Brazil—						
Magnesite .. ..	88,872	92,260	122,673	125,064	107,528	107,000
Dolomite .. ..	470,259	325,169	219,684	197,363	221,419	<i>n.a.</i>
Colombia—						
Magnesite .. ..	250	217	190	—	<i>n.a.</i>	<i>n.a.</i>
Dolomite .. ..	5,000	3,166	11,519	6,378	11,373	11,800
Peru—						
Dolomite .. ..	558	1,470	2,169	2,896	4,700	<i>n.a.</i>
Uruguay—						
Dolomitic limestone ..	26,383	26,512	20,091	28,483	14,683	<i>n.a.</i>
Formosa—						
Dolomite .. ..	30,416	32,168	49,778	r 45,399	56,072	73,023
Japan—						
Dolomite .. ..	1,723,823	1,805,922	1,647,000	1,684,000	2,110,500	2,186,235
Philippine Republic—						
Dolomite .. ..	5,009	5,138	5,068	4,070	6,687	6,100
Turkey—						
Magnesite .. ..	17,634	38,451	74,393	64,750	83,617	115,841
Dolomite .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	364,600	<i>n.a.</i>	<i>n.a.</i>
New Caledonia—						
Magnesite .. ..	12	991	743	625	1,533	654

Magnesite is known to have been produced in Bulgaria, Czechoslovakia, U.S.S.R., Iran, Chile, Mexico, Korea and Manchuria. Dolomite is known to have been produced in other countries. Magnesia is extracted from sea-water in the United Kingdom.

- (a) Derived partly from crude shown and partly from other sources, e.g. sea-water, brucite, dolomite.
- (b) Sold or used by producers.
- (c) Derived partly from crude shown.

PRODUCTION OF MAGNESIUM

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (a) ..	4,600	4,700	5,300	3,700	4,000	3,500
Canada .. .. .	7,951	8,351	9,025	6,003	8,062	8,961
<b>OTHER COUNTRIES</b>						
France .. .. .	1,715	973	2,780	3,300	4,133	4,407
Germany (Federal) (b) ..	500	500	500	200	—	—
Italy .. .. .	5,718	5,933	6,213	6,412	6,217	6,489
Norway .. .. .	17,795	20,604	23,526	25,388	29,973	30,792
U.S.S.R. (b) .. .. .	31,000	31,000	33,000	34,000	35,000	40,000
United States .. .. .	67,719	70,971	72,644	71,245	86,970	87,835
Japan .. .. .	2,401	2,891	3,700	5,200	6,642	5,600
<b>WORLD'S TOTAL* ..</b>	<b>139,000</b>	<b>146,000</b>	<b>157,000</b>	<b>155,000</b>	<b>181,000</b>	<b>188,000</b>

\*Excluding magnesium known to have been produced in China.

(a) Including re-melt alloys.

(b) "Metallgesellschaft" estimate.

## EXPORTS OF MAGNESITE, ETC.\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Magnesium and alloys..	(e) 2,967	(e) 2,324	1,740	1,208	1,109	908
Rhodesia (d)—						
Crude and calcined ..	9,363	23,395	33,563	n.a.	n.a.	n.a.
Dolomite ..	n.a.	115	n.a.	n.a.	n.a.	n.a.
Tanzania—						
Crude ..	84	487	1,025	1,079	1,177	1,062
Canada—						
Magnesium ..	(£1,217,459)	(£1,311,446)	(£1,478,028)	(£1,144,942)	(£1,247,637)	(£1,642,257)
India (c)—						
Crude and calcined ..	34,823	37,466	50,149	29,871	17,796	23,798
Chloride ..	106	—	—	5	—	—
Malaysia (West)—						
Dolomite ..	n.a.	n.a.	1,853	2,150	2,381	2,516
Singapore—						
Crude ..	98	638	998	988	1,308	1,461
Australia (b)—						
Crude and calcined ..	318	731	2,573	2,270	1,889	1,874
<b>OTHER COUNTRIES</b>						
Austria—						
Crude ..	413	754	567	406	379	627
Caustic ..	93,080	99,766	97,854	90,084	78,365	71,320
Dead-burned ..	161,699	233,223	270,915	220,432	180,415	174,854
Bricks ..	89,133	117,249	100,427	95,479	80,774	96,959
Dolomite ..	18,358	33,241	41,266	38,136	31,786	8,409
Belgium-Luxemburg						
E.U.—						
Crude ..	—	—	12	8	—	—
Calcined ..	36	43	8	218	1	23
Carbonate ..	4	—	63	31	63	13
Chloride ..	1	—	1	6	5	7
Oxide and hydroxide ..	4	1	81	2	7	52
Sulphate ..	25	30	22	158	323	61
Dolomite, crude ..	271,599	313,567	369,675	276,291	422,671	593,125
do. calcined ..	169,707	175,390	173,073	191,538	190,328	178,461
Czechoslovakia ..	101,000	142,000	190,000	204,000	213,573	n.a.
France—						
Crude and calcined ..	435	216	734	225	328	2,517
Magnesium metal (a) ..	92	148	132	140	148	338
Carbonate ..	830	1,391	1,147	1,175	1,160	999
Chloride ..	1,139	1,394	1,017	567	2,703	2,760
Oxide and hydroxide ..	1,404	1,491	1,429	1,593	1,928	2,118
Sulphate ..	85	386	100	165	210	167
Dolomite, crude ..	18,725	21,108	19,575	23,347	52,903	60,243
do. calcined ..	5,346	3,750	3,821	4,108	4,306	15,370
Germany (Federal)—						
Crude and calcined ..	3,858	8,132	5,542	6,519	8,821	9,527
Magnesium metal ..	427	900	1,135	1,008	304	1,026
Carbonate ..	277	456	348	298	244	254
Chloride ..	63,091	72,706	70,920	77,484	82,531	96,824
Oxide and hydroxide ..	1,574	1,874	2,242	2,727	1,956	1,998
Sulphate ..	40,299	39,188	39,169	39,727	34,142	34,227
Dolomite ..	56,597	72,729	89,165	98,338	84,564	72,648
Kieserite ..	168,346	195,824	206,839	230,344	234,407	233,453
Germany (East)—						
Sulphate ..	20,297	21,438	24,402	28,414	27,717	n.a.

\* Magnesite unless otherwise stated.

(a) Including alloys and scrap.

(b) Years ended June 30 of that stated.

(c) Years ended March 31 following that stated.

(d) Figures for 1963 relate to Rhodesia and Nyasaland.

(e) Including scrap.

## EXPORTS OF MAGNESITE, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Greece—						
Crude .. .. .	20,040	20,602	17,887	12,448	16,722	15,821
Calcined .. .. .	90,249	94,053	115,634	130,549	129,160	172,068
Italy—						
Crude .. .. .	19	20	20	11	9	6
Calcined .. .. .	88	40	70	250	70	19
Magnesium metal including alloyed .. .. .	4,100	5,626	5,826	4,558	3,117	6,999
Carbonate .. .. .	138	147	109	74	51	66
Chloride .. .. .	10	16	5	36	48	27
Oxide .. .. .	290	348	9,191	23,563	21,947	15,722
Dolomite, crude .. .. .	11,344	1,526	8,649	15,068	14,851	14,469
do. calcined .. .. .						
Netherlands—						
Crude .. .. .	802	1,073	1,185	1,318	875	973
Magnesium metal .. .. .	362	239	289	273	262	319
Calcined .. .. .	35,234	37,150	31,033	27,165	16,840	15,670
Chloride .. .. .	533	672	383	284	984	1,426
Sulphate .. .. .	716	425	493	550	282	283
Norway—						
Crude .. .. .	—	—	1	—	—	—
Magnesium metal .. .. .	18,889	22,748	24,608	29,946	29,636	<i>n.a.</i>
Dolomite, crude .. .. .	65,095	76,303	76,547	89,905	89,645	93,966
Poland—						
Dolomite .. .. .	2,226	2,426	2,557	2,796	3,300	3,181
Spain—						
Crude and calcined .. .. .	17,571	28,620	30,382	15,793	10,263	12,446
Dolomite, crude .. .. .	4,387	614	2,050	3,597	24,986	10,880
Sweden—						
Crude and calcined .. .. .	193	156	202	114	61	92
Dolomite .. .. .	3,836	4,373	3,662	3,923	4,576	9,272
Bricks .. .. .	441	12	14	4	204	6
U.S.S.R.—						
Magnesium metal .. .. .	2,100	2,800	3,400	8,000	8,400	14,271
Yugoslavia—						
Crude .. .. .	3,779	6,055	1,770	—	—	248
Ground and dead-burned .. .. .	84,285	119,744	117,396	101,385	83,141	105,867
Bricks .. .. .	11,533	25,904	47,054	21,409	22,673	29,230
South Africa—						
Crude and calcined .. .. .	—	7,612	2,309	3,302	3,021	1,905
United States—						
Crude and calcined .. .. .	<i>n.a.</i>	<i>n.a.</i>	5,145	6,359	6,953	6,414
Dead-burned .. .. .	69,312	70,821	63,972	65,420	57,472	51,033
Magnesium metal (a) .. .. .	2,918	15,010	16,357	13,275	10,705	16,430
Dolomite .. .. .	<i>n.a.</i>	<i>n.a.</i>	226,282	90,394	100,884	90,802
Brazil .. .. .	15,477	1,935	12,166	4,580	4,626	4,506
Uruguay—						
Dolomite, crude .. .. .	10,472	13,717	4,724	14,833	<i>n.a.</i>	<i>n.a.</i>
Formosa—						
Carbonate .. .. .	525	477	672	633	875	<i>n.a.</i>
Japan—						
Dolomite .. .. .	1,816	2,279	2,241	41,689	3,568	2,832
Magnesium metal .. .. .	19	22	72	119	72	76
Carbonate .. .. .	3,334	2,448	3,414	3,433	4,339	5,060
Chloride and sulphate .. .. .	145	136	185	451	221	265
Korea (South)—						
Dolomite .. .. .	4,527	11,810	19,401	12,996	11,404	<i>n.a.</i>
Turkey—						
Carbonate .. .. .	10,437	28,482	34,183	66,008	36,243	54,600
Oxide .. .. .	<i>n.a.</i>	97	98	49	315	128

(a) Including alloys and scrap.



## IMPORTS OF MAGNESITE, ETC.\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Crude and calcined .. .. .	37,378	85,728	107,745	109,004	60,945	76,048
Magnesium (c) .. .. .	4,086	3,157	4,506	4,777	6,060	6,089
Chloride .. .. .	3,974	6,826	5,079	3,832	4,088	4,527
Dolomite .. .. .	10,051	12,061	13,768	19,322	21,763	22,636
<b>Zambia—</b>						
Crude .. .. .	<i>n.a.</i>	<i>n.a.</i>	253	762	<i>n.a.</i>	<i>n.a.</i>
Salts .. .. .	<i>n.a.</i>	<i>n.a.</i>	75	340	632	387
<b>Canada—</b>						
Calcined and dead-burned .. .. .	16,644	27,482	32,161	31,087	34,145	37,878
Magnesium metal .. .. .	<i>n.a.</i>	1,425	1,465	2,685	1,333	2,146
do. alloys .. .. .	<i>n.a.</i>	165	148	294	184	270
	(£60,178)	(£255,000)	(£187,799)	(£301,824)	(£271,064)	(£605,874)
Oxide .. .. .	681	3,237	812	1,070	887	1,239
Carbonate .. .. .		<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sulphate .. .. .	3,001	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other salts .. .. .	10,581	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Bricks .. .. .	(£71,261)	(£276,825)	(£359,803)	(£545,937)	(£465,501)	(£822,863)
Dolomite, calcined .. .. .	<i>n.a.</i>	13,387	26,568	15,382	9,318	8,845
<b>Trinidad and Tobago—</b>						
Crude .. .. .	31	80	83	27	76	99
<b>Hong Kong—</b>						
Crude .. .. .	99	220	236	100	161	56
Magnesium carbonate .. .. .	—	681	570	827	1,302	1,542
<b>India (b)—</b>						
Crude and calcined .. .. .	—	—	343	—	71	103
Magnesium metal .. .. .	270	157	79	100	123	64
Carbonate .. .. .	439	550	425	144	231	80
Chloride .. .. .	—	—	9	4	—	4
Oxides .. .. .	37	53	136	81	40	51
Other salts .. .. .	69	34	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Malaysia (West)—</b>						
Crude .. .. .	<i>n.a.</i>	<i>n.a.</i>	72	154	204	200
Dolomite .. .. .	<i>n.a.</i>	<i>n.a.</i>	128	126	145	42
<b>Pakistan—</b>						
Chloride .. .. .	130	140	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sulphate .. .. .	<i>n.a.</i>	3	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other salts .. .. .	248	41	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Singapore—</b>						
Crude .. .. .	121	301	527	299	93	13
Dolomite .. .. .	1,038	2,322	1,912	2,185	2,831	3,791
<b>Australia (a)—</b>						
Crude and calcined .. .. .	3,863	50,054	41,673	22,524	17,218	26,301
Magnesium metal and powder .. .. .	203	489	455	872	1,028	603
Oxide .. .. .	389	255	234	312	3,347	453
Carbonate .. .. .	153	201	257	175	187	195
Sulphate .. .. .	—	218	211	383	—	—
Dolomite .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	411	448	673
<b>New Zealand (a)—</b>						
Crude .. .. .	146	174	167	279	267	<i>n.a.</i>
Magnesium metal .. .. .	23	21	84	14	2	<i>n.a.</i>
Sulphate .. .. .	590	596	705	506	613	<i>n.a.</i>

\* Magnesite unless otherwise stated.

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated

(c) Unwrought including alloys.

## IMPORTS OF MAGNESITE, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Crude .. .. .	10,621	25,751	19,905	31,803	3,925	7,421
Caustic and dead burned	904	1,857	17,393	23,046	23,411	35,003
Magnesium metal ..	451	506	532	502	536	886
Chloride .. .. .	1,764	1,685	1,468	1,403	1,228	1,102
Dolomite .. .. .	2,470	3,084	3,058	3,243	3,254	3,451
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Crude .. .. .	757	481	244	428	210	203
Calcined .. .. .	2,816	3,569	6,064	3,244	3,334	4,325
Magnesium metal ..	479	714	706	1,074	627	880
Carbonate .. .. .	261	284	300	247	224	245
Chloride .. .. .	646	668	849	889	2,076	4,395
Oxide and hydroxide ..	642	734	913	985	1,026	1,450
Sulphate .. .. .	2,128	2,076	1,911	2,153	1,622	1,589
Dolomite, crude .. ..	7,341	9,503	6,997	10,674	24,695	40,999
do. calcined .. ..	5,527	6,874	11,720	12,441	14,438	4,467
<b>Denmark—</b>						
Crude .. .. .	3,315	3,756	4,640	5,466	4,062	5,109
Carbonate .. .. .	1,005	107	104	77	62	53
Chloride .. .. .	537	445	707	587	1,007	<i>n.a.</i>
Sulphate .. .. .	2,210	4,760	2,488	1,812	1,577	885
Dolomite .. .. .	16,669	17,823	15,373	19,287	21,253	21,722
<b>Finland—</b>						
Crude and calcined ..	1,884	1,546	1,998	2,006	2,027	2,924
Bricks .. .. .	3,574	3,960	4,755	4,427	8,813	5,480
Carbonate .. .. .	60	63	113	98	214	129
Chloride .. .. .	222	263	288	307	800	1,204
Sulphate .. .. .	309	370	1,202	609	3,733	2,386
<b>France—</b>						
Crude .. .. .	3,163	1,689	767	1,369	1,044	55
Calcined .. .. .	22,714	33,114	41,516	40,121	37,954	41,911
Bricks .. .. .	29,477	32,540	36,313	31,629	31,724	34,299
Magnesium metal (a) ..	1,847	2,622	1,183	1,029	1,126	1,296
Carbonate .. .. .	275	234	221	272	246	302
Chloride .. .. .	30	121	370	1,839	2,832	3,675
Oxide and hydroxide ..	567	472	311	265	785	951
Sulphate .. .. .	2,621	1,974	3,041	2,630	2,975	3,798
Dolomite, crude .. ..	49,733	50,063	49,470	58,778	51,052	56,274
do. calcined .. ..	132,452	131,113	125,815	121,592	118,996	122,320
<b>Germany (Federal)—</b>						
Crude .. .. .	1,182	8,745	3,018	1,124	1,484	1,437
Caustic .. .. .	102,475	113,603	121,437	119,658	98,257	100,235
Dead-burned .. .. .	97,513	174,708	220,402	189,379	199,228	293,217
Magnesium metal (a) ..	30,528	33,963	40,398	35,295	32,264	41,185
Carbonate .. .. .	223	783	949	1,068	793	1,001
Chloride .. .. .	92	15	17	17	26	104
Oxide and hydroxide ..	4,007	2,361	2,081	2,014	1,686	2,929
Sulphate .. .. .	17	41	50	67	131	114
Dolomite .. .. .	117,379	116,361	118,524	145,671	237,515	300,451
<b>Greece—</b>						
Crude and calcined ..	250	409	496	334	388	<i>n.a.</i>
Magnesium metal .. ..	15	27	4	13	55	<i>n.a.</i>
Chloride .. .. .	86	79	88	76	97	<i>n.a.</i>
Sulphate .. .. .	366	312	263	251	266	<i>n.a.</i>
Dolomite .. .. .	41	106	194	142	758	<i>n.a.</i>
<b>Hungary—</b>						
Dead-burned .. .. .	64,118	58,037	62,375	76,945	74,580	77,588
<b>Italy—</b>						
Crude .. .. .	12,413	15,282	12,780	9,359	15,236	13,199
Calcined .. .. .	26,054	29,363	35,996	35,363	36,906	39,683
Chloride .. .. .	4,259	4,204	4,060	3,946	5,103	6,653
Oxide .. .. .	379	312	331	620	813	838
Sulphate .. .. .	2,518	4,956	5,834	6,733	7,985	7,773
Dolomite .. .. .	1,065	1,070	429	1,123	1,397	1,233

(a) Including alloys and scrap.

## IMPORTS OF MAGNESITE, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Netherlands—</b>						
Crude .. ..	2,150	2,519	2,808	2,930	1,747	2,509
Calcined .. ..	37,580	48,778	40,123	33,394	20,247	32,265
Magnesium metal .. ..	387	485	388	397	480	494
Carbonate .. ..	457	6,576	458	403	423	441
Oxide and hydroxide .. ..	347	410	444	533	366	458
Sulphate .. ..	8,225	7,285	6,562	6,549	4,890	4,921
Chloride .. ..	2,593	2,688	2,888	2,870	3,477	4,016
Dolomite, crude .. ..	210,260	260,935	361,519	315,309	380,798	427,712
do. calcined .. ..	49,478	47,650	53,840	60,485	51,189	32,265
<b>Norway—</b>						
Crude and calcined .. ..	7,221	7,643	3,895	3,964	2,311	5,048
Chloride .. ..	41,477	51,500	51,890	54,418	55,319	60,708
Sulphate .. ..	482	381	268	333	236	<i>n.a.</i>
Dolomite .. ..	6,657	12,326	15,580	4,619	2,930	2,539
<b>Poland—</b>						
Calcined and caustic .. ..	123,700	120,600	157,095	152,248	102,502	150,344
Magnesium metal .. ..	422	276	295	394	464	394
Chloride .. ..	7,860	5,867	6,376	6,929	7,097	6,311
<b>Portugal—</b>						
Crude and calcined .. ..	750	533	245	1,016	361	467
Carbonate .. ..	107	123	117	142	91	125
Oxide .. ..	18	73	245	48	168	29
Sulphate .. ..	1,586	1,728	1,836	496	1,128	914
<b>Spain—</b>						
Crude and calcined .. ..	1,140	3,859	11,547	7,096	6,318	18,728
Magnesium metal .. ..	161	205	298	339	321	325
Dolomite, crude .. ..	1,885	1,809	687	925	1,386	1,631
do. calcined .. ..	157	163	146	122	72	10
<b>Sweden—</b>						
Crude and calcined .. ..	6,722	9,204	7,872	15,673	7,135	5,905
Bricks .. ..	20,121	28,568	38,804	41,961	35,922	37,401
Magnesium metal .. ..	490	582	471	380	695	647
Carbonate .. ..	167	201	188	226	156	187
Chloride .. ..	1,482	1,154	2,157	3,704	4,091	7,254
Sulphate .. ..	4,512	11,976	9,372	10,004	13,023	14,311
Dolomite .. ..	20,043	31,187	27,443	22,781	23,996	25,755
<b>Switzerland—</b>						
Magnesium metal .. ..	573	745	510	644	1,018	773
Calcined .. ..	3,557	4,242	3,867	4,049	3,309	3,283
Carbonate .. ..	126	283	191	236	169	187
Chloride .. ..	5,547	5,729	4,650	4,315	3,255	3,276
Sulphate .. ..	923	641	747	734	682	737
Dolomite, calcined .. ..	7,777	8,870	11,670	12,882	12,476	12,430
<b>U.S.S.R.—</b>						
Crude (a) .. ..	96,000	78,800	135,700	104,700	156,390	208,061
<b>Yugoslavia—</b>						
Bricks .. ..	2,015	—	7	318	622	12
Magnesium metal .. ..	269	487	651	491	468	413
Carbonate .. ..	<i>n.a.</i>	<i>n.a.</i>	203	91	43	82
Dolomite .. ..	<i>n.a.</i>	663	1,217	2,275	2,307	3,687
<b>Angola—</b>						
Sulphate .. ..	23	1,032	49	81	58	80
<b>Egypt—</b>						
Magnesite and dolomite	4,587	623	3,518	2,664	<i>n.a.</i>	<i>n.a.</i>
<b>Morocco—</b>						
Crude .. ..	2	<i>n.a.</i>	54	6	63	53
Chloride .. ..	346	262	228	190	937	<i>n.a.</i>
Sulphate .. ..	227	168	362	220	265	426
Dolomite .. ..	692	<i>n.a.</i>	154	492	647	560

(a) Magnesite "powder", mainly from North Korea.

## IMPORTS OF MAGNESITE, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>South Africa—</b>						
Crude .. .. .	<i>n.a.</i>	25,745	35,615	34,681	54,262	77,999
Carbonate .. .. .	9,832	25,744	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Chloride .. .. .	174	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sulphate .. .. .	904	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Mexico—</b>						
Crude .. .. .	56	53	22	993	31,296	<i>n.a.</i>
Magnesium metal .. .. .	586	476	466	639	332	768
Oxide .. .. .	1,187	1,011	295	376	592	600
Sulphate .. .. .	370	289	127	92	73	148
<b>United States—</b>						
Crude .. .. .	<i>n.a.</i>	2	45	278	292	—
Calcined .. .. .	8,868	8,379	10,625	11,876	8,187	10,525
Dead-burned .. .. .	77,348	53,657	64,261	115,135	67,898	77,102
Bricks .. .. .	10,266	16,439	18,694	17,977	20,338	15,270
Magnesium metal, etc.	1,652	1,988	2,278	1,562	6,820	2,686
Oxide .. .. .	83	113	132	68	57	478
Carbonate, precipitated	556	993	1,116	973	804	1,133
Chloride .. .. .	596	671	327	157	403	429
Sulphate .. .. .	7,628	8,526	5,929	8,273	28,316	39,519
Kieserite .. .. .	21,495	37,478	44,966	41,682		
<b>Argentina—</b>						
Crude .. .. .	2,367	4,712	4,992	2,153	3,275	4,488
Carbonate .. .. .	368	536	108	211	373	229
Chloride .. .. .	25	113	124	207	152	275
Oxide .. .. .	23	44	37	75	57	84
<b>Brazil—</b>						
Magnesium metal .. .. .	1,779	1,478	1,309	2,772	1,954	3,021
Carbonate .. .. .	229	170	168	324	263	401
Chloride .. .. .	58	64	54	46	64	131
Oxide .. .. .	117	102	79	123	106	153
Sulphate .. .. .	772	410	112	193	146	432
<b>Chile—</b>						
Crude .. .. .	52	44	42	<i>n.a.</i>	431	<i>n.a.</i>
Calcined .. .. .	3,406	10,281	7,291	<i>n.a.</i>	7,174	<i>n.a.</i>
Dolomite, crude .. .. .	11,521	36,179	11,265	<i>n.a.</i>	33,590	<i>n.a.</i>
do. calcined .. .. .	3,347	12,635	5,938	<i>n.a.</i>	50,413	<i>n.a.</i>
<b>Colombia—</b>						
Crude and calcined .. .. .	36	47	52	75	69	116
Carbonate .. .. .	14	9	14	23	5	12
Chloride .. .. .	58	64	97	115	98	95
Oxide .. .. .	159	127	155	767	121	317
Sulphate .. .. .	600	296	197	752	191	243
Dolomite .. .. .	4,724	4,524	1,966	3,320	3,203	4,642
<b>Peru—</b>						
Crude and calcined .. .. .	941	990	1,187	1,253	3,183	<i>n.a.</i>
Carbonate .. .. .	46	55	63	35	<i>n.a.</i>	<i>n.a.</i>
Oxide .. .. .	54	26	—	115	93	<i>n.a.</i>
Hydroxide .. .. .	27	73	227			
Sulphate .. .. .	67	128	285	171	630	<i>n.a.</i>
Chloride .. .. .	16	27	17	9	13	<i>n.a.</i>
<b>Venezuela—</b>						
Crude .. .. .	635	804	2,146	2,868	1,771	3,402
Sulphate .. .. .	375	329	766	362	255	260
<b>Iran (a)—</b>						
Sulphate .. .. .	256	319	451	144	220	473
<b>Israel—</b>						
Crude .. .. .	948	1,443	2,276	1,278	1,118	1,603
<b>Japan—</b>						
Crude .. .. .	2,849	4,408	4,442	3,950	3,957	4,711
Dead-burn .. .. .	20,234	19,220	21,316	19,806	30,487	19,608

(a) Years ended March 20 of year following that stated.

## IMPORTS OF MAGNESITE, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Japan <i>cont.</i> —						
Magnesium metal ..	488	917	560	1,030	828	436
Dolomite .. ..	4,828	12,471	20,323	11,691	11,912	10,998
Korea (South)—						
Crude .. ..	2,044	1,972	1,250	294	—	<i>n.a.</i>
Philippine Republic—						
Crude and calcined ..	768	387	274	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sulphate .. ..	180	584	200	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Dolomite .. ..	2,803	2,656	3,225	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Syria—						
Sulphate .. ..	<i>n.a.</i>	40	<i>n.a.</i>	<i>n.a.</i>	69	<i>n.a.</i>
Thailand—						
Chloride .. ..	41	67	59	117	87	268
Sulphate .. ..	393	677	396	617	561	733
Turkey—						
Crude .. ..	92	3	7	68	1	3
Carbonate .. ..	43	56	64	68	213	151
Chloride .. ..	144	205	169	182	248	444
Oxide .. ..	10	27	28	21	23	82
Sulphate .. ..	422	381	408	629	415	552



PRODUCTION OF MANGANESE ORE (cont.)

Long tons

Producing Country	Estimated Manganese Content							1968	1967	1966	1965	1964	1963	1968	1967	1966	1965	1964	1963
	1963	1964	1965	1966	1967	1968													
<b>OTHER COUNTRIES—(cont.)</b>																			
Congo Republic ..	265,768	304,808	371,612	236,000	267,000	316,700	316,700	267,000	236,000	267,000	316,700	130,000	150,000	180,000	110,000	130,000	152,000		
Egypt ..	47,883	322,831	179,268	183,341	73,978	3,894	3,894	73,978	183,341	183,341	3,894	15,000	95,000	55,000	55,000	22,000	22,000	1,000	
Gabon ..	626,533	944,421	1,260,174	1,253,407	1,128,885	1,233,801	1,233,801	1,128,885	1,253,407	1,253,407	1,233,801	320,000	482,000	643,000	639,000	600,000	637,000	637,000	
Ivory Coast ..	136,867	134,407	165,688	173,138	147,073	114,897	114,897	147,073	173,138	147,073	114,897	66,000	65,000	80,000	83,000	71,000	71,000	56,000	
Morocco ..	329,658	335,691	369,944	356,696	281,619	157,681	157,681	281,619	356,696	281,619	157,681	150,000	150,000	170,000	160,000	127,000	127,000	71,000	
South Africa ..	1,336,420	1,444,512	1,747,395	1,950,981	2,087,294	2,388,857	2,388,857	2,087,294	1,950,981	2,087,294	2,388,857	558,600	574,800	713,700	777,400	800,000	955,000	955,000	
South West Africa ..	(d) 250	(d) 8,500	5,989	1,500	27,000	13,000	13,000	27,000	22,650	(d) 1,400	n.a.	n.a.	n.a.	2,900	10,900	12,000	6,000	6,000	
Sudan ..	(d) 590	—	1,000	—	—	n.a.	n.a.	—	—	(d) 1,400	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Costa Rica (a) ..	d 170,000	d 188,000	d 183,000	d 113,000	d 109,000	n.a.	n.a.	d 109,000	d 113,000	d 109,000	n.a.	53,483	63,077	57,882	30,608	32,093	n.a.	n.a.	
Mexico ..	357,848	208,734	290,298	298,940	269,415	228,543	228,543	269,415	298,940	269,415	228,543	47,084	34,707	46,271	43,964	41,614	35,000	35,000	
United States (c) ..	37,949	36,679	28,314	27,331	35,958	36,000	36,000	35,958	27,331	35,958	36,000	16,000	16,000	12,000	7,600	8,000	10,000	10,000	
Argentina ..	1,234,579	1,327,764	1,374,013	1,431,919	1,336,916	1,914,000	1,914,000	1,336,916	1,431,919	1,336,916	1,914,000	556,000	597,000	618,000	644,000	602,000	861,000	861,000	
Brazil ..	45,830	19,547	16,326	17,638	14,620	23,467	23,467	14,620	17,638	14,620	23,467	21,000	9,000	7,000	8,000	7,000	11,000	11,000	
Chile ..	510	366	974	840	1,056	n.a.	n.a.	1,056	840	1,056	n.a.	200	200	400	400	400	n.a.	n.a.	
Peru ..	980,000	980,000	980,000	980,000	690,000	890,000	890,000	690,000	980,000	690,000	890,000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
China (d) ..	2,796	6,667	1,186	—	n.a.	n.a.	n.a.	n.a.	—	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Indonesia ..	15,000	31,000	33,000	(d) 37,000	(d) 40,000	40,000	40,000	(d) 40,000	(d) 37,000	(d) 40,000	40,000	n.a.	n.a.	100,000	100,000	110,000	100,000	100,000	
Iran (b) ..	272,347	280,202	298,170	r 315,834	333,636	307,364	307,364	333,636	r 315,834	333,636	307,364	94,000	94,000	100,000	100,000	110,000	100,000	100,000	
Japan ..	4,089	4,244	6,585	5,879	7,127	4,154	4,154	7,127	5,879	7,127	4,154	1,600	1,700	2,600	2,400	2,900	1,700	1,700	
Korea (South) ..	7,545	7,879	50,927	55,207	78,923	65,000	65,000	78,923	55,207	78,923	65,000	3,400	3,500	23,000	25,000	41,435	34,000	34,000	
Philippine Republic ..	6,505	10,880	32,901	69,487	77,324	40,419	40,419	77,324	69,487	77,324	40,419	3,400	5,800	17,400	36,800	40,900	21,400	21,400	
Thailand ..	6,204	19,973	13,995	21,618	17,034	25,000	25,000	17,034	21,618	17,034	25,000	3,000	9,000	6,000	10,000	8,000	11,000	11,000	
Turkey ..	13,000,000	14,100,000	15,400,000	15,800,000	15,000,000	15,000,000	15,000,000	15,000,000	15,800,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	
<b>TOTAL</b> ..	13,000,000	14,100,000	15,400,000	15,800,000	15,000,000	15,000,000	15,000,000	15,000,000	15,800,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	
<b>WORLD'S TOTAL</b> ..	15,000,000	16,200,000	18,000,000	18,700,000	18,000,000	18,000,000	18,000,000	18,000,000	18,700,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	

Manganese ore is also produced in Cuba and North Vietnam.

(a) Exports.

(b) Years ended March 20 following that stated.

(c) Shipments.

(d) United States Bureau of Mines' estimate.

## EXPORTS OF MANGANESE ORE, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Spiegeleisen .. .. .	76	60	93	—	10	31
Ferro-manganese .. .. .	940	10,036	13,076	22,101	17,794	22,463
Ghana—						
Ore .. .. .	387,866	497,993	564,797	589,506	445,310	438,856
Zambia (a)— .. .. .						
Ore .. .. .	42,874	26,546	32,113	25,695	24,325	17,211
Canada—						
Ferro-manganese .. .. .	9	2,999	3,408	5,109	3,874	909
Guyana—						
Ore and concentrates .. .. .	191,892	136,124	157,607	194,050	191,668	97,593
Cyprus—						
Ore and concentrates .. .. .	104	—	—	—	—	—
India (b)—						
Ore .. .. .	634,422	1,011,827	630,936	688,955	451,018	556,430
Ferruginous manganese ore .. .. .	304,902	533,795	699,593	478,503	578,363	737,273
Ferro-manganese .. .. .	21,581	86,768	55,532	10,127	28,833	69,150
Malaysia (West)—						
Ore .. .. .	6,885	—	1,100	68,220	59,329	40,102
Singapore—						
Ore .. .. .	691	1,057	817	1,485	1,739	2,049
Australia (a)—						
Ore .. .. .	25,054	27,157	54,737	69,031	271,524	393,725
Fiji—						
Ore .. .. .	10,182	761	4,809	5,089	4,360	10,407
New Hebrides—						
Concentrates—						
Unsintered .. .. .	—	4,630	7,854	1,370	—	—
Sintered .. .. .	22,791	64,703	70,276	62,762	73,429	58,241
Papua (a)—						
Ore .. .. .	2	6	n.a.	n.a.	n.a.	n.a.
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg E.U.—						
Ore .. .. .	2,438	1,987	7,397	1,202	2,545	2,971
Ferro-manganese .. .. .	29,017	36,731	43,021	63,070	64,106	60,164
Ferro-silico-manganese .. .. .	4,912	n.a.	n.a.	n.a.	n.a.	n.a.
Spiegeleisen .. .. .	1,964	4,080	1,076	2,066	3,150	2,542
France—						
Ore (c) .. .. .	1,812	1,731	1,567	751	1,118	495
Metal .. .. .	199	1,027	1,565	3,389	3,270	4,600
Ferro-manganese .. .. .	147,755	192,878	200,471	184,815	167,227	204,910
Spiegeleisen .. .. .	12,733	15,821	16,872	12,073	7,492	7,162
Germany (Federal)—						
Ore .. .. .	6,600	7,197	8,869	5,766	601	5,811
Metal .. .. .	1,224	2,118	2,589	1,460	12	31
Ferro-manganese .. .. .	66,252	61,279	54,904	90,111	39,852	74,306
Spiegeleisen .. .. .	17,619	10,034	9,214	11,533	12,278	13,804
Greece—						
Ore .. .. .	12,254	13,179	21,261	23,662	6,019	5,579
Italy—						
Ore (c) .. .. .	726	668	1,035	548	295	221
Ferro-manganese .. .. .	2,008	7,497	6,969	9,125	8,478	17,042
Netherlands—						
Ore (c) .. .. .	6,983	8,452	8,589	10,596	18,436	21,439

(a) Years ended June 30 of that stated.

(c) Including manganiferous iron ore.

(b) Years ended March 31 following that stated

(d) Figure for 1963 relates to Rhodesia and Nyasaland.



## EXPORTS OF MANGANESE ORE, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Norway—						
Ore .. .. .	2,600	4,300	8,237	3,000	2,000	1,600
Ferro-manganese ..	59,499	72,177	100,190	112,460	118,611	141,483
Ferro-silico-manganese	83,022	105,999	116,953	106,830	111,466	129,789
Portugal—						
Ore .. .. .	6,048	8,326	2,839	7,705	6,333	5,703
Roumania—						
Ore .. .. .	70,900	72,700	78,600	47,700	58,659	65,548
Sweden—						
Ore .. .. .	1,290	581	24,495	23,385	4,256	3,040
Metal .. .. .	69	129	62	37	9	28
Ferro-manganese ..	4,281	2,913	3,129	8,028	12,561	15,052
Ferro-silico-manganese	20	1,004	25	15	494	27
U.S.S.R.—						
Ore .. .. .	970,400	963,500	1,004,000	1,198,800	1,230,258	1,131,830
do. (dioxide) .. ..	8,800	12,900	15,600	16,600	16,700	18,600
Ferro-manganese ..	56,000	58,700	66,200	86,000	85,600	95,600
Yugoslavia—						
Ferro-manganese ..	8,130	4,631	3,038	701	389	20
Silico-manganese ..	4,564	1,812	2,105	8,960	11,216	16,484
Angola—						
Ore .. .. .	2,869	9,484	848	5,674	12,895	37,308
Congo Republic—						
Ore (a) .. .. .	218,300	228,900	306,200	230,400	271,500	171,600
Egypt—						
Ore .. .. .	120,830	179,566	160,505	120,297	30,510	—
Gabon—						
Ore .. .. .	594,139	867,823	1,131,308	1,162,374	1,207,049	1,228,290
Ivory Coast—						
Ore .. .. .	103,638	114,530	166,907	173,420	103,919	116,992
Morocco—						
Ore .. .. .	344,135	281,109	315,869	299,608	211,171	166,127
South Africa—						
Ore .. .. .	922,200	870,787	993,244	1,482,352	1,425,916	1,716,764
Metal .. .. .	4,460	4,749	5,023	5,883	7,870	7,912
Ferro-manganese ..	77,444	120,310	155,110	154,400	125,816	127,603
South West Africa—						
Ore .. .. .	<i>n.a.</i>	<i>n.a.</i>	—	24,329	<i>n.a.</i>	<i>n.a.</i>
Costa Rica—						
Ore .. .. .	590	—	—	—	—	—
Cuba—						
Ore .. .. .	2,901	901	2,273	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Mexico—						
Ore .. .. .	108,024	118,316	86,865	39,965	10,284	6,532
<i>Mn content</i> .. ..	53,085	53,749	42,287	18,227	<i>n.a.</i>	<i>n.a.</i>
United States—						
Ore .. .. .	7,407	12,896	12,634	14,721	13,728	16,518
Metal .. .. .	1,841	3,124	2,167	1,698	1,239	1,891
Ferro-manganese ..	605	3,485	2,922	487	1,662	3,312
Spiegeleisen .. ..	1,050	701	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Brazil—						
Ore .. .. .	827,431	819,763	1,050,899	941,450	533,453	1,106,158
Ferro-manganese ..	—	—	7,145	764	305	79
Chile—						
Ore .. .. .	4,651	3,412	12,641	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-manganese ..	10,818	5,526	2,796	<i>n.a.</i>	1,436	<i>n.a.</i>
Silico-manganese ..	—	—	1,614	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru—						
Ore .. .. .	694	831	463	—	188	<i>n.a.</i>
Iran (b)—						
Ore .. .. .	11,950	26,431	34,459	39,171	10,654	32,282

(a) Estimated.

(b) Years ended March 20 following that stated.

## EXPORTS OF MANGANESE ORE, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Japan—						
Ore .. .. .	478	50	356	386	924	1,334
Ferro-manganese ..	14,158	8,724	15,072	14,808	4,736	7,044
Ferro-silico-manganese	3,701	427	712	589	343	1,275
Korea (South)—						
Ore .. .. .	276	1,097	2,766	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Philippine Republic—						
Ore .. .. .	5,257	16,276	59,041	<i>n.a.</i>	74,634	<i>n.a.</i>
Thailand—						
Ore .. .. .	2,712	6,629	18,319	65,404	79,084	9,680
Turkey—						
Ore .. .. .	11,854	17,854	14,707	6,605	5,738	8,154

## IMPORTS OF MANGANESE ORE, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Ore .. .. .	305,196	524,393	494,188	364,962	404,526	473,650
Metal .. .. .	2,061	3,135	2,135	1,861	2,494	2,246
Ferro-manganese .. .. .	54,205	62,037	80,387	75,849	73,324	66,381
Spiegeleisen .. .. .	345	35	151	49	—	—
Silico-manganese .. .. .	27,297	35,837	32,722	27,847	24,390	26,632
<b>Canada—</b>						
Ore .. .. .	95,439	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>Mn content</i> .. .. .	<i>n.a.</i>	56,083	79,893	164,377	73,803	61,795
Metal .. .. .	<i>n.a.</i>	2,082	2,861	2,376	1,986	2,922
Ferro-manganese and spiegeleisen .. .. .	20,211	19,491	30,859	43,855	14,325	24,947
Silico-manganese and silico-spiegel .. .. .	2,102	1,557	703	1,724	3,752	1,200
<b>Hong Kong—</b>						
Ore .. .. .	—	406	151	311	10	1
<b>India (c)—</b>						
Ore .. .. .	12,673	4,706	761	8,740	3,147	6,958
Ferro-manganese .. .. .	677	462	534	539	317	114
<b>Malaysia (West)—</b>						
Ore .. .. .	<i>n.a.</i>	<i>n.a.</i>	817	1,382	1,622	1,836
<b>Singapore—</b>						
Ore .. .. .	2,726	3,387	3,424	5,576	4,032	8,919
<b>Australia (b)—</b>						
Ore .. .. .	54,365	49,542	73,340	34,340	7,370	8,260
Metal .. .. .	208	346	327	(d) 241	(d) 353	(d) 330
Ferro-manganese .. .. .	6,364	11,672	9,575	11,122	2,775	10,459
<b>New Zealand (b)—</b>						
Ferro-manganese .. .. .	603	524	525	840	742	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Ore .. .. .	681	621	949	1,285	580	794
Spiegeleisen .. .. .	2,331	2,654	3,063	2,485	1,765	2,650
Ferro-manganese .. .. .	9,407	11,784	11,230	12,095	11,291	15,327
<b>Belgium-Luxemburg E.U.—</b>						
Ore (a) .. .. .	219,683	266,806	304,467	254,802	280,990	301,653
Ferro-manganese .. .. .	60,318	74,556	67,986	67,754	73,062	74,031
Ferro-silico-manganese .. .. .	3,601	4,488	7,523	4,643	5,924	10,066
Spiegeleisen .. .. .	19,108	18,284	13,768	12,672	14,749	19,382
<b>Czechoslovakia—</b>						
Ore .. .. .	232,000	314,000	329,000	282,000	301,000	<i>n.a.</i>
<b>Denmark—</b>						
Ore .. .. .	6,327	8,450	6,260	8,056	8,517	9,203
Ferro-manganese .. .. .	1,242	945	508	1,665	2,197	5,704
Ferro-silico-manganese .. .. .	1,690	1,951	2,252	2,494	2,855	2,785
<b>Finland—</b>						
Ferro-manganese and spiegeleisen .. .. .	2,598	1,530	1,789	1,258	2,153	3,194
<b>France—</b>						
Ore (a) .. .. .	701,050	778,700	841,229	826,816	678,933	875,903
Metal .. .. .	953	603	714	547	665	337
Ferro-manganese .. .. .	9,963	10,098	8,819	16,421	21,546	20,128
Spiegeleisen .. .. .	2,658	2,046	1,387	2,262	4,303	2,395
<b>Germany (Federal)—</b>						
Ore .. .. .	639,156	679,792	626,248	607,071	347,500	572,725
do. (ferruginous) .. .. .	79,987	71,865	93,905	246,627	314,234	373,837
Metal .. .. .	1,452	2,711	2,380	1,831	2,615	4,225
Ferro-manganese .. .. .	70,203	88,867	86,762	87,323	71,605	109,118
Spiegeleisen .. .. .	13,697	16,002	9,859	10,013	3,331	3,159

(a) Including manganiferous iron ore.

(c) Years ended March 31 following that stated.

(b) Years ended June 30 of that stated.

(d) Excluding waste and scrap.

## IMPORTS OF MANGANESE ORE, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Germany (East)—						
Ore (b) .. .. .	85,199	70,919	84,000	72,613	75,236	49,317
Greece—						
Ore .. .. .	1,617	7,636	67	56	8	n.a.
Hungary—						
Ferro-manganese ..	11,208	11,651	11,774	14,634	12,233	25,454
Italy—						
Ore (a) .. .. .	165,732	104,179	104,553	90,339	150,549	166,829
Metal .. .. .	144	559	500	1,104	1,384	1,874
Spiegeleisen .. ..	19,064	6,524	5,223	13,716	24,861	29,025
Ferro-manganese ..	53,853	53,145	77,451	76,652	85,550	86,054
Ferro-silico-manganese	5,535	3,203	5,914	6,710	12,005	15,638
Netherlands—						
Ore (a) .. .. .	12,723	16,561	16,309	26,829	42,095	35,564
Ferro-manganese ..	12,009	16,649	19,824	17,236	23,255	24,020
Ferro-silico-manganese	282	372	252	323	899	1,147
Spiegeleisen .. ..	1,075	708	458	915	317	201
Norway—						
Ore .. .. .	229,759	354,317	502,055	480,844	526,259	640,356
Poland—						
Ore .. .. .	299,494	374,200	342,215	391,293	348,434	345,530
Spain—						
Ore .. .. .	100,754	147,304	85,257	140,683	132,715	181,277
Ferro-manganese ..	1,483	1,610	1,580	1,324	949	950
Sweden—						
Ore .. .. .	76,133	56,085	94,459	45,230	106,621	86,033
Metal .. .. .	1,115	1,120	1,052	1,256	1,193	1,486
Ferro-manganese ..	12,170	12,347	16,052	22,727	20,834	30,458
Spiegeleisen .. ..	200	167	492	—	108	—
Ferro-silico-manganese	7,277	6,214	8,265	8,567	7,382	11,847
Yugoslavia—						
Ore .. .. .	35,465	40,038	43,417	34,502	48,218	34,981
Metal .. .. .	17	98	75	110	50	64
Ferro-manganese ..	334	362	434	267	2,075	2,489
South Africa—						
Ore .. .. .	n.a.	617	509	930	419	n.a.
Mexico—						
Ferro-manganese ..	530	424	326	308	423	410
United States—						
Ore (over 35% Mn) ..	2,133,500	2,700,211	3,442,497	2,367,784	1,844,547	1,630,000
Mn content .. ..	1,003,669	1,277,171	1,630,097	1,126,325	872,467	n.a.
Ore (10% to 35% Mn) ..	7,373	9,862	33,061	n.a.	n.a.	n.a.
Mn content .. ..	n.a.	n.a.	10,087	11,088	1,839	10,507
Metal .. .. .	2,108	784	1,235	1,803	1,998	2,842
Ferro-manganese ..	132,705	189,847	229,767	230,270	192,660	n.a.
Mn content .. ..	103,015	144,710	176,887	173,717	149,596	142,043
Silico-manganese ..						
Mn content .. ..	12,883	6,133	10,358	21,470	20,907	15,076
Argentina—						
Ferro-manganese ..	178	292	2,294	474	298	624
Brazil—						
Ferro-manganese ..	58	24	37	319	479	142
Chile—						
Ferro-manganese ..	—	14	—	n.a.	1,462	n.a.
Silico-manganese ..	—	1	13	n.a.	5	n.a.
Japan—						
Ore .. .. .	361,922	550,123	1,048,021	1,122,356	1,482,975	1,725,459
Manganiferous iron ore	96,698	68,851	213,868	239,632	324,889	221,134
Ferro-manganese ..	—	—	2	—	9,243	2,355
Turkey—						
Ferro-manganese ..	766	4,977	6,977	8,507	5,478	4,807

(a) Including manganiferous iron ore.

(b) Mn content.

**MERCURY**  
PRODUCTION OF MERCURY

Lb. avdp.

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada .. .. .	—	5,548	1,520	—	—	—
<b>OTHER COUNTRIES</b>						
Italy .. .. .	4,138,000	4,332,000	4,354,000	4,070,000	3,653,440	4,052,160
Roumania .. .. .	14,780	14,780	14,520	14,440	14,440	(c) 15,000
Spain .. .. .	4,328,536	5,952,000	5,674,263	5,324,104	3,724,000	4,352,000
U. S. S. R. (c) .. .. .	2,700,000	2,700,000	3,000,000	3,000,000	3,400,000	3,400,000
Yugoslavia .. .. .	r 1,203,724	r 1,316,160	r 1,248,000	r 1,208,000	1,201,536	1,124,600
Tunisia .. .. .	—	—	13,200	19,300	22,156	23,479
Mexico .. .. .	1,240,000	953,748	1,458,440	1,680,000	1,095,360	1,306,000
United States .. .. .	1,452,900	1,074,800	1,488,200	1,672,600	1,807,600	2,194,400
Bolivia (a) .. .. .	7,980	n.a.	4,489	n.a.	11,000	10,000
Chile .. .. .	46,632	20,310	32,498	7,295	13,995	39,013
Colombia .. .. .	242	265	3,520	6,395	14,492	24,990
Peru .. .. .	234,966	248,902	236,873	240,616	226,480	237,500
China (c) .. .. .	2,000,000	2,000,000	2,000,000	2,000,000	1,500,000	1,500,000
Japan .. .. .	1,413,730	788,695	717,000	690,000	660,000	600,000
Philippine Republic .. .. .	201,500	189,700	181,200	185,700	198,400	269,344
Turkey .. .. .	226,600	196,200	187,000	260,000	315,000	355,399
<b>WORLD'S TOTAL (b) ..</b>	<b>19,000,000</b>	<b>20,000,000</b>	<b>20,000,000</b>	<b>21,000,000</b>	<b>18,000,000</b>	<b>20,000,000</b>

Mercury is also produced in Czechoslovakia; an allowance has been made for this in the total.

(a) Exports.

(b) Estimated.

(c) United States Bureau of Mines' estimate.

## EXPORTS OF MERCURY, ETC.

Lb. avdp.

Exporting Country and Description	1963	1964	1965	1966	1967	1968
Belgium-Luxemburg						
E.U.—						
Mercury .. ..	27,800	22,000	24,900	30,000	15,400	38,600
Mercury compounds .. ..	<i>n.a.</i>	25,800	1,100	200	200	200
Denmark—						
Mercury oxide .. ..	2,646	6,614	2,000	—	—	—
France—						
Mercury .. ..	24,300	11,000	8,800	11,000	20,000	22,000
Mercury compounds .. ..	8,800	13,200	50,700	—	4,000	2,200
Germany (Federal)—						
Mercury .. ..	58,000	102,500	134,700	125,700	87,300	73,900
Italy—						
Mercury .. ..	5,755,400	6,348,232	3,883,000	3,452,000	2,809,600	2,681,400
Mercury compounds .. ..	220	33	—	—	661	220
Netherlands—						
Mercury .. ..	8,800	15,400	46,000	49,000	85,980	50,706
Mercury oxide .. ..	6,614	6,614	7,000	4,000	—	—
Spain—						
Mercury .. ..	3,733,598	5,376,789	4,923,360	3,999,829	3,839,764	3,266,121
Mercury compounds .. ..	394,003	111,567	133,721	64,177	415,238	465,308
Sweden—						
Mercury .. ..	6,600	20,000	35,000	51,000	18,000	24,250
Switzerland—						
Mercury .. ..	1,435	32,809	2,410	7,476	7,161	10,276
U.S.S.R.—						
Mercury .. ..	1,102,000	220,000	53,000	44,000	46,000	<i>n.a.</i>
Yugoslavia—						
Mercury .. ..	800,928	824,348	1,049,014	1,088,005	1,115,766	1,077,057
Mercury compounds .. ..	199,018	181,855	89,728	44,101	56,859	91,807
Mexico—						
Mercury .. ..	1,433,005	1,017,819	1,468,000	1,485,000	965,000	1,072,000
United States—						
Mercury .. ..	14,212	14,288	573,268	27,132	199,682	569,696
Bolivia—						
Mercury .. ..	7,980	<i>n.a.</i>	4,489	<i>n.a.</i>	11,000	10,000
Chile—						
Mercury .. ..	29,507	2,637	7,450	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Colombia—						
Mercury .. ..	—	—	—	2,191	—	—
Peru—						
Mercury .. ..	196,095	293,918	124,762	210,369	225,595	220,000
Japan—						
Mercury .. ..	3,492	58,956	199,304	120,359	65,832	36,978
Philippine Republic—						
Mercury .. ..	146,579	110,194	167,919	156,000	187,000	<i>n.a.</i>
Turkey—						
Mercury .. ..	208,500	245,700	176,300	236,602	340,523	231,666

## IMPORTS OF MERCURY, ETC.

Lb. avdp.

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Mercury .. ..	1,575,810	1,689,576	1,381,274	1,140,702	1,101,330	1,118,482
Rhodesia (c)—						
Mercury .. ..	10,402	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada—						
Mercury .. ..	447,592	293,900	1,071,900	404,600	356,300	197,900
Hong Kong—						
Mercury .. ..	40,160	31,428	19,704	25,438	24,006	34,751
India (b)—						
Mercury .. ..	398,545	407,540	484,635	242,012	582,814	417,315
Mercury compounds .. ..	26,579	38,287	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Malaysia (West)—						
Mercury .. ..	<i>n.a.</i>	<i>n.a.</i>	27,526	9,066	3,758	2,558
Pakistan—						
Mercury .. ..	70,336	11,648	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Australia (a)—						
Mercury .. ..	139,623	114,316	203,742	102,215	141,970	113,380
Mercury compounds .. ..	34,645	18,327	6,551	13,390	3,356	4,463
New Zealand (a)—						
Mercury .. ..	11,445	15,563	7,294	9,933	10,864	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Austria—						
Mercury .. ..	52,690	29,321	51,600	44,300	24,700	15,653
Belgium-Luxemburg						
E.U.—						
Mercury .. ..	235,700	126,500	271,400	103,800	310,000	205,000
Mercury compounds .. ..	15,200	15,200	14,600	20,300	10,400	16,755
Denmark—						
Mercury .. ..	57,300	77,200	46,000	46,000	39,683	28,660
Mercury compounds .. ..	70,547	57,320	37,000	13,000	15,432	15,432
Finland—						
Mercury .. ..	57,320	33,069	117,000	77,000	48,502	37,479
France—						
Mercury .. ..	1,164,000	754,000	983,300	637,000	739,000	696,600
Mercury compounds .. ..	77,200	70,500	68,300	64,000	55,000	55,100
Germany (Federal)—						
Mercury .. ..	1,241,200	1,849,000	1,745,800	1,479,100	945,600	1,148,600
Greece—						
Mercury .. ..	7,919	1,828	3,488	81,952	22,000	6,600
Italy—						
Mercury .. ..	29,762	22,688	83,300	79,600	87,083	49,824
Mercury compounds .. ..	40,124	12,641	8,200	27,100	19,400	18,959
Netherlands—						
Mercury .. ..	139,000	152,000	439,000	269,000	101,413	99,208
Mercury compounds .. ..	132,000	143,000	119,000	146,000	125,663	158,730
Norway—						
Mercury .. ..	55,000	77,000	51,000	46,000	46,000	57,000
Poland—						
Mercury .. ..	342,400	366,600	692,000	622,000	769,400	509,268
Portugal—						
Mercury .. ..	23,000	51,600	19,000	58,000	15,873	17,637
Mercury compounds .. ..	4,900	5,700	3,500	2,000	4,409	2,204
Sweden—						
Mercury .. ..	309,000	139,000	161,000	185,000	90,400	302,033
Switzerland—						
Mercury .. ..	97,089	118,759	73,224	54,820	23,239	60,102
Yugoslavia—						
Mercury .. ..	227,764	235,288	—	26	650	54,875
Mercury compounds .. ..	78,055	40,512	922	2,465	26,660	77,287

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

(c) Figure for 1963 relates to Rhodesia and Nyasaland.

## IMPORTS OF MERCURY, ETC. (cont.)

Lb. avdp.

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Angola—						
Mercury .. ..	18,365	137	7,948	522	1,245	1,144
Mercury compounds ..	538	483	14,482	24,260	20	223
Morocco—						
Mercury .. ..	7,994	580	518	1,054	267	935
Mozambique—						
Mercury .. ..	35	104	104	251	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Mercury .. ..	61,175	48,354	61,531	255,025	85,519	93,699
Tunisia—						
Mercury .. ..	48,998	661	216	3,071	683	<i>n.a.</i>
Costa Rica—						
Mercury .. ..	3,968	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	261	<i>n.a.</i>
United States—						
Mercury .. ..	3,277,576	3,127,629	1,234,088	2,383,747	1,850,391	1,766,709
Mercury compounds ..	14,899	8,625	12,452	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Argentina—						
Mercury .. ..	38,116	216,113	28,894	54,168	18,867	12,531
Mercury compounds ..	4,810	6,920	11,184	6,027	293	2,619
Brazil—						
Mercury .. ..	255,134	228,231	131,519	122,820	54,476	185,179
Chile—						
Mercury .. ..	1,065	1,250	254	<i>n.a.</i>	413	<i>n.a.</i>
Mercury compounds ..	2,066	1,995	1,733	<i>n.a.</i>	4,995	<i>n.a.</i>
Colombia—						
Mercury .. ..	14,162	16,133	6,413	10,029	15,159	3,508
Mercury compounds ..	14,511	10,357	2,389	14,561	5,875	4,019
Peru—						
Mercury .. ..	1,239	2,355	2,319	1,197	2,533	<i>n.a.</i>
Mercury compounds ..	456	547	1,093	4,037	1,614	<i>n.a.</i>
Uruguay—						
Mercury .. ..	<i>n.a.</i>	<i>n.a.</i>	132	1,750	—	—
Venezuela—						
Mercury .. ..	31,337	3,296	8,854	11,449	4,204	6,493
Mercury compounds ..	15,849	11,942	19,571	11,956	15,646	11,576
Formosa—						
Mercury .. ..	20,979	97,228	151,109	69,845	71,670	<i>n.a.</i>
Iran (a)—						
Mercury .. ..	1,316	3,386	3,314	8,056	981	96,904
Japan—						
Mercury .. ..	1,961,444	3,849,145	2,087,709	1,748,184	2,443,456	1,981,254
Korea (South)—						
Mercury .. ..	29,000	74,784	41,724	—	<i>n.a.</i>	<i>n.a.</i>
Philippine Republic—						
Mercury .. ..	606	1,462	666	<i>n.a.</i>	1,129	<i>n.a.</i>
Thailand—						
Mercury .. ..	2,427	7,068	3,702	27,302	1,208	19,460
Mercury compounds ..	2,663	3,777	3,239	5,298	4,601	5,505
Turkey—						
Mercury compounds ..	3,399	5,172	6,312	4,559	5,822	6,605

(a) Years ended March 20 of year following that stated.



**MICA**  
**PRODUCTION OF MICA**

Lb. avdp.

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Kenya—						
Block and sheet .. .. .	1,760	—	—	—	<i>n.a.</i>	<i>n.a.</i>
Rhodesia—						
Crude .. .. .	225,819	156,355	180,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Block and sheet .. .. .	58,452	74,910	64,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tanzania—						
Sheet .. .. .	235,000	211,500	228,500	199,000	170,900	157,800
Waste .. .. .	—	323,790	371,240	880,700	276,800	526,800
Uganda .. .. .	—	—	30	360	<i>n.a.</i>	<i>n.a.</i>
Zambia—						
Sheet .. .. .	—	3,305	8,731	—	—	<i>n.a.</i>
Canada (a)—						
Rough mine-run or						
rifted .. .. .	12,021	—	—	—	—	—
Trimmed .. .. .	4,235	20,454	1,261	—	—	—
Sold for mechanical						
splitting .. .. .	—	68,100	10,800	4,000	—	—
Ground .. .. .	813,935	615,968	299,500	339,800	—	—
Scrap .. .. .	352,850	493,640	236,050	200,000	—	—
By varieties—						
Phlogopite and						
biotite .. .. .	1,182,041	1,198,114	<i>n.a.</i>	<i>n.a.</i>	—	—
Muscovite and schist	1,000	48	<i>n.a.</i>	<i>n.a.</i>	—	—
India (d)—						
Blocks .. .. .	3,979,343	4,263,740	3,179,065	3,639,831	3,553,851	3,816,053
Splittings .. .. .	15,595,498	19,378,630	20,780,770	14,138,243	12,184,948	13,596,627
Condenser Films .. .. .	233,690	198,416	176,370	211,644	200,621	188,826
Powder, scrap, waste .. .. .	55,313,975	42,057,580	58,605,476	49,178,511	30,736,845	31,276,631
Pakistan (e) .. .. .	2,000	9,000	15,000	—	<i>n.a.</i>	<i>n.a.</i>
Australia (b)—						
Scrap .. .. .	16,352	32,032	—	—	—	—
<b>OTHER COUNTRIES</b>						
France .. .. .	388,000	646,000	430,000	492,000	630,560	550,000
Germany (Federal) .. .. .	11,000	18,000	26,000	—	—	—
Norway—						
Crude .. .. .	} f6,610,000	8,818,000	6,614,000	f 6,610,000	9,885,000	9,921,000
Waste .. .. .						
Sweden (a)—						
Ground .. .. .	44,000	46,000	—	—	—	<i>n.a.</i>
Yugoslavia .. .. .	77,000	26,000	r 118,807	r 120,439	261,598	<i>n.a.</i>
Malagasy Republic—						
Phlogopite (block and						
splittings) .. .. .	2,120,000	1,500,000	1,390,000	1,580,000	1,633,000	1,776,000
Mozambique .. .. .	—	—	22,000	<i>n.a.</i>	220,000	<i>n.a.</i>
South Africa—						
Sheet .. .. .	} 4,680,000	{ 103,633	2,000	1,068	9,331	20,386
Waste .. .. .						
South West Africa .. .. .	1,200,000	{ 6,764,000	5,000,000	4,926,000	10,180,000	17,456,000
Mexico .. .. .	—	832,000	260,000	56,000	<i>n.a.</i>	<i>n.a.</i>
United States (g)—						
Sheet (uncut) .. .. .	102,961	242,662	716,086	4,000	20,000	15,000
Scrap (h) .. .. .	218,646,000	229,458,000	240,509,000	226,266,000	237,006,000	250,646,000

(a) Sales.

(b) The following amounts of damourite were also produced (lb. avdp.): 1963—1,100,000; 1964—1,270,000; 1965—1,510,000; 1966—1,380,000; 1967—1,091,000; 1968—1,088,640

(c) Years ended March 31 following that stated.

(d) Exports.

(e) West Pakistan.

(f) United States Bureau of Mines' estimate.

(g) Sold or used by producers.

(h) Including mica recovered from kaolin and mica schists.

PRODUCTION OF MICA (cont.)

Lb. avdp.

Producing Country	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES (cont.)						
Argentina—						
Sheet .. .. .	200,000	241,191	205,510	290,279	299,488	208,320
Waste .. .. .	—	456,760	259,420	2,111,451	2,210,656	1,317,120
Brazil .. .. .	3,289,000	3,241,000	3,089,000	2,244,000	2,295,000	n.a.
Uruguay.. .. .	95,000	n.a.	n.a.	n.a.	n.a.	n.a.
TOTAL* .. .. .	298,000,000	314,000,000	347,000,000	288,000,000	310,000,000	336,000,000

\* Excluding mica known to have been produced in Roumania, U.S.S.R. and China.

EXPORTS OF MICA

Lb. avdp.

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Unmanufactured (e) ..	7,728,000	9,538,000	5,593,000	5,472,000	1,693,000	1,136,016
Kenya—						
Unmanufactured (a) ..	1,800	—	—	—	—	—
Rhodesia (d)— ..						
Unmanufactured (a) ..	99,877	777,053	n.a.	n.a.	n.a.	n.a.
Tanzania—						
Unmanufactured (a) ..	241,100	535,800	598,080	1,097,300	587,000	572,400
Zambia—						
Block or sheet ..	n.a.	5,760	887	n.a.	2,808	n.a.
Waste ..	n.a.	960	—	n.a.	4,383	n.a.
Hong Kong—						
Manufactured ..	560	560	1,120	—	—	336
India—						
Blocks ..	3,979,343	4,263,740	3,179,065	3,639,831	3,553,851	3,816,053
Splittings ..	15,595,498	19,378,630	20,780,770	14,138,243	12,184,948	13,596,627
Condenser Films ..	233,690	198,416	176,370	211,644	200,621	188,826
Powder, scrap, waste ..	55,313,975	42,057,580	58,605,476	49,178,511	30,736,845	31,276,631
Manufactured (c) ..	459,205	532,485	r 242,506	r 322,834	503,018	398,860
Singapore—						
Unmanufactured (a) ..	2,000	400	—	1,300	—	22
Manufactured ..	1,282	511	287	845	721	641
Australia (b)—						
Unmanufactured ..	60,397	68,418	73,564	64,991	n.a.	n.a.
Manufactured ..	(£16,367)	(£23,813)	(£20,153)	(£19,898)	(£21,600)	(£15,770)
<b>OTHER COUNTRIES</b>						
Austria—						
Unmanufactured ..	66,800	11,000	21,800	23,400	4,600	70,300
Manufactured ..	17,000	24,000	20,300	32,000	21,200	22,900
Belgium-Luxemburg E.U.—						
Unmanufactured (a) ..	19,600	50,900	30,400	73,200	193,600	162,040
Manufactured ..	285,500	435,200	381,400	442,700	655,900	873,700
Denmark—						
Ground ..	2,200	2,200	7,000	51,000	66,138	81,571
Manufactured ..	—	1,100	—	2,000	—	—
Finland—						
Unmanufactured (a) ..	132,000	110,000	110,000	55,000	55,000	97,000
France—						
Unmanufactured (a) ..	53,000	390,200	136,700	62,000	86,000	146,000
Ground ..	n.a.	388,000	1,135,400	1,550,000	1,905,000	3,159,000
Manufactured ..	615,100	716,500	623,900	547,000	721,000	930,300
Germany (Federal)—						
Unmanufactured (a) ..	1,072,300	1,218,700	1,065,900	1,350,000	1,506,000	1,444,000
Manufactured ..	187,600	277,300	265,900	202,360	298,200	445,600
Italy—						
Ground ..	106,000	131,219	170,400	968,000	567,200	782,600
Waste ..	—	—	113,300	315,000	155,600	105,600
Manufactured ..	52,700	69,856	69,000	76,000	58,860	42,900
Netherlands—						
Unmanufactured ..	346,000	392,000	229,000	168,000	220,500	211,600
Manufactured ..	24,300	—	—	4,000	6,600	4,400
Norway—						
Unmanufactured ..	7,917,000	8,768,000	9,074,000	9,458,000	9,886,000	10,613,052
Waste ..	—	71,000	77,000	—	—	—
Spain—						
Manufactured ..	992	24,467	16,149	31,802	46,425	63,963
Sweden—						
Unmanufactured ..	13,000	20,000	57,000	—	—	6,600

(a) Including waste.

(b) Years ended June 30 of that stated.

(c) Years ended March 31 following that stated.

(d) Figure for year 1963 relates to Rhodesia and Nyasaland.

(e) Including splitting and waste.

## EXPORTS OF MICA (cont.)

Lb. avdp.

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Switzerland—						
Unmanufactured (a) ..	45,102	25,904	10,293	11,643	131,537	235,749
Manufactured ..	367,881	434,456	335,872	354,406	459,972	371,567
U.S.S.R.—						
Unmanufactured ..	15,000	7,000	—	—	—	—
Angola—						
Unmanufactured ..	} 5,732	—	—	33,000	—	—
Waste ..		—	—	—	—	—
Malagasy Republic—						
Unmanufactured ..	1,856,881	2,125,805	2,099,050	2,109,698	2,242,736	3,120,017
Mozambique—						
Unmanufactured ..	—	—	22,000	13,000	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Unmanufactured (a) ..	4,704,000	5,402,000	3,936,000	3,446,000	16,510,416	20,712,000
Mexico—						
Unmanufactured ..	—	—	227	—	—	—
United States—						
Unmanufactured ..	594,427	542,516	} 7,802,539	10,810,194	14,301,524	27,014,321
Ground ..	7,244,428	8,263,497				
Manufactured ..	204,246	281,131				
Manufactured ..			523,338	537,556	526,690	474,509
Argentina—						
Unmanufactured ..	1,067,716	2,011,037	1,087,573	732,856	690,600	1,156,126
Brazil—						
Unmanufactured ..	2,759,680	3,837,220	4,989,404	4,172,724	1,317,542	1,345,638
Manufactured ..	33,600	22,540	12,763	9,233	12,070	28,274
Japan—						
Unmanufactured (a) ..	33,000	126,000	88,200	379,000	224,872	229,281
Manufactured ..	33,788	32,952	91,717	77,640	201,573	49,743

(a) Including waste.

## IMPORTS OF MICA

Lb. avdp.

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Block .. .. .	677,000	867,000	(c) 16,000	(c) 999,000	264,000	565,152
Splittings .. .. .	2,556,000	2,589,000	3,011,000	1,516,000	898,000	1,647,744
Ground and waste .. .. .	21,726,000	10,940,000	22,118,000	13,104,000	11,101,000	15,967,504
Manufactured .. .. .	81,000	164,000	210,000	279,000	321,000	567,280
Kenya—						
Unmanufactured (a) .. .. .	29,400	20,200	74,300	33,700	48,400	71,100
Malawi—						
Manufactured .. .. .	n.a.	n.a.	n.a.	8,160	n.a.	n.a.
Mauritius—						
Unmanufactured .. .. .	—	—	—	110	481	569
Manufactured .. .. .	271	—	(c) 143	172	11	218
Tanzania—						
Unmanufactured (a) .. .. .	16,700	8,800	—	21,800	21,800	51,900
Zambia—						
Block or sheet .. .. .	n.a.	42,540	6,020	13,250	28	—
Canada—						
Unmanufactured .. .. .	4,451,387	5,884,000	6,235,600	6,368,300	6,984,700	6,570,300
Manufactured .. .. .	(£167,443)	(£246,135)	(£200,788)	(£227,000)	(£245,072)	(£205,812)
Jamaica—						
Unmanufactured .. .. .	142,779	203,120	230,320	225,781	412,084	247,246
Manufactured .. .. .	842	270	152	697	1,933	1,418
Trinidad and Tobago—						
Unmanufactured (a) .. .. .	16,500	21,000	59,500	55,700	55,600	58,900
Manufactured .. .. .	245	85	325	432	29	508
Hong Kong—						
Unmanufactured (a) .. .. .	6,700	4,400	3,800	(c) 89,824	(c) 16,800	(c) 6,608
Manufactured .. .. .	11,000	22,000	17,800	27,000	36,064	12,992
India—						
Manufactured .. .. .	4,400	—	2,240	9,389	1,874	2,586
Malaysia (West)—						
Unmanufactured (a) .. .. .	n.a.	n.a.	4,210	11,600	3,450	16,643
Manufactured .. .. .	n.a.	n.a.	8,584	10,441	4,570	8,702
Sarawak—						
Unmanufactured (a) .. .. .	—	22	—	38,640	—	—
Singapore—						
Unmanufactured (a) .. .. .	22	1,100	14,700	6,030	14,358	87,091
Manufactured .. .. .	5,822	4,905	2,992	4,682	2,860	2,539
Australia (b)—						
Block or sheet .. .. .	40,393	74,571	97,900	75,225	42,903	40,232
Splittings .. .. .	178,034	246,699	316,491	223,749	172,071	199,200
Ground .. .. .	590,616	567,760	768,639	725,289	757,220	719,259
Waste .. .. .	575,472	718,587	1,528,894	872,844	867,047	1,409,001
Manufactured .. .. .	(£5,828)	(£6,094)	(£11,990)	(£10,000)	(£14,000)	(£22,431)
New Zealand (b)—						
Unmanufactured (a) .. .. .	(£10,622)	(£12,325)	(£11,236)	(£11,175)	(£12,246)	n.a.
Manufactured .. .. .	(£27,362)	(£37,081)	(£38,417)	(£29,049)	(£30,161)	n.a.
<b>OTHER COUNTRIES</b>						
Austria—						
Unmanufactured (a) .. .. .	817,700	744,900	571,200	842,400	522,900	964,302
Manufactured .. .. .	45,000	63,000	38,800	59,700	71,000	70,327
Belgium-Luxemburg						
E.U.—						
Unmanufactured (a) .. .. .	1,675,300	2,330,300	3,021,900	2,650,600	2,958,400	4,016,381
Manufactured .. .. .	72,500	109,100	89,100	88,200	37,700	93,917

(a) Including waste.

(b) Years ended June 30 of that stated.

(c) Excess of re-exports. United Kingdom imports, before deduction of re-exports, were (lb. avdp.): 1965—1,187,000; 1966—1,140,000.

## IMPORTS OF MICA (cont.)

Lb. avdp.

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Denmark—						
Unmanufactured ..	26,500	8,800	97,000	22,000	13,228	} 888,463
Ground .. .. .	482,800	412,300	538,000	650,000	751,776	
Manufactured ..	108,000	128,000	161,000	112,000	138,891	
Finland—						
Unmanufactured (a) ..	1,091,337	801,400	1,052,910	1,638,059	1,095,543	1,386,646
Manufactured .. .. .	59,500	53,000	68,000	46,000	52,911	61,729
France—						
Unmanufactured (a) ..	4,334,300	8,474,600	7,209,100	12,577,000	8,051,000	6,355,900
Ground .. .. .	3,661,900	3,785,300	3,388,500	4,063,000	4,259,000	5,041,900
Manufactured .. .. .	68,300	94,800	502,700	120,000	123,000	152,000
Germany (Federal)—						
Unmanufactured (a) ..	9,886,800	14,050,500	15,114,500	12,075,000	12,474,000	17,858,000
Manufactured .. .. .	237,400	318,800	450,000	330,300	414,990	639,000
Greece—						
Unmanufactured .. .. .	50,797	62,576	49,547	65,389	48,713	94,775
Manufactured .. .. .	16,976	12,483	17,666	20,507	18,924	<i>n.a.</i>
Italy—						
Unmanufactured .. .. .	1,475,300	1,110,823	751,100	} 4,184,600	6,124,882	5,734,822
Ground .. .. .	} 2,568,400	} 2,061,999	1,827,900			
Waste .. .. .			903,329			
Manufactured .. .. .	283,000	219,814	163,600	256,398	300,049	357,590
Netherlands—						
Unmanufactured (a) ..	1,389,000	1,748,000	2,110,000	1,810,000	2,061,322	3,721,402
Manufactured .. .. .	126,000	4,000	132,000	123,000	119,050	125,663
Norway—						
Unmanufactured .. .. .	71,000	754,000	2,769,000	337,000	148,000	723,000
Waste .. .. .	7,520,000	7,416,000	11,510,000	10,644,000	10,598,000	11,675,000
Manufactured .. .. .	88,000	77,000	86,000	44,000	86,000	79,000
Poland—						
Unmanufactured .. .. .	1,351,200	2,100,800	2,429,000	2,282,000	2,332,000	2,482,400
Portugal—						
Unmanufactured .. .. .	205,500	289,500	323,400	190,700	203,928	122,079
Manufactured .. .. .	15,200	16,800	21,800	90,610	16,535	13,228
Spain .. .. .	1,467,831	1,037,292	2,031,910	1,461,885	1,553,323	1,647,177
Sweden—						
Unmanufactured (a) ..	2,544,000	2,324,000	2,709,000	2,710,000	2,097,000	2,473,586
Manufactured .. .. .	90,000	108,000	88,000	93,000	84,000	136,687
Switzerland—						
Unmanufactured (a) ..	2,027,829	1,519,957	1,884,698	1,381,818	1,411,020	1,407,576
Manufactured .. .. .	130,218	265,756	356,807	206,763	471,749	415,847
U.S.S.R.—						
Unmanufactured .. .. .	441,000	529,000	829,000	194,000	341,700	352,700
Yugoslavia—						
Unmanufactured .. .. .	50,521	—	1,323	14,090	1,182,238	153,872
Manufactured .. .. .	73,921	101,911	84,210	82,124	78,026	67,565
Malagasy Republic—						
Unmanufactured .. .. .	1,653	4,411	77	478	5,710	<i>n.a.</i>
Morocco—						
Ground .. .. .	7,055	3,300	3,300	11,000	13,283	37,712
Manufactured .. .. .	2,077	2,354	—	—	—	337
South Africa—						
Unmanufactured .. .. .	<i>n.a.</i>	1,003,600	497,900	838,100	421,500	468,700
Manufactured .. .. .	<i>n.a.</i>	377,532	(£271,000)	(£217,211)	(£231,314)	(£202,698)
Mica and micanite sheets	89,791	(b)	(b)	(b)	(b)	(b)
Sudan—						
Unmanufactured .. .. .	16,199	11,000	2,000	7,000	<i>n.a.</i>	2,200
Manufactured .. .. .	35,713	9,004	22,159	29	22	44
Tunisia—						
Unmanufactured .. .. .	} 14,980	37,593	302,069	18,490	33,770	<i>n.a.</i>
Ground .. .. .						
Manufactured .. .. .						

(a) Including waste.

(b) Included with "manufactured"

## IMPORTS OF MICA (cont.)

Lb. avdp.

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Guatemala—						
Unmanufactured .. .. .	14,145	17,379	19,427	21,208	35,554	57,524
Manufactured .. .. .	42	227	260	225	68	212
Mexico—						
Unmanufactured .. .. .	177,126	124,035	} 360,617	527,520	412,181	725,320
Waste .. .. .	263,946	77,329				
United States—						
Unmanufactured .. .. .	1,133,521	942,547	653,734	} 3,810,703	1,946,797	3,792,930
Ground .. .. .	31,000	23,000	87,000			
Waste .. .. .	16,075,434	5,465,748	3,043,355			
Films and splittings .. .. .	8,442,887	9,830,594	11,117,748			
Other manufactures .. .. .	231,283	244,495	384,026	9,318,008	6,025,548	5,937,108
Argentina .. .. .	28,590	42,443	43,297	298,460	216,605	272,832
Bolivia .. .. .	31,200	18	—	18,894	27,084	44,983
Brazil—						
Unmanufactured .. .. .	661	500	701	3,955	220	65,206
Manufactured .. .. .	58,784	14,654	48,264	49,582	49,134	19,978
Chile—						
Unmanufactured .. .. .	39,930	10,540	14,559	<i>n.a.</i>	42,329	<i>n.a.</i>
Manufactured .. .. .	10,699	11,047	20,681	<i>n.a.</i>	13,854	<i>n.a.</i>
Colombia—						
Unmanufactured .. .. .	300,587	259,841	186,876	319,121	261,819	472,142
Manufactured .. .. .	22,306	21,272	24,690	38,638	40,605	38,420
Peru—						
Ground and waste .. .. .	225,046	285,307	302,620	296,143	354,371	<i>n.a.</i>
Venezuela—						
Unmanufactured .. .. .	312,657	657,489	846,740	863,182	1,075,565	792,473
Manufactured .. .. .	4,376	7,553	5,280	14,974	12,341	8,014
Iran (a)—						
Unmanufactured .. .. .	835,420	453,650	1,072,300	} 601,483	324,884	558,082
Manufactured .. .. .	11,508	64,137	202,984			
Japan—						
Unmanufactured .. .. .	3,126,000	9,301,000	11,105,000	5,483,000	10,523,000	35,033,653
Ground .. .. .						
Waste .. .. .	3,258,000	3,018,000	3,472,000	4,475,000	6,283,000	5,262,000
Manufactured .. .. .	1,468	840	637	952	8,574	<i>n.a.</i>
Lebanon—						
Unmanufactured .. .. .	21,566	54,611	71,564	55,281	13,977	<i>n.a.</i>
Philippine Republic—						
Unmanufactured .. .. .	109,989	82,642	143,772	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Thailand—						
Unmanufactured .. .. .	4,273	10,911	20,049	22,048	37,479	79,408
Manufactured .. .. .	7,824	4,969	10,190	12,233	16,581	11,107
Turkey—						
Unmanufactured .. .. .	39,979	116,845	72,753	18,023	98,822	58,202
Manufactured .. .. .	16,506	356,024	18,435	39,110	55,126	31,405

(a) Years ended March 20 of year following that stated.

**MOLYBDENUM**  
**PRODUCTION OF MOLYBDENUM ORE**  
*(MoS<sub>2</sub> content or equivalent)*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Nigeria .. .. .	2	—	3	2	<i>n.a.</i>	<i>n.a.</i>
Canada (a) .. .. .	621	912	7,116	15,336	15,905	14,886
Australia .. .. .	10	—	19	2	—	—
<b>OTHER COUNTRIES</b>						
Norway .. .. .	345	375	393	398	479	393
U.S.S.R. (b) .. .. .	9,300	9,800	10,200	10,600	11,000	<i>n.a.</i>
Mexico .. .. .	68	88	80	147	63	79
United States .. .. .	48,407	48,849	57,611	67,410	67,037	69,552
Chile .. .. .	4,770	6,323	7,702	7,016	7,781	6,325
Peru .. .. .	836	648	1,116	1,243	1,517	1,302
China (b) .. .. .	2,500	2,500	2,500	2,500	2,500	<i>n.a.</i>
Japan .. .. .	544	460	455	465	473	<i>n.a.</i>
Korea (South) .. .. .	115	200	334	491	457	331
Philippine Republic .. .. .	176	173	130	80	70	70
<b>TOTAL*</b> .. .. .	<b>67,700</b>	<b>70,300</b>	<b>87,700</b>	<b>105,700</b>	<b>107,300</b>	<b>106,900</b>

\*Excluding molybdenum ore known to have been produced in Roumania, Spain, Argentina, North Korea and Turkey.

(a) Shipments.

(b) United States Bureau of Mines' estimate.



## EXPORTS OF MOLYBDENUM ORE, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ferro-molybdenum ..	160	130	277	478	209	671
Canada—						
Ore and concentrates (MO content) (a) ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	10,622	10,136
<b>OTHER COUNTRIES</b>						
France—						
Ferro-molybdenum ..	569	618	467	507	318	446
Oxide and molybdates ..	57	38	61	73	31	78
Germany (Federal)—						
Ore .. .. .	<i>n.a.</i>	114	83	35	25	3
Metal .. .. .	35	80	83	94	74	112
Italy—						
Ferro-molybdenum ..	<i>n.a.</i>	13	1	1	1	129
Netherlands—						
Metal .. .. .	55	65	123	153	90	86
Norway—						
Ore .. .. .	417	400	417	426	494	410
Sweden—						
Ferro-molybdenum ..	271	308	420	607	684	591
U.S.S.R.—						
Ferro-molybdenum ..	3,000	5,300	4,600	1,100	—	—
Mexico—						
Ore and concentrates (MoS <sub>2</sub> content) ..	68	88	107	64	11	151
United States—						
Ore and concentrates (MoS <sub>2</sub> content) ..	19,765	18,570	16,388	13,289	13,393	12,949
Metal, alloys and scrap ..	62	627	49	26	22	131
Ferro-molybdenum ..	107	779	1,001	982	684	385
Wire, powder and semi-fabricated .. ..	25	128	309	94	253	88
Chile—						
Ore .. .. .	5,844	7,559	5,574	7,261	7,201	<i>n.a.</i>
Peru—						
Ore (MoS <sub>2</sub> content) ..	264	773	579	825	1,917	700
Korea (South)—						
Ore .. .. .	302	358	524	1,012	506	<i>n.a.</i>
Philippine Republic—						
Concentrates .. ..	169	271	148	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Not recorded as a separate export item prior to 1967.

## IMPORTS OF MOLYBDENUM ORE, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ore .. .. .	5,780	6,398	7,823	8,997	8,880	8,189
Metal .. .. .	42	81	120	67	84	105
Canada—						
Oxide .. .. .	116	219	339	297	202	607
Australia (a)—						
Oxide .. .. .	61	90	146	84	74	192
Ferro-molybdenum ..	77	260	182	244	193	182
<b>OTHER COUNTRIES</b>						
Austria—						
Oxide .. .. .	291	296	393	529	332	488
Ferro-molybdenum ..	65	37	10	10	5	30
Belgium-Luxemburg						
E.U.—						
Oxide .. .. .	9	86	15	15	29	7
Ferro-molybdenum ..	297	379	152	100	83	85
Denmark—						
Ferro-molybdenum ..	15	29	34	47	27	15
Finland—						
Ferro-molybdenum ..	59	67	76	124	102	103
France—						
Ore .. .. .	4,547	4,785	4,105	5,576	5,350	4,446
Metal and alloys ..	34	73	86	84	81	82
Oxide and molybdates..	39	7	18	79	32	82
Germany (Federal)—						
Ore .. .. .	9,227	7,847	8,886	9,802	9,420	11,770
Metal .. .. .	64	438	311	381	245	222
Hungary—						
Ferro-molybdenum ..	158	116	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Italy—						
Ore .. .. .	1,115	1,273	1,501	1,974	2,479	2,401
Metal .. .. .	20	40	121	28	1	2
Ferro-molybdenum ..	<i>n.a.</i>	453	616	722	797	625
Netherlands—						
Metal .. .. .	12	12	34	91	8	15
Ferro-molybdenum ..	56	50	86	87	55	34
Oxide and molybdates..	183	218	207	78	88	233
Norway—						
Ferro-molybdenum ..	43	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Poland—						
Concentrates .. .. .	239	324	105	244	156	437
Sweden—						
Ore .. .. .	2,295	3,022	3,400	3,950	3,414	2,085
Metal .. .. .	22	69	44	70	23	28
Ferro-molybdenum ..	596	405	592	1,611	932	1,191
United States—						
Metal .. .. .	154	110	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Semi-fabricated ..	8	5	15	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Japan—						
Ore and concentrates ..	1,619	4,998	4,962	7,220	8,648	9,388
Molybdenum metal ..	6	111	61	25	33	51

(a) Years ended June 30 of that stated.

**NICKEL**  
**PRODUCTION OF NICKEL ORE**  
*(Metal content)*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Rhodesia .. ..	159	231	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada (b) .. ..	193,777	204,015	231,413	199,652	222,006	235,579
<b>TOTAL .. ..</b>	<b>193,936</b>	<b>204,246</b>	<b>232,000</b>	<b>200,000</b>	<b>223,400</b>	<b>235,800</b>
<b>OTHER COUNTRIES</b>						
Finland (c) .. ..	3,040	3,260	3,060	3,087	3,560	3,349
Poland .. ..	1,088	1,186	1,804	(a) 1,300	(a) 1,500	1,500
U.S.S.R. (d) .. ..	80,000	80,000	80,000	90,000	90,000	100,000
Morocco .. ..	270	331	354	384	(a) 370	300
Cuba (a) (e) .. ..	19,474	22,061	27,000	26,000	26,179	27,000
United States (f) .. ..	10,207	10,879	12,062	11,819	13,049	13,530
Brazil (i) .. ..	1,014	(a) 1,000	1,096	(a) 1,362	1,054	1,060
Burma (g) .. ..	90	70	50	70	50	<i>n.a.</i>
Indonesia .. ..	1,600	1,700	2,800	(a) 4,000	5,900	8,200
Korea (South) .. ..	25	18	1	—	—	<i>n.a.</i>
New Caledonia (h) .. ..	44,000	61,000	61,000	66,000	81,000	108,000
<b>TOTAL* .. ..</b>	<b>160,000</b>	<b>180,000</b>	<b>190,000</b>	<b>200,000</b>	<b>230,000</b>	<b>263,000</b>
<b>WORLD'S TOTAL* ..</b>	<b>350,000</b>	<b>380,000</b>	<b>420,000</b>	<b>400,000</b>	<b>450,000</b>	<b>500,000</b>

\*Ores containing nickel are also produced in Albania, East Germany and South Africa. Totals are approximate.

(a) United States Bureau of Mines' estimate.

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

(c) Nickel content of concentrates and nickel sulphate.

(d) Estimated. Source: Metallgesellschaft.

(e) Estimated nickel content of nickel oxide and sulphide.

(f) Metal from domestic ore plus nickel produced as a by-product in the electrolytic refining of copper (partly from imported blister copper).

Secondary metal was recovered in the United States as follows:

				Long tons				Long tons			
1963	..	..	..	16,961	1966	..	..	..	..	23,908	
1964	..	..	..	20,637	1967	..	..	..	..	18,510	
1965	..	..	..	17,328	1968	..	..	..	..	12,554	

(g) Nickel content of nickel speiss.

(h) Content of dry ore mined. The estimated content of matte and ferro-nickel produced was:

				Long tons				Long tons			
1963	..	..	..	22,095	1966	..	..	..	..	33,881	
1964	..	..	..	26,167	1967	..	..	..	..	33,951	
1965	..	..	..	30,873	1968	..	..	..	..	36,731	

(i) Content of ferro-nickel.

EXPORTS OF NICKEL\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Unwrought (a) .. ..	23,604	26,882	27,783	25,385	30,203	33,483
Semi-manufactures .. ..	2,910	3,072	2,979	3,822	4,494	11,575
do. alloys .. ..	3,528	4,441	3,745	4,206	4,973	
Scrap (a) .. ..	2,738	3,237	3,398	2,995	2,407	3,289
Nickel oxide .. ..	481	149	38	11	126	285
Rhodesia (d)—						
Ore .. ..	570	698	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada—						
Matte or speiss (Ni content) .. ..	74,457	66,755	73,506	74,631	74,698	85,292
Unwrought .. ..	97,461	114,580	120,712	118,493	114,874	113,479
Scrap (a) .. ..	854	965	934	1,056	1,797	3,684
Semi-manufactures (a) .. ..	3,583	2,284	2,839	3,461	3,964	3,482
Nickel oxide (Ni content) .. ..	13,579	31,965	36,568	30,028	30,539	37,552
Hong Kong—						
Scrap .. ..	62	56	20	43	94	26
Australia (c) .. ..						
Unwrought and semi-manufactures (a) .. ..	115	192	252	255	<i>n.a.</i>	63
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Unwrought .. ..	—	2	9	172	23	46
do. alloys .. ..	5	28	—	15	—	13
Scrap .. ..	606	494	454	463	589	799
Semi-manufactures (a) (b) .. ..	126	116	163	259	266	205
Denmark—						
Unwrought .. ..	—	—	—	5	—	—
Scrap (a) .. ..	221	201	173	405	245	192
Finland—						
Unwrought .. ..	2,329	3,122	2,508	2,585	2,604	2,881
France—						
Matte and speiss .. ..	1,201	656	55	22	252	160
Unwrought .. ..	5,494	3,041	4,704	7,010	8,382	5,677
do. alloys .. ..	—	14	27	26	27	57
Scrap (a) .. ..	3,099	828	1,357	1,565	2,267	1,819
Semi-manufactures (a) .. ..	1,066	1,114	1,729	1,921	2,574	2,417
Germany (Federal)—						
Unwrought and scrap (a) .. ..	824	1,085	1,194	2,571	3,011	2,418
Semi-manufactures (a) .. ..	4,312	4,307	5,047	5,964	6,621	6,749
Greece—						
Unwrought .. ..	595	45	56	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Italy—						
Semi-manufactures (a) .. ..	972	777	1,071	1,020	803	620
Netherlands—						
Scrap (a) .. ..	1,524	1,534	1,167	1,270	2,136	2,202
Semi-manufactures (a) .. ..	90	106	123	195	196	188
Norway—						
Unwrought .. ..	23,559	33,330	30,745	30,138	28,753	29,965
Scrap .. ..	212	150	64	130	84	178
Semi-manufactures (a) .. ..	507	498	266	216	235	197

\*In these tables the description "unwrought" nickel corresponds to item 683.1 of the Standard International Trade Classification (Revised) which excludes all electro-plating anodes. "Semi-manufactures" corresponds to S.I.T.C. (R) 683.2 and includes electro-plating anodes as well as sheets, bars, rods, etc.

(a) Including alloys.

(b) Excluding anodes.

(c) Years ended June 30 of that stated.

(d) Figure for 1963 relates to Rhodesia and Nyasaland.

## EXPORTS OF NICKEL (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Sweden—						
Unwrought .. ..	9	—	70	33	434	482
Scrap .. ..	55	74	343	364	721	639
Semi-manufactures (a)	703	763	812	1,008	1,275	1,267
Switzerland—						
Unwrought and scrap (a)	474	589	802	675	583	647
Semi-manufactures (a)	775	773	1,061	994	935	1,279
South Africa—						
Unwrought .. ..	<i>n.a.</i>	740	1,077	1,266	3,517	8,531
United States—						
Ore, concentrates and matte .. ..	11	7	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Unwrought (a) .. ..	8,920	10,661	4,739	10,208	6,655	5,802
Semi-manufactures (a)	1,614	2,130	5,676	5,285	6,027	6,323
Scrap (a) .. ..	43,854	48,364	6,003	5,247	12,404	14,949
Burma—						
Unwrought .. ..	706	615	—	—	<i>n.a.</i>	<i>n.a.</i>
Japan—						
Ferro-nickel .. ..	11	—	3	186	5	616
Unwrought .. ..	—	7	1	1	5	1
do. alloys .. ..	—	—	—	—	—	—
Semi-manufactures (a)	133	240	388	3,059	1,857	498
Korea (South)—						
Ore .. ..	537	—	—	—	—	<i>n.a.</i>
Philippine Republic—						
Ore .. ..	34	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
New Caledonia—						
Ore .. ..	606,969	1,066,559	879,821	1,069,493	1,484,452	2,450,075
Matte .. ..	17,581	16,901	18,107	19,372	16,411	19,684
Ferro-nickel .. ..	29,003	46,591	54,543	71,112	72,419	81,099

(a) Including alloys.

## IMPORTS OF NICKEL\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ore, concentrates and matte .. .. .	61,621	56,183	63,038	55,270	57,487	57,461
Unwrought .. .. .	7,485	18,612	16,592	23,763	23,286	23,368
do. alloys .. .. .	934	121	124	361	690	218
Semi-manufactures (a) .. .. .	3,078	4,818	2,015	1,721	1,169	1,303
Scrap (a) .. .. .	2,508	3,722	3,091	2,883	4,576	4,246
Nickel oxide .. .. .	1,027	1,674	97	643	608	512
Rhodesia (f)—						
Semi-manufactures (a) .. .. .	10	17	48	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada—						
Ore, concentrates and Scrap (Ni content) .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	23,819	12,781	14,271
Unwrought (a) .. .. .	8,212	11,257	13,437	28,256	11,630	13,434
Semi-manufactures (a) .. .. .	1,586					
Cyprus—						
Semi-manufactures (a) .. .. .	1	2	—	2	9	5
Hong Kong—						
Semi-manufactures (a) .. .. .	103	143	125	116	79	195
India (c)—						
Unwrought .. .. .	1,663	1,249	634	265	390	529
do. alloys .. .. .	39	60	480	113	339	401
Scrap .. .. .	190	752	799	298	(a) 580	(a) 542
Semi-manufactures (a) .. .. .	266	396	676	567	1,234	1,524
Australia (b)—						
Matte, speiss, etc. .. .. .	300	82	1,409	456	136	315
Unwrought .. .. .	624	947	1,252	972	980	1,602
do. alloys .. .. .	(d) 162	(d) 213	(d) 318	319	707	684
Semi-manufactures (a) .. .. .	1,054	996	1,104	(e) 793	(e) 1,141	(e) 965
New Zealand (b)—						
Unwrought (a) .. .. .	28	31	41	53	46	<i>n.a.</i>
Semi-manufactures (a) .. .. .	180	164	176	228	368	<i>n.a.</i>
Irish Republic—						
Unwrought (a) .. .. .	10	23	32	13	28	41
Semi-manufactures (a) .. .. .	141	116	61	101	270	406
<b>OTHER COUNTRIES</b>						
Austria—						
Matte and speiss .. .. .	293	385	363	726	700	746
Unwrought .. .. .	3,020	2,788	2,488	2,210	1,862	2,359
Scrap .. .. .	2	9	23	117	123	225
Semi-manufactures (a) .. .. .	341	423	431	559	516	551
Belgium-Luxemburg						
E.U.—						
Unwrought .. .. .	984	1,143	1,030	1,194	1,020	1,267
do. alloys .. .. .	137	176	138	167	273	183
Scrap .. .. .	403	349	523	550	1,232	1,945
Semi-manufactures (a) .. .. .	611	689	678	657	968	1,050
Denmark—						
Unwrought .. .. .	69	65	100	110	82	114
do. alloys .. .. .	8	18	17	13	16	10
Semi-manufactures (a) .. .. .	568	574	684	792	519	464

\*See footnote on p. 222 concerning the descriptions "unwrought" nickel and "semi-manufactures" used in these tables.

(a) Including alloys.

(b) Years ended June 30 of that stated.

(c) Years ended March 31 following that stated.

(d) Including scrap.

(e) Owing to reclassification not strictly comparable with earlier years.

(f) Figure for 1963 relates to Rhodesia and Nyasaland.

## IMPORTS OF NICKEL (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Finland—						
Unwrought (a) ..	145	227	263	249	238	128
France—						
Matte and speiss ..	12,501	11,079	16,556	12,963	18,322	13,173
Ferro-nickel .. ..	19,587	22,349	32,388	28,202	44,100	49,470
Unwrought .. ..	4,783	8,236	8,005	8,363	8,619	9,596
do. alloys .. ..	27	57	122	58	92	96
Scrap (a) .. ..	1,804	1,324	476	578	375	234
Semi-manufactures (a)	1,727	2,488	2,083	2,607	2,446	2,572
Germany (Federal)—						
Ore .. ..	682	119	521	5	239	1
Matte and speiss ..	1,240	3,622	4,067	6,069	3,978	2,555
Unwrought (a) ..	18,914	23,033	23,555	23,439	27,809	30,865
Scrap (a) .. ..	4,257	3,158	1,865	2,700	6,486	8,581
Semi-manufactures (a)	893	1,354	1,824	1,736	1,877	3,100
Italy—						
Matte and speiss ..	1,046	999	620	1,717	1,776	4,292
Unwrought (a) ..	6,067	7,114	8,322	10,983	11,870	13,336
Scrap .. ..	598	179	602	957	1,538	1,314
Semi-manufactures (a)	1,457	1,060	981	1,571	1,768	1,842
Nickel oxide .. ..	232	182	113	131	139	180
Netherlands—						
Unwrought .. ..	528	628	749	1,590	<i>n.a.</i>	1,736
do. alloys .. ..	57	102	63	64	231	166
Scrap (a) .. ..	862	896	733	1,042	1,502	1,369
Semi-manufactures (a)	1,343	1,875	1,908	1,892	2,181	2,827
Nickel oxide .. ..	206	228	127	65	71	209
Norway—						
Matte (copper-nickel) ..	55,559	50,009	59,760	60,405	52,673	76,488
Scrap (a) .. ..	165	1,397	2,727	1,845	187	686
Semi-manufactures (a)	283	264	243	266	344	301
Portugal—						
Unwrought and semi-manufactures ..	82	151	201	238	203	432
Spain—						
Matte and speiss ..	291	326	434	463	241	529
Unwrought (a) ..	817	888	1,191	1,153	1,392	1,521
Semi-manufactures (a)	765	698	1,103	1,089	1,049	1,425
Sweden—						
Matte and speiss ..	340	375	575	2,276	964	1,015
Unwrought .. ..	8,047	11,352	12,795	12,072	12,127	13,433
do. alloys .. ..	198	246	181	302	347	347
Scrap (a) .. ..	266	620	824	1,277	1,358	2,126
Semi-manufactures (a)	968	815	782	936	872	971
Switzerland—						
Unwrought and scrap (a)	1,084	1,317	972	1,387	1,307	1,605
Semi-manufactures (a)	637	741	1,397	1,088	1,095	947
Yugoslavia—						
Unwrought .. ..	566	576	562	354	396	710
Semi-manufactures (a)	82	92	96	121	522	708
Mexico—						
Unwrought .. ..	146	222	204	93	70	180
Semi-manufactures ..	253	214	817	898	1,310	920
United States—						
Ore and matte .. ..	30	—	72	—	—	1
Unwrought and scrap ..	97,170	95,241	121,066	101,586	102,945	98,333
Semi-manufactures ..	<i>n.a.</i>	3,014	2,304	4,129	3,950	3,367
Nickel oxide .. ..	11,506	15,056	12,136	6,884	5,472	5,646
Argentina—						
Unwrought .. ..	73	177	202	201	130	319
Semi-manufactures ..	127	331	307	280	236	227

(a) Including alloys.

## IMPORTS OF NICKEL (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Brazil—						
Unwrought (a) ..	322	352	273	468	381	445
Semi-manufactures (a)	267	142	230	397	358	640
Chile—						
Unwrought .. ..	<i>n.a.</i>	37	74	<i>n.a.</i>	43	<i>n.a.</i>
Colombia—						
Unwrought (a) ..	48	37	7	18	6	22
Semi-manufactures (a)	340	616	108	170	86	116
Formosa—						
Unwrought (a) ..	177	101	106	129	143	<i>n.a.</i>
Iran—						
Semi-manufactures ..	290	196	132	160	218	121
Japan—						
Ore .. .. .	668,764	1,125,173	951,474	1,249,886	1,634,360	2,669,371
Matte .. .. .	3,869	5,343	4,288	4,974	9,620	12,398
Scrap (a) .. ..	21	12	—	4,839	10,650	572
Ferro-nickel .. ..	<i>n.a.</i>	6,495	6,601	670	2,782	1,129
Unwrought (a) ..	169	2,438	2,615	3,034	12,082	3,597
Semi-manufactures (a)	776	1,351	654	629	2,016	1,261
Philippine Republic—						
Semi-manufactures (a)	12	58	39	<i>n.a.</i>	46	<i>n.a.</i>
Turkey—						
Semi-manufactures (a)	101	87	68	77	211	144

(a) Including alloys.



**NITROGEN COMPOUNDS**  
**PRODUCTION OF NITROGEN COMPOUNDS\***

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (a)—						
Nitrogenous fertilizers expressed as 25% NH <sub>3</sub> .. .. .	2,630,200	2,784,400	2,952,000	3,188,300	3,848,000	4,246,100
Actual ammonium sulphate .. .. .	1,152,600	1,170,000	990,000	913,600	824,400	776,800
Canada—						
Ammonium sulphate .. .. .	246,740	284,504	260,437	307,125	258,444	266,025
Ammonium nitrate .. .. .	404,538	380,441	462,882	553,735	628,871	670,000
Trinidad (b)—						
(N content)						
Nitrogen fertilizers .. (e)	26,000	30,000	30,000	37,200	45,800	49,000
India—						
Ammonium sulphate .. .. .	436,000	421,110	431,658	n.a.	n.a.	n.a.
do. (N content) .. .. .	87,100	84,200	81,600	85,000	82,300	109,000
Pakistan (d)—						
Ammonium sulphate .. .. .	49,724	40,002	37,931	40,456	45,058	45,815
Ammonium nitrate .. .. .	66,955	61,199	n.a.	n.a.	n.a.	n.a.
Australia—						
Ammonium sulphate .. .. .	86,410	97,370	107,830	111,000	77,680	86,720
<b>OTHER COUNTRIES</b>						
Austria (b)—						
(N content)						
Nitrogen fertilizers .. .. .	170,700	167,100	181,800	207,736	230,816	240,000
Belgium—						
(N content)						
Synthetic ammonia, etc. .. .. .	309,740	351,610	391,660	393,655	404,887	447,759
Ammonium sulphate .. .. .	13,520	15,930	14,700	13,819	13,121	11,905
Mixed fertilizers .. .. .	50,690	59,540	67,950	70,471	78,670	91,720
Technical products .. .. .	19,760	23,690	18,790	17,563	17,326	45,884
Bulgaria—						
(N content)						
Nitrogen fertilizers .. .. .	99,353	202,150	241,951	292,700	348,000	348,000
Czechoslovakia—						
Nitrogen fertilizers (N content) .. .. .	151,382	155,881	216,313	246,566	241,000	247,000
Denmark—						
Lime ammonium nitrate .. .. .	—	14,566	70,161	n.a.	n.a.	n.a.
Finland (b)—						
(N content)						
Cyanamide .. .. .	76	135	143	86	50	36
Ammonium nitrate .. .. .	13,262	19,783	23,239	28,261	28,895	29,808
Calcium nitrate .. .. .	882	1,312	1,929	3,368	3,536	4,654
Other nitrogen fertilizers .. .. .	23,042	29,296	38,972	43,351	43,863	44,100
Mixed fertilizers .. .. .	7,879	8,858	8,619	17,044	28,951	40,998
France (d)—						
(N content)						
Ammonium sulphate .. .. .	71,800	86,300	87,400	84,500	80,400	67,700
Cyanamide .. .. .	2,859	2,347	2,573	2,350	3,070	3,430
Sodium nitrate .. .. .	3	80	3	800	900	700
Calcium nitrate .. .. .	32,200	41,700	35,100	32,100	n.a.	n.a.
Ammonium nitrate .. .. .	425,800	508,600	611,400	n.a.	n.a.	n.a.
Ammonium phosphate .. .. .	700	1,500	500	n.a.	n.a.	n.a.
Other nitrogen fertilizers .. .. .	53,100	64,100	84,800	n.a.	n.a.	n.a.
Mixed fertilizers .. .. .	147,700	193,400	233,600	n.a.	n.a.	n.a.

\*Includes by-product ammonium sulphate which is separately recorded as far as available on pages 84-86.

(a) Source: British Sulphate of Ammonia Federation.

(b) Years ended June 30 of the year stated.

(c) West Pakistan.

(d) Years ended April 30 of the year stated

(e) Estimated.

## PRODUCTION OF NITROGEN COMPOUNDS (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Germany (Federal)—						
Chemical nitrogen						
<i>(N content)</i>						
Fertilizer .. ..	1,201,683	1,244,842	1,339,555	1,426,323	1,538,145	1,567,264
Technical use ..	277,163	330,800	356,399	n.a.	n.a.	n.a.
Germany (East)—						
<i>(N content)</i>						
Ammonium sulphate	173,669	168,705	168,717	161,251	157,731	163,955
Cyanamide .. ..	15,947	17,854	17,215	16,685	15,502	11,996
Lime ammonium nitrate .. ..	117,790	119,436	121,073	123,427	117,643	143,021
Potassium ammonium nitrate .. ..	12,492	5,324	15,800	17,658	15,595	n.a.
Hungary—						
Nitrogen fertilizers ..	380,839	441,674	711,000	803,000	903,000	1,177,000
Iceland (a)—						
Ammonium nitrate						
<i>(N content)</i> .. ..	6,400	6,600	6,400	8,392	7,993	7,500
Italy—						
Ammonium sulphate ..	1,312,500	1,313,346	1,468,058	1,609,749	1,699,476	1,475,561
Ammonium sulpho-						
nitrate .. ..	59,110	43,109	48,703	59,211	31,040	97,337
Cyanamide .. ..	111,750	81,181	84,976	121,439	114,638	100,315
Sodium nitrate .. ..	6,873	8,728	8,781	6,951	8,667	8,357
Potassium nitrate ..	17,419	71,160	11,546	13,144	25,812	21,757
Calcium nitrate .. ..	331,488	354,159	336,605	315,769	324,590	297,271
Ammonium nitrate ..	707,020	584,634	770,889	654,364	745,202	846,512
Di-ammonium phos-						
phate .. ..	387,151	491,722	456,831	487,161	417,321	450,638
Ammonium phosphate						
Netherlands (a)—						
<i>(N content)</i>						
Ammonium sulphate ..	69,900	69,900	68,600	77,756	79,144	91,308
Ammonium nitrate ..	214,000	269,900	304,300	258,751	302,810	352,094
Calcium nitrate .. ..	23,600	24,600	22,900	22,047	23,274	22,488
Other nitrogen fertilizers	81,700	72,800	98,200	n.a.	n.a.	n.a.
Mixed fertilizers	60,600	30,800	24,900	n.a.	n.a.	n.a.
Norway—						
Cyanamide .. ..	4,104	4,713	4,261	4,392	4,496	3,753
Ammonium nitrate ..	14,034	18,455	19,596	22,270	23,053	24,692
Calcium nitrate .. ..	1,161,066	1,160,136	1,154,272	1,166,284	785,444	778,381
Sodium nitrate .. ..	1,402	1,775	1,401	—	—	—
Lime ammonium nitrate	95,265	118,356	147,101	39,821	109,181	112,965
Poland—						
Ammonium sulphate ..	170,000	194,000	217,000	246,000	254,000	277,000
Cyanamide .. ..	149,000	179,000	165,000	n.a.	n.a.	n.a.
“Saletzrak” .. ..	613,000	634,000	601,000	675,000	726,000	780,000
Portugal—						
Cyanamide .. ..	10,369	8,724	8,174	9,850	10,036	11,672
Ammonium sulphate ..	244,985	240,856	273,301	247,649	205,433	231,894
Ammonium nitrate ..	166,092	195,646	194,329	200,200	225,023	223,267
Calcium nitrate .. ..	15,499	20,367	22,859	14,271	5,033	7,567
Roumania—						
Nitrogen fertilizers						
<i>(N content)</i> .. ..	83,510	106,276	163,680	260,063	366,383	414,069
Spain—						
<i>(N content)</i> .. ..						
Cyanamide .. ..	747	764	1,353	r 850	1,597	1,575
Lime ammonium nitrate	65,676	74,685	90,264	r 104,400	114,444	93,500
Ammonium sulphate ..	103,840	128,382	135,100	r 151,836	182,285	224,005

(a) Years ended June 30 of the year stated.

## PRODUCTION OF NITROGEN COMPOUNDS (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
Sweden—						
Ammonium nitrate ..	14,032	16,987	13,389	18,750	22,655	n.a.
Ammonium sulphate ..	9,369	8,446	8,160	8,761	10,275	n.a.
Cyanamide ..	9,057	714	8,297	16,305	20,960	n.a.
Lime ammonium nitrate	157,334	187,197	175,813	202,814	212,343	n.a.
Mixed fertilizers ..	141,078	176,029	220,484	235,369	323,550	n.a.
Switzerland (a)—						
(N content)						
Cyanamide ..	2,000	2,000	2,200	2,400	3,200	3,400
Ammonium sulphate	5,200	5,200	5,300	9,300	9,300	7,900
Ammonium nitrate ..	8,100	8,100	8,500	10,000	13,400	14,800
Calcium nitrate ..	3,800	3,500	3,500	3,700	3,500	3,500
Mixed fertilizers ..	4,000	4,000	4,000	n.a.	n.a.	n.a.
U.S.S.R.—						
Nitrogen fertilizers						
(N content) ..	1,731,000	2,066,000	2,670,000	3,050,000	3,700,000	3,800,000
Yugoslavia—						
Ammonium nitrate ..	11,356	9,603	7,248	7,000	7,366	8,557
Ammonium sulphate ..	11,269	12,220	11,981	12,251	12,598	n.a.
Cyanamide ..	29,227	874	1,854	5,016	7,290	n.a.
Lime ammonium nitrate	252,000	400,000	429,000	474,000	477,000	n.a.
Egypt—						
Ammonium nitrate ..	324,618	428,788	370,770	385,461	420,560	433,051
Calcium nitrate ..	256,916	251,288	273,258	256,614	188,973	165,471
Ammonium sulphate ..	28,375	90,205	58,768	96,260	73,259	48,296
South Africa—						
Nitrogen fertilizers						
(N content) ..	(b) 70,000	(b) 71,000	75,000	n.a.	n.a.	n.a.
Mexico—						
Ammonium sulphate ..	135,804	n.a.	185,867	210,856	225,609	n.a.
Ammonium nitrate ..	136,295	n.a.	92,554	143,859	157,078	n.a.
Netherlands Antilles—						
Nitrogen compounds ..	n.a.	102,168	129,077	n.a.	n.a.	n.a.
Mixed fertilisers ..	n.a.	38,840	46,015	n.a.	n.a.	n.a.
United States—						
Sulphate equivalent of ammonia produced (coke-ovens) ..	641,766	708,846	717,641	769,649	745,000	685,000
Actual ammonium sulphate (coke-ovens)	553,286	607,935	619,011	681,938	658,000	626,000
Actual ammonium sulphate (synthetic plants)	1,049,000	1,452,000	1,784,000	1,886,000	1,730,000	1,779,000
Anhydrous ammonia (synthetic plants) ..	5,975,911	6,816,332	7,919,162	9,484,364	10,893,000	10,797,000
Ammonium nitrate, original ..	3,536,000	4,056,000	4,128,000	4,479,000	5,096,000	4,664,000
Ammonium phosphate	2,353,000	2,764,000	2,601,000	3,313,000	5,088,000	4,588,000
Brazil—						
Ammonium sulphate ..	8,034	10,032	11,646	12,205	12,281	n.a.
Lime ammonium nitrate	54,484	24,738	57,707	18,954	25,431	n.a.
Chile—						
Sodium and potassium nitrate (natural) ..	1,117,932	1,154,386	1,140,152	1,047,081	860,000	668,143
Peru (a)—						
Nitrogen fertilizers						
(N content) (c) ..	38,900	46,300	46,300	42,700	(b) 59,000	(b) 62,000
Formosa—						
Cyanamide ..	63,064	50,648	26,267	11,440	5,695	n.a.
Ammonium sulphate ..	109,633	r 221,757	r 288,983	r 283,037	325,587	376,168
Nitro-phosphate ..	—	3,521	7,898	5,118	3,809	n.a.
Nitro-chalk ..	54,221	62,148	47,843	42,382	63,188	74,119
Israel—						
Ammonium sulphate ..	68,252	78,520	76,522	75,958	66,660	77,642

(a) Years ended June 30 of the year stated.

(b) Estimated.

(c) Including guano.

PRODUCTION OF NITROGEN COMPOUNDS (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
<b>Japan—</b>						
Ammonium sulphate ..	2,224,000	2,256,000	2,449,000	2,612,000	2,678,000	2,672,000
Cyanamide ..	314,000	329,000	339,000	372,000	343,502	326,923
Ammonium nitrate ..	50,204	55,133	66,234	76,400	78,359	94,951
Ammonium chloride ..	486,656	472,398	494,490	549,540	611,076	771,822
<b>Philippine Republic (a)—</b> (N content)						
Ammonium sulphate	} 7,600	(b) 8,000	(b) 9,000	(b) 16,000	(b) 25,000	(b) 40,000
Ammonium phosphate						
<b>Turkey—</b>						
Ammonium sulphate ..	87,401	62,484	90,200	85,000	84,900	79,224
Ammonium nitrate ..	57,865	84,556	62,900	64,000	62,600	63,777

In addition, natural nitrate of potash is known to have been produced in India and Spain and nitrified earth in China.

(a) Years ended June 30 of the year stated

(b) Estimated.

## EXPORTS OF NITROGEN COMPOUNDS

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ammonium sulphate ..	384,722	366,239	417,976	339,010	290,834	330,437
Ammonium chloride ..	11,248	13,938	11,232	11,818	9,601	12,504
Other manufactured nitrogen fertilizers ..	3,104	11,621	14,326	17,544	75,988	8,971
Anhydrous and liquid ammonia .. ..	3,736	3,954	5,697	6,306	15,263	24,606
Canada—						
Anhydrous ammonia ..	n.a.	n.a.	n.a.	n.a.	54,865	74,618
Ammonium sulphate ..	(£2,167,006)	(£2,010,432)	(£2,965,482)	(£2,747,264)	(£2,275,520)	(£3,014,723)
Ammonium nitrate ..	(£4,352,326)	(£3,654,737)	(£3,381,919)	(£2,986,401)	(£3,259,519)	(£4,701,688)
Nitrogen-phosphate fertilizers ..	(£4,329,440)	(£3,403,812)	(£6,453,415)	(£7,558,541)	(£8,978,193)	(£9,930,240)
Other nitrogen fertilizers	(£5,241,100)	(£5,150,709)	(£4,940,746)	(£4,591,045)	(£5,331,488)	(£7,271,641)
Trinidad and Tobago—						
Ammonium sulphate ..	82,287	78,825	91,837	115,054	108,173	46,271
India (a)—						
Potassium nitrate ..	5	r 3	3	6	—	9
Sodium nitrate ..	4	3	—	—	—	—
Malaysia (West)—						
Nitrogen fertilizers ..	n.a.	n.a.	1,291	841	276	107
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Potassium nitrate ..	1	1	1	—	—	—
Sodium nitrate ..	246	8	26	18	43	422
Calcium nitrate ..	—	—	1	2	27	394
Ammonium sulphate ..	390,893	259,044	402,245	(b) 48,366	(b) 55,567	(b) 76,067
Ammonium chloride ..	23	35	46	77	18	26
Ammonium nitrate ..	195,161	208,985	281,521	(b) 23,776	(b) 10,320	(b) 13,867
Cyanamide ..	2,988	6,597	17,534	(b) 4,368	(b) 3,149	(b) 3,828
Anhydrous ammonia ..	25,887	45,952	49,138	53,692	60,205	145,276
Bulgaria—						
Nitrogen fertilizers ..	75,966	98,599	57,054	18,668	44,634	n.a.
France—						
Potassium nitrate ..	2,762	2,076	1,935	1,939	2,773	2,426
Sodium nitrate ..	800	571	756	686	1,011	1,527
Calcium nitrate ..	16,667	30,551	95,825	31,202	28,590	29,682
Ammonium sulphate ..	250,820	210,348	215,837	238,641	259,910	114,820
Ammonium chloride ..	4	47	52	176	1,215	2,483
Ammonium nitrate ..	46,514	44,005	53,364	63,790	63,121	79,574
Cyanamide ..	57	30	1,661	1,111	705	1,393
Anhydrous ammonia ..	16,040	7,858	27,289	34,468	12,428	7,075
Germany (Federal)—						
Potassium nitrate ..	12,746	14,305	13,949	14,033	16,688	14,949
Sodium nitrate ..	10,706	9,918	5,319	2,358	1,314	2,097
Calcium nitrate ..	109,446	122,481	129,820	94,796	58,972	13,007
Ammonium nitrates ..	1,012,752	700,956	448,740	563,366	688,020	702,608
Other nitrogen fertilizers	814,711	728,474	759,463	711,342	911,942	809,375
Germany (East)—						
Nitrogen fertilizers (b)	91,245	65,620	72,014	47,503	69,732	n.a.
Anhydrous ammonia ..	755	811	873	977	904	n.a.
Greece—						
Anhydrous ammonia ..	n.a.	n.a.	n.a.	6,086	17,336	14,426

(a) Years ended March 31 following that stated.

(b) N content.

## EXPORTS OF NITROGEN COMPOUNDS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Italy—</b>						
Potassium nitrate ..	910	80	999	2,476	1,504	1,690
Sodium nitrate ..	477	65	135	111	275	25
Calcium nitrate ..	16,999	4,669	1,986	396	1,482	<i>n.a.</i>
Ammonium nitrate ..	411,979	197,956	352,112	206,249	237,289	233,859
Ammonium sulphate ..	908,035	728,796	746,339	754,055	900,260	543,321
Cyanamide ..	3,451	1,769	6,826	<i>n.a.</i>	49	—
<b>Netherlands—</b>						
Potassium nitrate ..	70	104	421	639	302	83
Sodium nitrate ..	274	240	372	610	948	2,615
Calcium nitrate ..	37,502	48,750	45,422	7,621	6,714	9,330
Ammonium sulphate ..	363,209	277,931	354,270	47,552	89,952	91,977
Ammonium chloride ..	22	30	129	156	116	31
Ammonium nitrate ..	154,942	120,442	172,137	37,773	58,312	83,834
Lime ammonium nitrate						
Anhydrous ammonia ..	2,140	2,283	5,013	37,845	80,979	125,856
<b>Norway—</b>						
Sodium nitrate ..	1,625	1,901	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Calcium nitrate ..	1,173,265	1,138,565	1,231,470	1,005,686	707,423	<i>n.a.</i>
Ammonium nitrate ..	7,422	8,549	6,813	5,412	5,196	<i>n.a.</i>
Cyanamide ..	1,718	1,215	1,471	1,241	1,573	<i>n.a.</i>
Anhydrous ammonia ..	849	737	2,798	9	2	—
<b>Poland—</b>						
Ammonium chloride ..	4,335	3,614	3,595	4,326	4,001	3,980
Nitrogen fertilizers ..	19,979	25,500	44,000	41,000	84,000	156,000
<b>Portugal—</b>						
Ammonium sulphate ..	39,294	44,808	25,233	37,106	43,903	17,754
Ammonium nitrate ..	23,146	56,754	34,055	30,240	43,581	32,905
Sodium nitrate ..	73	140	245	—	1	—
Calcium nitrate ..	8,391	10,257	9,198	3,614	4,814	5,117
<b>Sweden—</b>						
Ammonium nitrate ..	278	1,370	648	1,520	3,019	1,639
<b>Switzerland—</b>						
Potassium and sodium nitrates (purified) ..	—	—	—	4	4	5
Ammonium sulphate, etc. ..	20,046	26,519	28,589	31,271	21,904	21,354
<b>U.S.S.R.—</b>						
Ammonium nitrate ..	157,000	41,800	8,200	71,000	125,486	194,774
Ammonium sulphate ..	404,000	220,300	325,200	488,000	682,843	737,269
<b>Yugoslavia—</b>						
Ammonium nitrate ..	<i>n.a.</i>	<i>n.a.</i>	415	1,057	<i>n.a.</i>	<i>n.a.</i>
Lime ammonium nitrate ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	4,921	<i>n.a.</i>	<i>n.a.</i>
Cyanamide ..	2,181	46	262	975	1,044	774
<b>United States—</b>						
Sodium nitrate ..	2,129	848	416	562	246	1,030
Ammonium nitrate ..	22,386	78,783	92,604	77,675	36,564	79,396
Ammonium sulphate ..	437,812	431,950	858,572	1,437,553	935,053	1,245,610
Other nitrogen fertilizers ..	11,877	53,953	30,857	22,000	24,355	22,776
Nitrogen phosphatic fertilizers ..	165,430	324,211	285,404	689,000	1,134,000	1,133,929
Anhydrous ammonia (a) ..	67,215	132,571	164,467	201,753	386,486	714,469
<b>Chile—</b>						
Sodium nitrate ..	895,704	870,154	907,664	792,481	623,757	<i>n.a.</i>
Potassium nitrate ..						
<b>Israel—</b>						
Anhydrous ammonia ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	18
<b>Japan—</b>						
Cyanamide ..	13	19,807	44,406	48,025	160	2,682
Ammonium nitrate ..	5,892	8,300	20,572	13,587	11,530	17,666
Ammonium chloride ..	322	234,773	176,910	302,097	379,794	425,505
Ammonium sulphate ..	1,207,225	833,218	1,242,930	1,172,469	1,591,605	1,439,697
Anhydrous ammonia ..	81	253	595	5,760	7,781	12,229
Other nitrogen fertilizers ..	6,456	37,350	31,742	62,001	27,968	78,343

(a) Ammonia content.

## IMPORTS OF NITROGEN COMPOUNDS

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Natural sodium nitrate ..	13,347	14,952	17,915	19,143	13,414	14,094
Manufactured fertilizers—						
Nitrogenous .. ..	314,539	292,196	272,183	180,518	389,896	373,440
Ammonium phosphate ..	10,904	11,557	3,429	3,222	10,451	30,118
Potassium nitrate ..	2,793	3,029	3,026	4,004	3,965	<i>n.a.</i>
Anhydrous and liquid ammonia .. ..	<i>n.a.</i>	1,677	4,303	66,166	155,045	272,678
Malta—						
Ammonium sulphate ..	2,367	2,118	931	561	1,087	1,754
Gambia—						
Ammonium sulphate ..	—	—	—	—	16	—
Ghana—						
Ammonium sulphate ..	79,436	757	855	5,018	105	1,057
Other nitrogen fertilizers	7	7	4	—	41	58
Kenya—						
Ammonium sulphate ..	4,652	12,157	20,586	8,531	8,659	6,258
Other nitrogen fertilizers	12,916	19,502	26,552	21,668	20,145	31,059
Malawi—						
Ammonium sulphate ..	<i>n.a.</i>	6,097	7,806	14,071	17,777	12,957
Ammonium nitrate ..	<i>n.a.</i>	41	200	48	6	13
Mauritius—						
Nitrogen fertilizers ..	36,743	26,908	20,393	14,415	18,668	15,638
Nigeria—						
Nitrogen fertilizers ..	3,040	8,821	14,601	10,948	28,914	12,718
Rhodesia (a)— .. ..						
Ammonium sulphate ..	31,964	53,522	53,996	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other nitrogen fertilizers	53,668	61,565	71,713	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sierra Leone—						
Ammonium sulphate ..	571	1	43	388	260	<i>n.a.</i>
Tanzania— .. ..						
Ammonium sulphate ..	3,465	8,077	8,679	7,976	6,820	7,354
Other nitrogen fertilizers	3,180	5,118	5,981	5,941	4,247	5,929
Uganda—						
Ammonium sulphate ..	2,905	5,015	5,457	5,356	4,761	3,357
Other nitrogen fertilizers	505	1,195	858	447	2,920	2,754
Zambia—						
Ammonium sulphate ..	<i>n.a.</i>	2,111	11,052	1,134	12,101	2,361
Ammonium nitrate ..	<i>n.a.</i>	472	616	3,987	7,108	8,306
Canada—						
Potassium nitrate ..	760	789	1,308	1,443	1,517	2,384
Sodium nitrate ..	14,955	18,044	19,958	22,997	18,610	12,916
Ammonium sulphate ..	12,731	15,739	13,814	15,278	20,952	16,476
Other nitrogen fertilizers (b)	8,146	20,296	14,771	16,273	12,471	23,319
Antigua—						
Nitrogen fertilizers ..	<i>n.a.</i>	3	—	1	85	<i>n.a.</i>
Barbados—						
Nitrogen fertilizers ..	12,118	13,683	8,567	10,225	9,540	6,984
Grenada—						
Ammonium sulphate ..	827	392	372	283	285	251
Other nitrogen fertilizers	690	176	490	77	420	699
Jamaica—						
Ammonium sulphate	25,306	33,485	23,188	14,364	26,323	25,282
Other nitrogen fertilizers .. ..	2,681	2,139	1,651	6,529	7,043	3,405
St. Kitts—						
Nitrogen fertilizers ..	2,202	2,616	2,433	2,370	99	<i>n.a.</i>
St. Lucia—						
Nitrogen fertilizers ..	899	849	442	311	1,387	230
St. Vincent—						
Ammonium sulphate ..	420	205	871	799	2,985	<i>n.a.</i>
Trinidad and Tobago—						
Ammonium sulphate ..	<i>n.a.</i>	<i>n.a.</i>	200	<i>n.a.</i>	50	—

(a) Figures for 1963 relate to Rhodesia and Nyasaland.

(b) Owing to reclassification not strictly comparable with the figures for 1964 onward.

## IMPORTS OF NITROGEN COMPOUNDS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES (cont.)						
Guyana—						
Ammonium sulphate ..	<i>n.a.</i>	16,923	21,431	23,617	28,052	25,017
Ceylon—						
Natural sodium nitrate ..	99	61	270	12	—	—
Ammonium sulphate ..	166,419	179,036	182,490	175,528	129,640	161,449
Ammonium nitrate ..	180	334	206	7,899	5,349	295
Cyanamide .. ..	—	—	25	—	—	50
Cyprus—						
Ammonium sulphate ..	26,660	14,872	17,419	28,528	17,950	29,108
Other nitrogen fertilizers	15,945	11,543	13,423	15,082	8,701	16,555
Hong Kong—						
Potassium nitrate ..	626	423	404	341	634	742
Sodium nitrate ..	596	723	826	947	675	916
Ammonium sulphate ..	242	892	659	727	1,015	720
Synthetic nitrates ..	94	45	255	608	494	903
Ammonium chloride ..	1,219	1,055	932	1,044	1,360	1,264
India (a)—						
Potassium nitrate ..	2	2	—	5	—	—
Sodium nitrate ..	18,929	9,398	15,545	14,718	2,652	6,991
Ammonium sulphate ..	444,729	445,983	826,596	983,123	865,755	1,280,100
Ammonium nitrate ..	1,486	1,032	863	33,201	129,748	78,133
Ammonium phosphate	23,581	35,632	46,636	128,902	459,136	353,524
Ammonium chloride ..	7	2	2,977	6,957	46,298	46,835
Other nitrogen fertilizers	26,826	6,553	22,856	65,301	174,320	78,136
Malaysia (West)—						
Nitrogen fertilizers ..	<i>n.a.</i>	<i>n.a.</i>	139,140	152,759	120,642	56,855
Anhydrous ammonia ..	<i>n.a.</i>	<i>n.a.</i>	6,197	6,588	6,271	2,095
Pakistan—						
Sodium nitrate ..	88	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ammonium sulphate ..	150,873	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ammonium chloride ..	329	154	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Anhydrous ammonia ..	46	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sabah—						
Ammonium sulphate ..	595	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other nitrogen fertilizers	13	1,979	2,076	1,236	2,339	325
Sarawak—						
Ammonium sulphate ..	3,568	<i>n.a.</i>	7,069	5,731	5,717	4,246
Other nitrogen fertilizers	244	6,680				
Australia (b)—						
Potassium nitrate ..	424	403	470	422	1,602	603
Sodium nitrate ..	5,611	8,939	7,215	6,506	4,938	9,041
Sodium and potassium nitrate ..	2,183	1,500	4,499	1,120	95	213
Ammonium chloride ..	1,424	1,517	2,039	1,475	1,723	1,684
Ammonium sulphate ..					75,013	113,231
Ammonium nitrate ..	37,458	117,593	71,406	52,558	9,804	16,152
Cal. ammonium nitrate	9,230	9,054	7,845	13,003	13,817	15,286
Other nitrogen fertilizers	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	1,055	2,444	1,393
Fiji—						
Nitrogen fertilizers ..	18,648	29,014	28,518	18,105	19,728	26,391
New Zealand (b)—						
Potassium nitrate ..	128	166	184	185	517	<i>n.a.</i>
Sodium nitrate ..	85	121	3,790	3,923	2,600	<i>n.a.</i>
Calcium nitrate ..	639	644	1,362	1,393	1,853	<i>n.a.</i>
Ammonium sulphate ..	9,850	6,745	13,723	12,557	12,834	10,487
Ammonium chloride ..	<i>n.a.</i>	1,750	2,034	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ammonium nitrate ..	942	1,025	771	1,886	996	<i>n.a.</i>
Anhydrous ammonia ..	114	92	147	127	128	<i>n.a.</i>
Cyanamide .. ..	45	376	267	5	5	<i>n.a.</i>

(a) Years ended March 31 following that stated.

(b) Years ended June 30 of that stated.



## IMPORTS OF NITROGEN COMPOUNDS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>Irish Republic—</b>						
Sodium nitrate ..	2,865	2,166	973	917	736	724
Ammonium sulphate ..	124,531	120,327	81,960	13,589	23,005	13,378
Anhydrous ammonia ..	119	133	14,398	3,843	15,054	31,205
Ammonium nitrate ..	39,147	28,996	27,407	8,363	10,785	30,879
Other nitrogen fertilizers	3,267	8,879	4,714	3,164	939	542
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Calcium nitrate ..	861	807	610	440	383	487
Potassium nitrate ..	399	385	507	547	487	499
Cyanamide ..	2,758	2,211	1,775	1,629	1,677	2,497
Anhydrous ammonia ..	2	4	3,097	4,979	9,383	4,344
<b>Belgium-Luxemburg</b>						
<b>E. U.—</b>						
Potassium nitrate ..	2,631	2,809	2,607	2,519	2,614	2,433
Sodium nitrate ..	22,619	33,514	17,913	29,152	17,913	22,739
Calcium nitrate ..	7,437	8,890	9,571	(a) 1,090	(a) 2,156	(a) 2,636
Cyanamide ..	455	501	2,082	(a) 992	(a) 95	(a) 163
Ammonium sulphate ..	12,105	15,729	22,603	(a) 6,569	(a) 6,260	(a) 5,484
Ammonium chloride ..	2,064	2,567	2,449	3,131	2,720	3,000
Ammonium nitrate ..	82,758	82,477	108,210	(a) 10,097	(a) 2,993	(a) 6,771
Anhydrous ammonia ..	1,178	1,759	5,241	13,892	52,882	203,234
<b>Bulgaria—</b>						
Nitrogen fertilizers ..	69,100	5,400	100	62,694	n.a.	n.a.
<b>Czechoslovakia—</b>						
Nitrogen fertilizers (a)	43,000	49,000	49,000	40,000	n.a.	n.a.
<b>Denmark—</b>						
Potassium nitrate ..	1,206	1,335	1,295	1,314	1,477	1,410
Sodium nitrate ..	25,567	37,275	32,067	18,258	13,940	7,699
Calcium nitrate ..	669,238	580,497	539,356	424,969	292,569	258,974
Ammonium sulphate ..	9,312	9,689	7,047	6,212	4,631	4,366
Ammonium chloride ..	1,086	954	1,215	1,453	1,262	1,461
Ammonium nitrates ..	23,718	58,368	44,449	11,988	20,821	26,757
Cyanamide ..	174	141	116	59	54	136
<b>Finland—</b>						
Potassium nitrate ..	168	528	552	461	278	926
Sodium nitrate ..	3,078	2,244	360	643	476	531
Calcium nitrate ..	61,758	86,283	65,344	52,117	43,514	42,914
Ammonium nitrate ..	13,657	7,508	31,053	5,035	4,446	4,082
Ammonium sulphate ..	40,031	38,158	50,364	62,431	27,800	20,541
Ammonium chloride ..	606	1,153	1,517	1,055	1,318	602
<b>France—</b>						
Sodium nitrate ..	49,685	64,820	45,591	30,920	24,088	26,894
Calcium nitrate ..	485	660	1,419	594	1,374	3,942
Ammonium sulphate ..	43,270	49,008	38,465	50,306	34,118	40,192
Ammonium nitrate ..	14,010	8,329	3,335	4,226	8,450	3,424
Ammonium chloride ..	1,961	2,171	1,890	1,835	1,826	1,891
Anhydrous ammonia ..	27,224	39,959	41,759	51,642	60,586	147,851
Cyanamide ..	2,582	4,171	5,251	6,448	8,694	10,278
<b>Germany (Federal)—</b>						
Potassium nitrate ..	1,188	2,202	3,019	4,577	4,235	4,387
Sodium nitrate ..	11,712	11,173	464	897	34	64
Ammonium nitrates ..	81,006	117,580	146,335	196,745	373,177	238,707
Ammonium chloride ..	359	860	1,504	n.a.	n.a.	n.a.
Other nitrogen fertilizers	517	791	9,213	35,865	8,918	4,975
<b>Greece—</b>						
Potassium nitrate ..	79	104	167	79	91	124
Sodium nitrate ..	6,084	5,597	5,110	13,913	5,846	199
Ammonium nitrate ..	56,869	38,671	54,587	11,367	60,251	91,996
Ammonium sulphate ..	182,769	125,699	105,746	104,788	26,499	15,446
Ammonium chloride ..	206	171	123	212	247	271
Lime ammonium nitrate	74,049	64,034	30,435	28,186	19,557	21,693
Other nitrogen fertilizers						
Anhydrous ammonia ..	11,976	1,759	5,600	5,856	14,871	10,455

(a) N content.

## IMPORTS OF NITROGEN COMPOUNDS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
Hungary—						
Nitrogen fertilizers ..	463,763	475,095	310,000	265,000	209,636	495,056
Iceland—						
Calcium nitrate ..	—	5	1	—	—	—
Lime ammonium nitrate ..	6,308	10,266	11,303	6,842	1,777	3,598
Nitrophoska ..	—	4,486	—	—	—	—
Italy—						
Potassium nitrate ..	1,027	2,081	1,501	1,523	1,744	1,846
Sodium nitrate ..	4,724	140	85	1,365	23,576	234
Ammonium chloride ..	1,492	1,398	1,059	1,005	1,567	1,610
Ammonium nitrate ..	2,999	2,616	1,743	2,535	3,201	5,134
Ammonium sulphate ..	4,043	112	115	219	1,423	1,033
Cyanamide ..	1,372	—	—	—	674	3,898
Netherlands—						
Potassium nitrate ..	2,807	2,914	3,146	3,282	3,680	3,339
Sodium nitrate ..	34,238	19,711	32,075	30,753	54,859	7,704
Calcium nitrate ..	14,042	1	1	—	—	37
Ammonium sulphate ..	2,271	455	650	230	136	121
Ammonium chloride ..	1,481	1,779	2,043	1,797	2,143	2,418
Ammonium nitrate ..	95,343	379	303	198	897	998
Lime ammonium nitrate ..						
Cyanamide ..	1,369	2,273	4,855	636	563	423
Anhydrous ammonia ..	13,629	19,021	27,078	3,436	1,794	48,990
Other nitrogen fertilizers ..	7,113	35	681	1,835	309	140
Norway—						
Potassium nitrate ..	178	164	240	234	663	136
Ammonium chloride ..	412	416	467	554	448	495
Ammonium sulphate ..	479	407	407	466	260	571
Anhydrous ammonia ..	9,310	36,801	20,325	24,098	5,413	66,784
Poland—						
Nitrogen fertilizers ..	49,300	50,200	280,000	86,000	67,000	51,000
Portugal—						
Potassium nitrate ..	296	286	430	459	394	427
Sodium nitrate ..	12,524	3,100	604	524	3,967	3,583
Calcium nitrate ..	—	—	—	—	475	260
Ammonium sulphate ..	10,039	24	4,472	50	68	83
Ammonium chloride ..	137	153	143	173	176	298
Ammonium nitrate ..	443	10	10	49	39	252
Cyanamide ..	—	—	1,947	—	—	—
Nitrophoska ..	14,672	8,326	n.a.	n.a.	n.a.	n.a.
Anhydrous ammonia ..	12,823	—	1,982	—	6	8,403
Roumania—						
Nitrogen fertilizers (a)	3,445	1,900	—	100	295	1,772
Spain—						
Sodium nitrate ..	118,147	123,170	120,295	118,715	70,677	60,098
Ammonium sulphate ..	454,349	519,116	469,619	193,778	100,402	106,439
Calcium nitrate ..	126,785	143,124	126,056	149,497	55,891	101,987
Other nitrogen fertilizers ..	55,740	40,637	61,110	33,876	7,595	41,987
Anhydrous ammonia ..	2,847	1,627	5,405	14,892	3,739	1,993
Sweden—						
Potassium nitrate ..	1,005	1,122	1,206	1,636	1,213	1,441
Sodium nitrate ..	24,815	31,160	33,523	27,361	23,054	27,343
Calcium nitrate ..	352,660	376,481	403,984	457,808	384,212	480,933
Ammonium nitrate ..	156	325	357	22	—	1,247
Ammonium sulphate ..	11,347	14,233	7,828	4,224	487	656
Ammonium chloride ..	1,055	1,265	1,521	1,191	1,491	1,391
Switzerland—						
Potassium and sodium nitrates ..	933	925	944	1,093	1,122	2,771
Ammonium sulphate, etc. ..	501	683	827	827	903	1,237
Ammonium chloride ..	889	993	1,080	832	970	1,140
Ammonium and calcium nitrates ..	5,266	264	176	446	3,022	1,200

(a) N content.

## IMPORTS OF NITROGEN COMPOUNDS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
<b>Yugoslavia—</b>						
Sodium nitrate ..	162	28,276	4,529	1,350	*725	1,160
Ammonium sulphate ..	95,072	97,250	101,813	134,346	110,590	150,214
Ammonium nitrate ..	10,801	9,428	1,798	497	3,465	922
Lime ammonium nitrate	414,818	327,259	129,848	251,618	271,365	185,256
Anhydrous ammonia ..	<i>n.a.</i>	<i>n.a.</i>	1	220	295	4,021
Other nitrogen fertilizers	6,107	28,009	1,798	<i>n.a.</i>	<i>r</i> 3,789	9,412
<b>Angola—</b>						
Sodium nitrate ..	136	273	35	190	375	30
Ammonium nitrate ..	913	1,284	816	1,257	929	482
Ammonium sulphate ..	5,443	6,309	8,666	9,888	9,514	8,516
<b>Cameroun—</b>						
Nitrogen fertilizers ..	12,976	32,859	22,037	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Canary Islands—</b>						
Ammonium sulphate ..	50,112	62,396	55,495	43,432	45,579	<i>n.a.</i>
Calcium nitrate ..	196	1,034	747	936	767	<i>n.a.</i>
Other nitrogen fertilizers	3,622	3,246	2,117	6,784	4,852	<i>n.a.</i>
<b>Central African Republic</b>						
Congo, Republic of ..	<i>n.a.</i>	803	1,937	436	2,122	<i>n.a.</i>
Egypt—	<i>n.a.</i>	1,141	1,059	1,265	46	<i>n.a.</i>
<b>Egypt—</b>						
Sodium nitrate ..	10	139	71	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ammonium sulphate ..	167,117	267,793	387,378	416,170	106,135	<i>n.a.</i>
Ammonium nitrate ..	15,324	32,173	51,446	9,844	27,050	<i>n.a.</i>
Ammonium sulpho-nitrate ..	29,531	26,083	10,779	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other nitrogen fertilizers	133,799	78,275	98,515	82,773	28,785	<i>n.a.</i>
<b>Malagasy Republic—</b>						
Nitrogen fertilizers ..	1,049	1,803	1,776	2,862	3,675	4,859
<b>Morocco—</b>						
Potassium nitrate ..	231	254	216	172	328	506
Sodium nitrate ..	467	133	71	222	215	265
Calcium nitrate ..	745	458	220	253	49	146
Ammonium nitrate ..	7,156	3,626	6,861	18,649	13,581	23,741
Ammonium sulphate ..	24,215	31,378	29,359	42,522	50,088	76,704
Other nitrogen fertilizers	8,443	11,192	9,296	1,983	11,364	8,712
<b>Reunion—</b>						
Nitrogen fertilizers ..	9,967	10,688	10,147	4,912	5,702	<i>n.a.</i>
<b>South Africa—</b>						
Potassium nitrate ..	1,273	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sodium nitrate ..	983	<i>n.a.</i>	<i>n.a.</i>	1,043	945	1,430
Ammonium sulphate ..	117,179	131,247	42,197	24,326	10,339	5,480
Ammonium chloride ..	1,111	820	1,636	1,783	2,829	2,356
Ammonium nitrate ..	49,355	738	3,044	993	17,140	<i>n.a.</i>
<b>Sudan—</b>						
Sodium, calcium and ammonium nitrates (synthetic) ..	14,387	25,484	59,815	30,573	12,167	7,301
Other nitrogen fertilizers						
<b>Tunisia—</b>						
Nitrogen fertilizers ..	25,869	24,613	16,253	19,814	21,165	27,905
<b>Costa Rica—</b>						
Nitrogen fertilizers ..	11,487	11,948	82,496	29,245	28,059	<i>n.a.</i>
<b>Cuba—</b>						
Ammonium nitrate ..	20,177	71,617	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ammonium sulphate ..	178,349	165,895	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>French West Indies—</b>						
<b>Guadeloupe—</b>						
Nitrogen fertilizers ..	2,165	2,248	2,887	2,059	1,484	<i>n.a.</i>
<b>Martinique—</b>						
Nitrogen fertilizers ..	8,132	7,605	6,648	7,157	6,736	<i>n.a.</i>
<b>Guatemala—</b>						
Sodium nitrate ..	20	153	60	1	148	181
Other nitrogen fertilizers	16,216	16,907	33,087	31,191	24,469	29,298

## IMPORTS OF NITROGEN COMPOUNDS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Honduras—						
Nitrogen fertilizers ..	12,410	14,565	20,728	15,647	19,326	25,028
Mexico—						
Sodium nitrate ..	3,074	356	13,183	14,415	15,004	17,283
Ammonium chloride ..	—	1	332	45	249	1
Ammonium sulphate ..	4	8,264	69,039	55,637	69,386	84,693
Ammonium nitrate ..	6,129	18,834	41,870	24,387	4,194	15,204
Anhydrous ammonia ..	51,043	73,150	102,383	126,228	189,718	173,484
Nicaragua—						
Sodium nitrate ..	389	423	124	—	—	—
Other nitrogen fertilizers	11,777	3,831	27,163	18,562	25,681	44,116
Panama Republic—						
Nitrogen fertilizers ..	15,319	19,007	22,691	12,308	15,484	<i>n.a.</i>
Salvador—						
Sodium nitrate ..	592	267	12	248	—	<i>n.a.</i>
Other nitrogen fertilizers	76,450	100,810	73,646	56,936	69,731	<i>n.a.</i>
United States—						
Potassium and sodium						
nitrates, crude ..	34,000	12,052	6,615	36,000	44,117	25,000
Potassium nitrate ..	3,970	2,824	4,377	24,617	13,799	14,287
Sodium nitrate ..	106,737	324,300	349,949	286,841	194,693	183,285
Calcium nitrate ..	37,210	48,875	29,643	34,131	28,795	37,360
Ammonium sulphate ..	209,381	185,682	161,490	143,000	150,000	116,000
Ammonium chloride ..	2,311	<i>n.a.</i>	2,916	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ammonium nitrate ..	185,375	212,552	159,796	137,000	158,000	202,600
Ammonium phosphates	115,812	85,845	155,768	160,000	189,081	220,554
Cyanamide ..	25,800	21,428	16,713	16,904	15,874	15,444
Argentina—						
Potassium nitrate ..	—	—	—	97	57	6
Sodium nitrate ..	9,845	10,667	10,590	8,935	10,118	8,891
Ammonium sulphate ..	23,866	38,110	45,081	2,172	29,988	12,646
Ammonium chloride ..	1,003	2,576	1,589	1,516	1,954	2,567
Brazil—						
Potassium nitrate ..	777	750	894	739	442	353
Sodium nitrate ..	34,309	25,304	30,628	27,649	26,737	24,965
Potassium and sodium						
nitrates ..	16,429	7,171	21,296	18,411	9,562	6,240
Ammonium chloride ..	1,363	2,078	1,104	2,540	2,586	3,315
Ammonium nitrate ..	2,180	7,577	100	—	148	—
Ammonium sulphate ..	178,611	141,295	206,667	234,346	298,590	412,243
Cyanamide ..	—	90	41	104	59	197
Other nitrogen fertilizers	6,876	9,483	4,294	9,999	10,870	13,519
Chile—						
Ammonium chloride ..	361	587	57	<i>n.a.</i>	636	<i>n.a.</i>
Ammonium sulphate ..	657	475	525	<i>n.a.</i>	408	<i>n.a.</i>
Ammonium nitrate ..	20,179	20,212	20,029	<i>n.a.</i>	15,176	<i>n.a.</i>
Anhydrous ammonia ..	43	131	93	<i>n.a.</i>	116	<i>n.a.</i>
Colombia—						
Potassium nitrate ..	401	196	87	498	208	192
Sodium nitrate ..	1,551	20	20	10	133	172
Ammonium chloride ..	684	606	229	375	37	312
Ammonium sulphate ..	4,508	491	—	4,020	1,865	4,824
Other nitrogen fertilizers	14,442	6,745	203	2,076	711	2,172
Anhydrous ammonia ..	122	2	5	5	16	7
Ecuador—						
Nitrogen fertilizers ..	5,873	8,857	11,633	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru—						
Potassium nitrate ..	9	95	156	141	200	<i>n.a.</i>
Sodium nitrate ..	4,651	6,508	5,430	2,416	2,544	<i>n.a.</i>
Anhydrous ammonia ..	46	65	16	28	4	<i>n.a.</i>
Other nitrogen fertilizers	93,901	85,678	109,833	34,830	92,069	<i>n.a.</i>
Uruguay—						
Potassium nitrate ..	<i>n.a.</i>	<i>n.a.</i>	7	11	31	<i>n.a.</i>
Sodium nitrate ..	<i>n.a.</i>	<i>n.a.</i>	19	510	216	<i>n.a.</i>
Ammonium sulphate ..	<i>n.a.</i>	<i>n.a.</i>	5,303	8,351	1,563	<i>n.a.</i>

## IMPORTS OF NITROGEN COMPOUNDS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Venezuela—						
Potassium nitrate ..	210	177	140	414	3,562	1,961
Sodium nitrate ..	120	215	184	182	327	167
Calcium nitrate ..	—	—	3	—	—	—
Ammonium sulphate ..	18,562	2,267	—	10,000	27,512	11,953
Anhydrous ammonia ..	798	716	148	—	2	6,866
Cyanamide ..	—	49	—	—	—	—
Burma—						
Nitrogen fertilizers ..	37,079	13,911	8,934	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Formosa—						
Sodium nitrate ..	440	707	1,245	1,241	<i>n.a.</i>	<i>n.a.</i>
Ammonium chloride ..	3,562	400	589	741	<i>n.a.</i>	<i>n.a.</i>
Ammonium sulphate ..	105,704	171,009	108,988	22,981	<i>n.a.</i>	<i>n.a.</i>
Other nitrogen fertilizers	83,860	75,341	71,394	45,668	<i>n.a.</i>	<i>n.a.</i>
Iran (a)—						
Ammonium chloride ..	185	258	105	286	293	490
Nitrogen fertilizers ..	7,503	4,706	7,987	7,173	6,870	20,157
Iraq—						
Nitrogen fertilizers ..	8,337	9,117	<i>n.a.</i>	11,644	25,074	<i>n.a.</i>
Israel—						
Nitrogen fertilizers ..	<i>n.a.</i>	2,116	2,517	1,932	1,749	<i>n.a.</i>
Japan—						
Sodium nitrate ..	20,143	20,408	22,243	21,659	26,896	24,283
Jordan—						
Nitrogen fertilizers ..	4,521	2,523	3,617	6,840	8,965	4,162
Korea (South)—						
Ammonium sulphate ..	600,023	204,738	339,828	79,732	100,593	<i>n.a.</i>
Ammonium nitrate ..	1,604	1,968	2,693	4,114	6,163	<i>n.a.</i>
Other nitrogen fertilizers	58,920	144,791	51,833	112,521	35,695	<i>n.a.</i>
Lebanon—						
Nitrogen fertilizers ..	52,983	52,744	50,005	59,334	21,312	<i>n.a.</i>
Philippine Republic—						
Potassium nitrate ..	28	218	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sodium nitrate ..	732	289	69	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ammonium phosphate	6,882	15,966	27,711	<i>n.a.</i>	4,432	<i>n.a.</i>
Ammonium sulphate ..	30,844	85,553	95,943	<i>n.a.</i>	94,570	<i>n.a.</i>
Other nitrogen fertilizers	10,122	60,380	27,818	<i>n.a.</i>	66,517	<i>n.a.</i>
Syria—						
Nitrogen fertilizers ..	<i>n.a.</i>	18,192	44,405	59,066	34,009	83,362
Thailand—						
Potassium nitrate ..	933	855	866	1,198	976	1,334
Ammonium chloride ..	1,533	2,016	1,998	1,991	2,319	2,153
Ammonium sulphate ..	42,349	32,311	26,525	39,181	40,923	26,749
Other nitrogen fertilizers	1,846	1,735	2,163	1,949	1,023	3,032
Turkey—						
Potassium nitrate ..	296	211	267	587	322	316
Sodium nitrate ..	952	1,688	4,144	1,868	7,503	12,697
Ammonium chloride ..	359	511	584	646	844	776
Ammonium sulphate ..	15,922	31,979	r 129,711	259,482	294,335	296,133
Ammonium nitrate ..	63	146	9,957	48,026	32,018	130,934
Calcium nitrate ..	<i>n.a.</i>	<i>n.a.</i>	—	—	11,744	42,449
Vietnam (South)—						
Nitrogen fertilizers ..	182,372	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Years ended March 20 of year following that stated.

**PETROLEUM AND ALLIED PRODUCTS**  
**PRODUCTION OF CRUDE PETROLEUM\***

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Crude petroleum .. .. .	122,800	127,400	82,400	76,800	87,400	79,900
Nigeria (b) .. .. .	3,824,000	6,027,000	13,564,000	20,881,000	15,962,000	6,900,000
Canada (b) .. .. .	34,354,904	36,612,711	39,437,267	42,856,000	46,838,978	50,359,267
Barbados (b) .. .. .	3	—	—	—	—	n.a.
Trinidad (b) .. .. .	6,954,038	7,103,495	6,979,848	7,943,355	9,284,320	9,600,000
Abu Dhabi (c) .. .. .	2,350,000	5,928,853	9,010,743	12,053,582	12,165,510	14,919,544
Bahrain Islands (c) .. .. .	2,227,000	2,402,000	2,789,000	3,021,000	3,396,000	3,696,000
Brunei .. .. .	3,383,789	3,488,000	3,874,000	4,619,000	5,095,000	5,884,000
India .. .. .	1,626,560	2,177,240	2,980,000	4,570,000	6,000,000	6,000,000
Pakistan (b) .. .. .	474,900	504,400	520,000	500,000	425,000	480,000
Qatar (c) .. .. .	8,953,349	8,802,292	9,013,660	8,915,387	9,069,839	9,018,000
Sarawak .. .. .	51,126	48,243	48,125	47,336	45,104	170,066
Australia .. .. .	—	274,258	329,041	425,437	978,077	1,790,500
New Zealand .. .. .	570	581	616	521	360	n.a.
<b>TOTAL .. .. .</b>	<b>64,323,000</b>	<b>73,496,000</b>	<b>88,629,000</b>	<b>105,909,000</b>	<b>109,422,000</b>	<b>109,396,000</b>
<b>OTHER COUNTRIES</b>						
Albania .. .. .	738,935	751,661	805,000	861,000	1,070,000	n.a.
Austria .. .. .	2,578,480	2,620,829	2,809,460	2,713,568	2,642,506	2,770,000
Bulgaria .. .. .	170,000	157,000	225,000	398,000	491,000	467,000
Czechoslovakia .. .. .	177,000	192,000	189,000	187,000	200,000	n.a.
France .. .. .	2,476,219	2,792,152	2,930,890	2,879,131	2,781,172	2,645,220
Germany (Federal)—						
Crude petroleum .. .. .	7,266,112	7,551,440	7,759,378	7,743,949	7,801,994	7,856,069
Hungary .. .. .	1,729,562	1,772,522	1,775,000	1,679,000	1,659,000	1,778,000
Italy .. .. .	1,755,941	2,627,143	2,171,990	1,783,263	1,663,523	1,520,000
Netherlands .. .. .	2,180,000	2,230,000	2,357,400	2,331,000	2,229,227	2,100,000
Poland .. .. .	209,100	277,500	333,400	394,100	443,000	467,300
Roumania .. .. .	12,040,000	12,199,000	12,372,000	12,622,000	12,997,000	13,075,000
Sweden—						
Shale oil .. .. .	78,078	79,763	56,465	26,574	n.a.	n.a.
U.S.S.R. .. .. .	202,814,000	220,072,000	239,052,000	260,938,000	283,451,000	305,000,000
Yugoslavia .. .. .	1,585,181	1,770,194	2,030,497	2,187,075	2,336,506	2,500,000
Algeria (e) .. .. .	23,273,000	25,817,000	25,614,000	32,736,000	37,770,000	41,479,000
Angola .. .. .	787,028	890,468	645,014	621,348	528,668	737,676
Congo (Republic of) .. .. .	107,495	31,987	70,000	61,013	49,210	41,947
Egypt .. .. .	5,511,000	6,251,000	6,379,000	6,165,000	5,626,000	7,900,000
Gabon .. .. .	875,629	1,041,650	1,244,474	1,424,000	3,424,054	4,569,000
Libya .. .. .	21,748,000	40,913,000	57,550,000	71,100,000	82,100,000	123,000,000
Morocco .. .. .	147,534	117,877	101,265	101,344	95,626	87,238
Cuba (b) (d) .. .. .	27,000	33,000	51,000	61,000	101,000	n.a.
Mexico (b) .. .. .	16,178,000	16,278,000	16,610,000	17,700,000	18,721,000	20,019,000
United States (b) .. .. .	367,029,700	371,576,300	379,801,900	403,701,700	428,860,000	443,872,000
Argentina (b) .. .. .	13,670,100	14,112,500	13,831,100	14,728,400	16,138,800	17,661,000
Bolivia (b) .. .. .	384,500	381,700	404,800	738,453	1,780,000	1,864,000
Brazil (b) .. .. .	4,578,000	4,268,000	4,400,000	5,438,000	6,856,000	7,700,000
Chile .. .. .	1,695,000	1,756,000	1,630,000	1,594,000	1,583,000	1,760,000
Colombia (b) .. .. .	8,499,000	8,816,324	10,312,856	10,129,089	9,941,128	8,934,444
Ecuador (b) .. .. .	321,499	372,810	379,835	345,100	293,108	229,000
Peru .. .. .	2,822,000	3,131,000	3,032,000	3,026,000	3,094,000	3,555,000
Venezuela .. .. .	166,990,981	175,415,532	179,528,577	173,631,463	182,559,869	186,242,006
Burma .. .. .	642,965	562,282	549,000	474,000	608,000	779,000

\*Excluding Natural Gasoline. See page 242.

(a) Years ended June 30 of that stated.

(b) The following conversion rates have been used: 35 gallons=1 barrel, and the undermentioned barrels=1 ton—Nigeria 7.3, Canada 7.5, Barbados 8.1, Trinidad 7.0, Burma 7.4, Pakistan 7.2 (1961—1962) 7.4 (1963 onwards), Cuba 6.8, Mexico 7.1, United States 7.5, Argentina 7.1, Bolivia 8.2, Brazil 7.8, Columbia 7.1, Ecuador 7.5, Venezuela 7.1, Indonesia 7.5.

(c) British Protected State.

(d) Estimated.

(e) Including French Sahara.

## PRODUCTION OF CRUDE PETROLEUM (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
China (a) .. ..	(d)6,000,000	(d)6,000,000	(d)8,000,000	(d)8,500,000	(d)7,500,000	(d)8,500,000
Formosa .. ..	2,450	8,040	17,295	29,805	32,357	55,580
Indonesia .. ..	21,923,000	r 23,257,000	r 24,247,000	r 23,359,000	25,498,000	30,118,000
Iran (b) .. ..	70,497,000	81,114,000	88,473,000	98,829,000	120,919,000	132,901,000
Iraq .. ..	55,576,822	60,350,313	63,150,413	66,679,542	58,938,981	72,620,000
Israel .. ..	148,000	202,713	206,905	184,000	138,000	117,000
Japan .. ..	767,296	642,096	660,000	765,000	771,000	780,364
Kuwait .. ..	95,666,630	105,033,846	107,322,975	112,500,000	113,355,644	120,162,473
Mongolia .. ..	19,000	18,000	16,000	12,000	n.a.	n.a.
Saudi Arabia .. ..	79,768,933	84,442,667	99,436,852	117,568,598	127,262,215	138,776,535
Turkey .. ..	733,168	906,864	1,510,000	2,008,884	2,685,033	3,055,400
Neutral Zone (c) ..	16,487,000	18,918,000	19,043,000	22,087,000	22,263,000	22,546,000
<b>TOTAL .. ..</b>	<b>1,219,000,000</b>	<b>1,307,000,000</b>	<b>1,388,000,000</b>	<b>1,492,000,000</b>	<b>1,508,000,000</b>	<b>1,742,000,000</b>
<b>WORLD'S TOTAL ..</b>	<b>1,283,000,000</b>	<b>1,381,000,000</b>	<b>1,477,000,000</b>	<b>1,600,000,000</b>	<b>1,617,000,000</b>	<b>1,851,000,000</b>

(a) Including oil from shale and coal.

(b) 1954 Oil Agreement Area only.

(c) Neutral Zone of Kuwait and Saudi Arabia.

(d) Estimated.

## PRODUCTION OF NATURAL GASOLINE

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Trinidad (a) .. ..	19,364	22,696	22,361	21,359	21,818	<i>n.a.</i>
Brunei .. .. .	68,565	65,000	56,000	55,000	57,000	55,000
New Zealand .. ..	398	405	23	—	—	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Austria .. .. .	2,000	2,000	2,000	2,000	1,000	<i>n.a.</i>
France .. .. .	265,496	281,240	290,445	285,899	308,843	<i>n.a.</i>
Germany (Federal) ..	12,000	10,000	8,000	8,000	8,000	<i>n.a.</i>
Italy .. .. .	54,198	62,126	38,512	90,745	105,115	<i>n.a.</i>
Poland .. .. .	19,400	20,000	23,200	26,100	24,000	24,000
Roumania .. .. .	343,299	346,000	375,000	391,000	404,000	<i>n.a.</i>
Yugoslavia .. .. .	6,000	10,000	15,000	17,000	18,000	<i>n.a.</i>
Algeria .. .. .	237,000	254,000	547,000	600,000	676,000	732,000
Egypt .. .. .	7,000	7,000	5,000	5,000	4,000	<i>n.a.</i>
Mexico .. .. .	1,270,000	1,612,000	1,642,000	1,605,000	1,955,000	<i>n.a.</i>
United States .. ..	12,944,890	14,174,460	14,621,880	14,911,880	15,638,000	16,664,000
Argentina .. .. .	12,000	11,000	13,000	13,000	<i>n.a.</i>	<i>n.a.</i>
Chile .. .. .	60,000	59,000	55,000	58,000	56,000	<i>n.a.</i>
Colombia .. .. .	74,587	84,854	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ecuador .. .. .	12,420	13,604	13,624	13,667	14,311	13,000
Peru .. .. .	109,000	106,000	105,000	90,000	<i>n.a.</i>	<i>n.a.</i>
Venezuela .. .. .	376,000	411,000	425,000	408,000	<i>n.a.</i>	<i>n.a.</i>
Japan .. .. .	18,461	26,153	4,000	3,000	3,000	<i>n.a.</i>
<b>World's TOTAL (b)</b>	<b>16,000,000</b>	<b>18,000,000</b>	<b>19,000,000</b>	<b>19,000,000</b>	<b>20,000,000</b>	<b>21,000,000</b>

(a) Incomplete, as about half the production is blended with crude petroleum at field storage.

(b) Totals refer only to those countries reported above.



## PRODUCTION OF NATURAL GAS\*

Million cubic feet

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom ..	200	200	449	123	16,664	71,351
Nigeria .. ..	1,130	1,766	3,531	6,357	5,424	5,190
Canada .. ..	1,117,425	1,407,098	1,445,354	1,341,833	1,471,598	1,642,636
Barbados .. ..	111	80	102	96	108	97
Trinidad .. ..	29,365	38,452	41,456	48,691	53,747	56,402
Brunei .. ..	(a) 2,377	6,297	7,450	7,100	8,899	8,474
Pakistan .. ..	49,459	59,102	66,000	76,000	83,288	91,525
Australia .. ..	96	106	143	143	152	216
New Zealand ..	5	5	5	4	4	3
<b>OTHER COUNTRIES</b>						
Austria .. ..	59,999	62,290	60,873	66,163	63,469	57,600
Czechoslovakia ..	35,200	33,000	30,100	33,300	31,900	<i>n.a.</i>
France .. ..	265,593	280,354	279,768	285,899	302,011	307,238
Germany (Federal) ..	39,752	61,375	91,399	114,183	148,476	223,841
Hungary .. ..	21,590	27,702	39,130	54,810	72,219	95,032
Italy .. ..	256,654	271,376	275,540	311,652	330,330	367,590
Netherlands .. ..	20,100	29,500	61,600	123,400	246,900	496,400
Poland .. ..	34,700	43,470	48,660	48,590	55,440	90,300
Roumania .. ..	503,700	546,800	610,300	657,400	731,000	774,600
U.S.S.R. .. ..	3,172,400	3,834,000	4,508,500	5,048,700	5,593,800	6,000,000
Yugoslavia .. ..	6,748	9,675	11,655	14,208	16,280	20,624
Algeria (Sahara) ..	40,360	45,700	73,240	72,250	78,990	93,660
Gabon .. ..	304	334	376	406	611	883
Morocco .. ..	420	420	390	460	379	382
Tunisia .. ..	258	277	288	296	326	315
Mexico .. ..	401,560	485,050	493,300	529,300	571,674	576,759
United States .. ..	14,666,559	15,462,143	16,039,753	17,206,628	18,171,000	19,322,400
Argentina .. ..	213,240	232,712	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Brazil .. ..	17,774	18,777	24,125	27,848	30,888	34,700
Chile .. ..	67,840	62,900	61,060	55,940	60,000	68,000
Colombia .. ..	24,800	26,900	32,000	35,990	40,640	41,500
Peru .. ..	32,500	37,100	<i>n.a.</i>	<i>n.a.</i>	56,904	<i>n.a.</i>
Venezuela .. ..	198,111	180,206	227,709	237,868	265,233	272,800
Burma .. ..	570	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Formosa .. ..	1,789	5,982	10,936	15,509	18,616	24,878
Indonesia .. ..	99,000	96,440	86,380	56,540	98,000	115,000
Iran .. ..	40,212	42,100	43,400	51,000	51,000	54,600
Israel .. ..	347	1,041	2,559	3,371	3,860	5,001
Japan .. ..	59,845	65,641	62,862	64,510	66,735	72,620
Kuwait .. ..	53,640	59,190	63,350	66,110	69,920	(b) 87,000

\*So far as possible the figures represent only that part of the gas produced which is actually utilized.

NOTE.—Production and shipments of helium in the United States were as follows (million cubic feet)

Production: 1963—2,232; 1964—4,027; 1965—4,365; 1966—4,606; 1967—4,712; 1968—4,855.

Shipments from Bureau of Mines plants: 1963—627; 1964—667; 1965—699; 1966—809; 1967—607; 1968—478.

(a) Sales. (b) Estimated.

PRODUCTION OF ASPHALT ROCK

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
France .. .. .	104,523	102,549	114,761	126,632	125,495	112,297
Germany (Federal) .. .. .	91,000	120,054	100,178	85,757	80,318	74,152
Italy .. .. .	380,461	340,816	264,129	287,691	302,089	274,952
Angola .. .. .	53,876	43,645	22,513	29,444	26,600	30,100
United States (a) .. .. .	1,088,900	1,289,500	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Indonesia .. .. .	10,323	5,231	<i>n.a.</i>	7,153	<i>n.a.</i>	<i>n.a.</i>
Philippine Republic .. .. .	5,104	—	—	—	—	—

(a) Shipments.

PRODUCTION OF NATURAL ASPHALT, ETC.

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Trinidad .. .. .	169,308	193,304	166,588	157,226	142,444	136,041
<b>OTHER COUNTRIES</b>						
Spain .. .. .	7,700	9,500	13,119	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Argentina—						
Grahamite ("Rafaelite") .. .. .	(a) 828	(a) 1,052	348	829	681	555
Impsonite .. .. .	4,100	2,400	3,152	4,880	<i>n.a.</i>	<i>n.a.</i>
Turkey .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	10,672	11,186	25,441

NOTE.—This table is incomplete owing to the fact that official statistics of production of natural asphalt are published by only a few countries.

(a) Exports.

PRODUCTION OF OIL-SHALE

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
Austria .. .. .	320	44	571	315	589	394
France .. .. .	2,977	3,359	4,119	2,544	3,000	4,000
Germany (Federal) .. .. .	56,929	107,385	136,973	110,563	108,303	108,434
Italy .. .. .	295	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Spain .. .. .	798,608	701,139	620,283	220,000	<i>n.a.</i>	<i>n.a.</i>
Sweden (a) .. .. .	3,263,446	3,536,385	1,880,165	2,242,370	715,398	714,866

NOTE.—Oil-shale is known to have been produced in U.S.S.R. and Manchuria.

(a) Alum shale. The amounts used as retort shale were as follows (long tons): 1963—3,049,010; 1964—3,174,128; 1965—1,419,707; 1966—1,476,310; 1967—*n.a.*; 1968—*n.a.*

## PRODUCTION OF PETROLEUM REFINERY PRODUCTS IN CERTAIN COUNTRIES\*

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom (a)—</b>						
Aviation and motor spirit	7,634,000	8,656,000	9,431,000	9,297,000	9,272,000	9,809,000
Other spirit .. ..	156,000	163,000	152,000	172,000	154,000	247,000
Kerosine .. .. .	3,083,000	3,169,000	3,375,000	3,791,000	3,980,000	4,652,000
Gas oil and diesel oil ..	10,788,000	11,993,000	13,423,000	14,663,000	14,005,000	16,874,000
Fuel oil .. .. .	21,142,000	22,810,000	25,873,000	28,668,000	30,282,000	33,718,000
Fuel used in refineries ..	3,803,000	3,972,000	4,143,000	4,568,000	4,673,000	5,073,000
Lubricating oil .. ..	967,000	1,036,000	1,001,000	1,073,000	994,000	1,019,000
Bitumen .. .. .	1,305,000	1,458,000	1,422,000	1,577,000	1,722,000	1,726,000
Paraffin wax .. .. .	55,000	59,000	53,000	57,000	56,000	56,000
<b>Ghana—</b>						
Motor spirit .. .. .	32,288	141,436	128,049	121,158	136,484	136,000
Kerosine .. .. .	13,370	46,148	55,631	46,982	39,989	<i>n.a.</i>
Gas oil .. .. .	71,754	260,561	261,983	198,101	201,952	<i>n.a.</i>
Fuel oil .. .. .	48,785	255,616	250,335	252,388	264,608	<i>n.a.</i>
<b>Kenya—</b>						
Motor spirit .. .. .	20,000	215,000	260,000	252,000	265,000	253,000
Kerosine .. .. .	10,000	115,000	180,000	172,000	214,000	202,000
Gas and diesel oil .. ..	21,000	230,000	291,000	311,000	381,000	400,000
Fuel oil .. .. .	42,000	629,000	676,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Asphalt .. .. .	—	11,000	28,000	36,000	49,000	40,000
<b>Barbados—</b>						
Motor spirit .. .. .	2,468	3,076	7,022	11,271	19,816	31,146
Kerosine .. .. .	2,123	3,010	3,693	9,184	13,137	15,407
Gas oil .. .. .	875	—	592	2,923	3,979	3,333
Diesel oil .. .. .	3,211	9,228	11,819	22,748	29,591	35,069
Fuel oil .. .. .	11,100	14,547	17,446	19,000	20,565	26,058
Asphalt .. .. .	1,090	2,803	4,529	4,960	6,080	5,724
<b>Canada (b)—</b>						
Aviation spirit .. .. .	173,007	162,561	157,432	158,212	153,454	164,740
Motor spirit .. .. .	13,321,500	13,929,830	14,574,753	15,588,628	16,120,783	16,981,395
Naphtha .. .. .	225,779	245,726	275,491	282,788	290,769	286,002
Kerosine .. .. .	2,397,362	2,334,603	2,362,426	2,303,135	2,360,522	2,340,912
Aviation turbine fuel .. .	948,340	899,853	867,756	1,030,905	1,001,648	1,245,000
Gas oil, etc. .. .. .	8,181,244	7,804,947	8,163,654	8,664,550	8,276,930	8,893,411
Diesel oil .. .. .	4,527,930	4,943,335	5,337,146	5,982,641	6,103,025	6,609,122
Fuel oil .. .. .	8,369,558	8,620,484	8,689,147	9,393,627	9,849,580	10,811,396
Lubricating oil and grease .. .. .	244,051	243,422	240,662	229,877	273,783	309,916
Coke .. .. .	222,143	169,205	196,141	185,330	211,401	204,516
Asphalt .. .. .	1,586,547	1,691,706	1,796,629	1,947,483	1,996,847	2,025,421
<b>Jamaica—</b>						
Motor spirit .. .. .	—	120,198	187,707	231,646	175,871	<i>n.a.</i>
Kerosine and jet fuel .. .	—	68,398	127,819	139,405	96,802	<i>n.a.</i>
Diesel oil .. .. .	—	170,082	248,978	265,849	197,819	<i>n.a.</i>
Fuel oil .. .. .	—	555,685	666,471	641,868	487,557	<i>n.a.</i>
Asphalt .. .. .	—	3,624	16,110	28,529	18,118	<i>n.a.</i>
<b>Trinidad—</b>						
Aviation spirit .. .. .	107,765	108,562	95,965	223,958	178,831	54,451
Motor spirit .. .. .	2,153,195	2,087,839	2,024,964	2,088,016	2,310,045	2,392,654
White spirit .. .. .	8,222	7,260	4,023	34,715	23,770	892
Kerosine .. .. .	229,692	302,046	390,790	407,068	464,512	468,232
Aviation turbine fuel .. .	974,132	1,201,118	1,808,290	1,719,014	1,483,213	1,941,371
Gas and diesel oil .. ..	2,747,295	2,692,921	2,664,524	2,764,360	2,668,836	2,509,363
Fuel oil .. .. .	10,195,646	10,967,287	11,606,922	12,255,514	11,542,084	12,387,013

\*This table refers to the more important products obtained and does not include in some cases items classified as "other products". It follows, therefore, that the sum of the products shown for a particular country does not necessarily represent the total refinery production.

(a) Including distillation plants.

(b) Including the amount used in the refineries.

## PRODUCTION OF PETROLEUM REFINERY PRODUCTS IN CERTAIN COUNTRIES (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
<b>Trinidad (cont.)—</b>						
Lubricating oil and greases .. ..	343	67,640	139,140	168,785	205,229	152,880
Bitumen .. ..	36,199	} 116,940	169,849	266,115	272,646	n.a.
Other products .. ..	57,681					
<b>Southern Yemen—</b>						
Motor spirit etc. .. ..	404,000	390,000	394,000	488,000	327,000	340,000
Kerosine .. ..	649,000	764,000	681,000	732,000	532,000	566,000
Gas and diesel oil .. ..	1,275,000	1,281,000	1,254,000	1,246,000	996,000	590,000
Fuel oil .. ..	3,346,000	3,520,000	3,730,000	3,557,000	2,915,000	2,600,000
Other products .. ..	404,000	570,000	608,000	612,000	405,000	602,000
<b>Bahrain Islands (b)—</b>						
Motor spirit .. ..	1,655,000	1,662,000	1,272,000	1,155,000	963,000	797,000
Kerosine .. ..	531,000	437,000	399,000	346,000	295,000	237,000
Jet fuel .. ..	645,000	823,000	1,055,000	1,182,000	1,671,000	1,904,000
Gas oil and diesel oil .. ..	2,618,000	2,081,000	1,683,000	1,683,000	1,761,000	1,802,000
Fuel oil .. ..	4,906,000	4,069,000	4,050,000	4,335,000	5,567,000	5,159,000
Lubricating oil .. ..	—	77,000	115,000	84,000	94,000	157,000
Bitumen .. ..	28,000	33,000	—	3,000	3,000	6,000
<b>India—</b>						
Motor and other spirits .. ..	} 7,529,230	8,806,687	8,842,500	10,938,900	13,000,000	n.a.
Kerosine .. ..						
Gas and diesel oils .. ..						
Fuel oil, etc. .. ..						
Lubricating oils .. ..						
Bitumen .. ..						
Other refined products .. ..						
<b>Pakistan—</b>						
Motor spirit .. ..	110,000	54,000	113,000	103,000	102,000	110,000
Kerosine .. ..	33,000	16,000	37,000	40,000	41,000	43,000
Diesel oil .. ..	123,000	61,000	140,000	133,000	128,000	138,000
Fuel oil .. ..	144,000	75,000	154,000	136,000	136,000	130,000
Lubricating oil .. ..	12,000	6,000	15,000	18,000	15,000	16,000
Bitumen .. ..	22,000	16,000	23,000	24,000	20,000	21,000
<b>Sarawak—</b>						
Motor spirit .. ..	—	6,800	7,900	218,500	494,000	596,400
Gas and diesel oils .. ..	394,500	419,300	1,400,600	368,000	379,900	164,400
Fuel oil .. ..	15,700	48,600	26,600	13,800	90,500	77,800
Feedstocks (a) .. ..	1,717,800	1,849,900	839,500	1,741,000	1,680,100	2,049,100
<b>Singapore and Malaysia (West)—</b>						
Motor spirit .. ..	1,071,000	1,153,000	n.a.	n.a.	n.a.	n.a.
Kerosine .. ..	271,000	416,000	n.a.	n.a.	n.a.	n.a.
Gas and diesel oils .. ..	1,376,000	1,745,000	n.a.	n.a.	n.a.	n.a.
Fuel oil .. ..	3,234,000	3,274,000	n.a.	n.a.	n.a.	n.a.
<b>Australia—</b>						
Aviation spirit .. ..	27,022	30,354	41,001	34,664	37,465	34,550
Motor spirit .. ..	4,281,400	4,621,548	4,966,106	5,292,876	5,983,011	6,400,000
Kerosine .. ..	174,443	273,799	325,860	358,487	420,909	232,372
Aviation turbine fuel .. ..	279,734	346,112	304,087	508,777	671,319	782,109
Gas and diesel oils .. ..	2,646,557	2,462,321	2,608,253	2,858,383	3,155,132	n.a.
Fuel oil .. ..	4,712,293	4,904,359	5,069,289	5,560,503	5,936,630	6,517,000
do. (used in refineries) .. ..	1,291,972	1,495,332	1,666,603	1,802,304	2,066,043	828,509
Lubricating oil .. ..	77,581	194,848	252,773	261,655	321,749	337,373
Bitumen .. ..	320,872	355,531	384,765	395,596	401,445	405,488

(a) Mainly gasoline-type and fuel oil-type feedstocks, previously included with motor spirit and fuel oil.

(b) British Protected State.

## PRODUCTION OF PETROLEUM REFINERY PRODUCTS IN CERTAIN COUNTRIES (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<i>(cont.)</i>						
<b>New Zealand—</b>						
Motor spirit .. ..	295	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
White spirit .. ..	34	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. ..	136	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Diesel oil .. ..	165	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Fuel oil .. ..	299	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Irish Republic—</b>						
Motor spirit .. ..	332,000	376,000	418,000	343,000	439,000	460,000
Jet fuel .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	25,000	<i>n.a.</i>
Gas and diesel oils ..	487,000	531,000	610,000	458,000	705,000	620,000
Fuel oil .. ..	651,000	740,000	865,000	609,000	926,000	900,000
<b>OTHER COUNTRIES</b>						
<b>Albania—</b>						
Motor spirit .. ..	53,867	51,430	44,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. ..	2,109	2,302	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Diesel oil .. ..	90,559	79,196	77,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Austria—</b>						
Motor spirit .. ..	368,211	505,653	633,794	690,341	836,273	851,025
Kerosine .. ..	57,021	68,269	50,510	91,809	76,620	88,438
Gas oil .. ..	831,366	845,773	836,980	847,007	881,284	1,003,533
Fuel oil .. ..	1,370,472	1,565,966	1,755,219	1,819,897	1,963,689	2,216,418
Lubricating oil .. ..	108,988	189,040	182,404	203,485	185,427	253,857
Bitumen .. ..	124,660	156,360	184,060	211,623	240,570	236,364
<b>Belgium—</b>						
Aviation spirit and aviation turbine gasoline ..	224,970	244,030	271,960	201,227	201,227	252,924
Motor spirit .. ..	1,458,880	1,590,977	1,899,821	1,923,903	1,922,002	2,501,711
White spirit, etc. ..	59,950	59,110	75,360	113,031	99,314	162,892
Kerosine, including aviation kerosine .. ..	324,260	421,230	485,505	553,840	589,544	604,235
Gas oil .. ..	2,338,950	2,462,830	2,651,050	2,773,301	2,564,574	4,410,470
Diesel oil .. ..	1,363,670	1,634,530	2,032,394	1,930,682	2,128,815	2,379,236
Fuel oil .. ..	3,889,990	4,215,265	5,266,032	5,593,005	5,385,400	7,095,671
Lubricating oil .. ..	30,570	36,825	41,537	38,000	41,000	<i>n.a.</i>
Bitumen .. ..	472,960	504,150	404,240	455,888	505,000	611,883
<b>Bulgaria—</b>						
Motor spirit .. ..	67,000	302,000	365,000	411,000	586,000	590,000
Kerosine .. ..	8,000	41,000	73,000	84,000	92,000	92,000
Diesel oil .. ..	115,000	486,000	615,000	813,000	925,000	925,000
Fuel oil .. ..	261,090	984,572	1,079,804	1,343,000	1,425,000	1,480,000
Lubricating oil .. ..	33,000	44,000	46,000	47,000	46,000	49,000
<b>Czechoslovakia—</b>						
Motor spirit .. ..	509,000	529,000	567,000	572,000	551,000	733,000
Kerosine .. ..	89,000	108,000	135,000	132,000	213,000	207,000
Diesel oil .. ..	1,627,000	1,751,000	2,039,000	2,207,000	<i>n.a.</i>	<i>n.a.</i>
<b>Denmark—</b>						
Motor spirit .. ..	361,341	584,486	780,457	766,866	1,092,894	1,100,721
Kerosine and gas oil ..	425,043	459,416	534,519	3,229,907	4,532,273	4,969,886
Diesel oil .. ..	33,848	182,726	352,086			
Fuel oil .. ..	1,020,606	1,296,415	1,437,855			
Lubricating oil .. ..	2,453	2,739	2,159	4,151	4,024	<i>n.a.</i>
Grease .. ..	1,672	1,817	2,414	2,054	1,810	<i>n.a.</i>
Asphalt .. ..	23,069	24,553	25,427	37,892	61,572	106,805

PRODUCTION OF PETROLEUM REFINERY PRODUCTS IN CERTAIN COUNTRIES (cont.)  
Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
<b>France—</b>						
Motor spirit .. ..	7,804,000	8,598,000	9,422,000	10,135,000	10,947,000	11,335,000
Kerosine and jet fuel ..	1,789,000	1,771,000	1,901,000	1,985,000	2,371,000	2,298,000
Gas and diesel oil ..	4,386,000	4,665,000	5,801,000	6,446,000	5,713,000	6,020,000
Fuel oils .. ..	21,949,000	26,251,000	30,800,000	34,420,000	39,335,000	42,838,000
Lubricating oil .. ..	791,000	841,000	797,000	875,000	904,000	n.a.
Other products (a) ..	3,151,000	3,947,000	4,352,000	4,827,000	6,024,000	n.a.
<b>Germany (Federal)—</b>						
Aviation spirit .. ..	1,084,771	1,328,879	1,398,294	1,523,581	1,589,165	1,651,248
Motor spirit .. ..	8,127,307	8,957,683	9,720,428	11,044,838	11,460,374	12,432,909
White spirit .. ..	130,369	143,571	144,173	147,688	128,122	139,272
Kerosine .. ..	632,715	669,029	675,517	805,930	986,698	1,167,340
Diesel oil .. ..	7,131,679	6,680,977	6,801,165	7,995,434	8,191,482	9,082,837
Fuel oil .. ..	22,701,996	31,585,781	37,341,837	42,163,934	44,071,482	49,702,020
Lubricating oil .. ..	544,939	(b) 815,479	(b) 854,407	(b) 886,265	(b) 918,671	(b) 1,146,311
Grease .. ..	16,962	(b) 52,277	(b) 56,356	(b) 52,628	(b) 44,691	(b) 48,467
Paraffin wax .. ..	95,842	87,207	91,148	100,115	100,434	112,923
Coal .. ..	422,777	436,773	414,943	444,244	447,017	562,562
Bitumen .. ..	2,267,779	2,776,008	3,183,632	3,458,583	3,762,346	4,280,429
<b>Greece—</b>						
Motor spirit .. ..	233,577	248,182	235,861	230,938	251,049	277,539
Kerosine .. ..	139,691	143,043	131,220	119,264	101,885	84,912
Aviation turbine fuel ..	23,313	30,963	31,501	69,469	70,418	36,673
Diesel oil .. ..	594,151	575,752	585,789	545,331	569,431	575,697
Fuel oil .. ..	692,237	698,405	698,405	658,893	657,342	543,699
Asphalt .. ..	63,150	62,332	62,332	51,875	56,611	63,879
<b>Hungary—</b>						
Motor spirit .. ..	328,062	364,204	389,000	427,000	472,000	717,000
Kerosine .. ..	70,943	37,778	20,694	18,485	2,000	1,000
Diesel oil .. ..	847,098	944,649	1,028,000	1,115,000	1,241,000	1,369,000
Fuel oil .. ..	1,381,142	1,616,987	1,698,000	1,695,000	1,773,000	1,938,000
Lubricating oils .. ..	98,934	109,482	114,211	118,418	n.a.	n.a.
Grease .. ..	18,399	18,516	18,837	18,660	n.a.	n.a.
Bitumen .. ..	409,607	448,470	478,000	506,000	571,000	n.a.
<b>Italy—</b>						
Motor spirit .. ..	7,098,878	8,377,303	10,141,324	11,687,624	11,508,450	12,394,239
White spirit .. ..	46,306	42,852	39,276	38,654	43,398	32,193
Kerosine .. ..	1,504,246	1,597,528	2,302,303	2,879,580	3,420,145	4,257,133
Gas oil .. ..	8,811,322	10,171,158	12,109,050	14,023,230	15,706,783	17,494,987
Fuel oil and diesel oil ..	24,780,750	30,104,155	36,104,917	41,630,758	42,570,224	44,117,416
Lubricating oil .. ..	166,458	255,077	342,074	435,636	437,508	484,705
Bitumen .. ..	1,005,890	1,207,710	1,208,832	1,278,431	1,459,616	1,677,352
Other products .. ..	1,119,882	1,524,789	1,937,448	2,683,517	1,986,815	1,921,264
<b>Netherlands—</b>						
Motor spirit .. ..	3,602,000	2,725,000	2,703,000	2,214,000	2,154,000	3,331,000
Kerosine .. ..	955,000	940,000	1,109,000	1,058,000	913,000	1,153,000
Aviation fuels .. ..	843,000	961,000	765,000	1,269,000	1,012,000	1,239,000
Gas and diesel oil .. ..	5,082,000	5,930,000	6,463,000	7,713,000	7,947,000	9,414,000
Residual fuel oil .. ..	9,995,000	10,770,000	12,684,000	13,201,000	14,051,000	15,891,000
Lubricating oil .. ..	241,000	247,000	327,000	333,000	316,000	274,000
<b>Poland—</b>						
Aviation and motor spirit	296,600	377,100	695,600	805,300	995,200	1,456,400
Kerosine .. ..	20,800	15,700	30,800	20,000	18,700	41,100
Gas and diesel oil .. ..	470,400	579,000	901,400	1,080,600	1,243,600	1,661,300
Fuel oil .. ..	223,400	463,000	1,249,200	1,090,800	1,097,100	1,727,400
Lubricating oil .. ..	180,500	168,400	180,600	180,500	187,800	173,600
Grease .. ..	25,000	23,800	26,800	30,700	29,700	31,100
Paraffin wax .. ..	7,800	10,200	11,700	13,200	13,800	13,900
Bitumen .. ..	182,900	200,600	237,200	299,500	343,600	401,600

(a) Other than butane and propane.

(b) Owing to reclassification not strictly comparable with earlier years.

## PRODUCTION OF PETROLEUM REFINERY PRODUCTS IN CERTAIN COUNTRIES (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Portugal—</b>						
Motor spirit .. ..	373,610	372,554	384,929	392,920	400,979	396,581
Kerosine .. ..	162,901	181,174	195,542	182,076	187,192	199,675
Jet fuel .. ..	31,282	28,687	38,674	73,447	94,500	62,933
Gas and diesel oil .. ..	284,965	316,749	325,766	364,829	362,123	362,811
Fuel oil .. ..	502,407	560,832	586,977	558,356	609,194	597,258
<b>Roumania—</b>						
Motor spirit .. ..	2,396,000	2,472,000	2,419,000	2,312,000	2,260,000	2,594,000
Kerosine and white spirit .. ..	1,067,000	974,000	950,000	905,000	908,000	934,000
Gas oil .. ..	3,061,000	3,333,000	3,543,000	3,687,000	3,961,000	4,299,000
Fuel oil .. ..	3,991,000	3,770,000	3,713,000	3,890,000	3,884,000	3,567,000
Bitumen .. ..	290,000	316,000	336,000	364,000	385,000	431,000
<b>Spain—</b>						
Motor spirit .. ..	706,000	1,065,000	1,118,000	1,610,000	2,074,000	2,800,000
Kerosine and jet fuel .. ..	369,000	391,000	379,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Gas oil .. ..	1,380,000	1,842,000	1,990,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Diesel oil .. ..	1,380,000	1,842,000	1,990,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Fuel oil .. ..	2,679,000	3,089,000	3,404,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Lubricating oil .. ..	90,000	173,000	198,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Sweden—</b>						
Motor spirit .. ..	386,741	492,732	494,145	483,074	757,847	<i>n.a.</i>
White spirit etc. .. ..	14,821	10,333	10,346	26,685	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. ..	4,000	3,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Fuel oil, etc. .. ..	1,873,000	2,439,000	2,714,000	3,144,000	4,230,000	<i>n.a.</i>
Lubricating oil .. ..	53,008	57,010	67,909	71,123	73,500	<i>n.a.</i>
Asphalt .. ..	367,016	428,667	468,502	506,769	583,298	<i>n.a.</i>
<b>Yugoslavia—</b>						
Motor spirit .. ..	338,525	379,471	537,377	775,554	872,006	920,000
White spirit .. ..	12,107	15,830	15,372	15,982	16,604	17,600
Kerosine .. ..	87,458	96,648	80,406	92,185	92,579	117,000
Gas oil .. ..	608,119	690,317	875,752	1,124,155	1,367,063	1,358,000
Fuel oil .. ..	472,471	672,656	1,129,916	1,736,284	1,787,319	1,819,000
Lubricating oil .. ..	110,481	124,321	132,031	155,309	135,820	101,000
Bitumen .. ..	117,924	148,468	110,666	138,000	168,000	241,000
Other products .. ..	7,415	10,679	15,767	17,762	19,453	<i>n.a.</i>
<b>Angola—</b>						
Motor spirit .. ..	64,235	72,663	54,864	59,166	54,997	64,841
Kerosine .. ..	9,435	22,815	6,843	6,930	7,197	8,124
Jet fuel .. ..	—	—	36,420	43,371	41,729	46,120
Gas and diesel oil .. ..	123,559	122,195	116,029	128,838	105,439	133,313
Fuel oil .. ..	251,901	284,843	286,580	336,488	356,896	348,844
Asphalt .. ..	6,304	7,514	10,313	10,697	7,458	11,108
<b>Canary Islands—</b>						
Motor spirit .. ..	570,501	552,320	702,401	584,586	610,785	707,951
Kerosine .. ..	135,744	182,680	208,777	267,425	129,848	184,747
Jet fuel .. ..	58,792	3,873	15,055	<i>n.a.</i>	<i>n.a.</i>	24,505
Gas oil .. ..	864,053	339,586	860,002	896,163	1,079,443	1,137,219
Diesel oil .. ..	214,624	269,026	198,264	230,819	203,581	104,251
Fuel oil .. ..	2,453,337	2,722,368	3,439,980	3,546,668	3,864,101	3,883,070
Lubricating oil .. ..	29,635	36,642	53,430	58,545	57,454	62,280
Asphalt .. ..	150,338	227,020	219,701	189,533	137,980	129,454
<b>Egypt—</b>						
Motor spirit .. ..	702,025	744,814	845,243	835,472	724,590	<i>n.a.</i>
Kerosine .. ..	796,996	968,134	839,278	908,823	808,831	<i>n.a.</i>
Jet fuel .. ..	29,215	11,629	38,049	23,475	—	<i>n.a.</i>
Gas and diesel oil .. ..	1,021,560	1,180,372	1,216,104	1,429,559	1,139,713	<i>n.a.</i>
Fuel oil .. ..	3,335,614	4,170,900	4,606,845	4,129,710	3,185,494	<i>n.a.</i>
Asphalt .. ..	140,740	148,394	131,398	131,843	96,850	<i>n.a.</i>
<b>Morocco—</b>						
Motor spirit .. ..	251,200	165,000	240,000	240,000	248,000	280,000
Kerosine .. ..	76,600	62,000	66,000	66,000	65,000	73,000
Gas and fuel oils .. ..	559,600	639,000	692,000	880,000	<i>n.a.</i>	<i>n.a.</i>

PRODUCTION OF PETROLEUM REFINERY PRODUCTS IN CERTAIN COUNTRIES (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Mozambique—</b>						
Motor spirit .. ..	101,582	100,022	102,789	115,692	130,391	140,183
Gas oil .. ..	127,544	131,706	145,903	189,466	220,994	246,916
Fuel oil .. ..	247,776	242,372	237,870	293,917	342,364	361,066
<b>South Africa—</b>						
Motor spirit .. ..	592,000	1,394,000	1,304,000	1,562,000	1,897,000	<i>n.a.</i>
Kerosine .. ..	184,000	158,000	135,000	155,000	153,000	<i>n.a.</i>
Jet fuel .. ..	184,000	74,000	88,000	111,000	117,000	<i>n.a.</i>
Gas and diesel oil .. ..	533,000	1,209,000	1,208,000	1,361,000	1,849,000	<i>n.a.</i>
Fuel oil .. ..	840,000	1,899,000	1,523,000	1,939,000	2,714,000	<i>n.a.</i>
<b>Costa Rica—</b>						
Motor spirit .. ..	—	—	—	—	20,554	55,351
Diesel oil .. ..	—	—	—	—	36,559	117,342
Fuel oil .. ..	—	—	—	—	23,066	67,104
Kerosine .. ..	—	—	—	—	3,619	15,921
<b>Guatemala—</b>						
Motor spirit .. ..	<i>n.a.</i>	<i>n.a.</i>	102,421	136,064	135,125	150,602
Kerosine .. ..	<i>n.a.</i>	<i>n.a.</i>	26,689	40,227	39,568	43,971
Aviation turbine fuel .. ..	<i>n.a.</i>	<i>n.a.</i>	2,124	22,645	22,184	25,674
Diesel oil .. ..	<i>n.a.</i>	<i>n.a.</i>	96,868	155,564	167,965	204,765
Fuel oil .. ..	<i>n.a.</i>	<i>n.a.</i>	149,739	194,550	220,788	225,126
<b>Mexico—</b>						
Aviation spirit .. ..	71,935	77,158	87,834	70,715	70,988	58,000
Motor spirit .. ..	3,191,105	3,201,917	3,256,798	2,838,710	3,113,000	<i>n.a.</i>
Kerosine .. ..	1,464,242	1,544,313	1,533,429	1,575,214	1,697,975	1,500,000
Gas and diesel oil .. ..	3,131,505	3,910,210	4,116,314	4,535,570	5,115,221	<i>n.a.</i>
Fuel oil .. ..	6,194,844	5,821,877	6,102,767	5,875,307	6,328,194	6,300,000
Lubricating oil .. ..	164,925	171,854	190,893	182,030	187,941	<i>n.a.</i>
Grease .. ..	6,400	6,546	6,963	6,317	8,605	<i>n.a.</i>
Paraffin wax .. ..	41,547	46,251	45,767	45,424	49,909	<i>n.a.</i>
Asphalt .. ..	319,000	369,000	504,000	959,000	999,824	<i>n.a.</i>
<b>Netherlands Antilles (b)—</b>						
Aviation spirit .. ..	1,563,000	1,558,000	1,504,000	1,138,000	1,062,000	714,534
Motor spirit .. ..	2,508,000	2,825,000	3,031,000	3,109,000	3,248,000	3,089,424
White spirit .. ..	56,000	74,000	72,000	50,000	61,000	34,447
Kerosine .. ..	859,000	724,000	642,000	444,000	530,000	726,344
Aviation turbine fuel .. ..	<i>n.a.</i>	2,882,000	3,008,000	3,641,000	4,168,000	4,053,946
Gas oil .. ..	4,705,000	3,488,000	2,836,000	3,701,000	2,790,000	1,715,472
Diesel oil .. ..	1,465,000	1,678,000	1,245,000	1,396,000	1,466,000	1,853,261
Fuel oil .. ..	21,357,000	21,858,000	21,860,000	19,453,000	20,579,000	21,469,470
Lubricating oil .. ..	599,000	809,000	939,000	654,000	420,000	483,245
Asphalt .. ..	808,000	898,000	865,000	934,000	999,000	1,080,659
<b>Nicaragua—</b>						
Motor spirit .. ..	(a) 41,000	79,000	77,000	85,000	92,000	100,000
Kerosine .. ..	(a) 15,000	21,000	19,000	22,000	28,000	28,000
Gas and diesel oil .. ..	(a) 28,000	55,000	64,000	69,000	82,000	101,000
Fuel oil .. ..	(a) 58,000	67,000	45,000	66,000	82,000	99,000
<b>Panama—</b>						
Motor spirit .. ..	257,000	235,000	307,000	335,000	322,000	<i>n.a.</i>
Kerosine .. ..	67,000	75,000	94,000	75,000	110,000	<i>n.a.</i>
Jet fuel .. ..	25,000	48,000	43,000	65,000	165,000	<i>n.a.</i>
Gas and diesel oil .. ..	597,000	614,000	689,000	861,000	662,000	<i>n.a.</i>
Fuel oil .. ..	929,000	976,000	1,047,000	1,268,000	1,490,000	<i>n.a.</i>
<b>Salvador—</b>						
Motor spirit .. ..	86,121	117,441	113,669	114,000	122,810	<i>n.a.</i>
Kerosine .. ..	33,550	46,556	54,577	<i>n.a.</i>	64,954	<i>n.a.</i>
Diesel oil .. ..	202,662	119,117	232,826	146,000	150,322	<i>n.a.</i>
Lubricating oil .. ..	<i>n.a.</i>	169,662	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>United States—</b>						
Aviation spirit .. ..	13,800,000	14,203,000	199,000,000	209,000,000	212,000,000	223,000,000
Motor spirit .. ..	172,246,000	178,973,000				
Kerosine (c) .. ..	21,120,000	21,575,000				
Jet fuels (military) .. ..	12,646,000	13,745,000	36,352,000	40,418,000	47,556,000	53,009,000

(a) United States Bureau of Mines' estimate.

(b) Exports.

(c) Including commercial jet fuel.



PRODUCTION OF PETROLEUM REFINERY PRODUCTS IN CERTAIN COUNTRIES (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>United States (cont.)—</b>						
Distillate fuel oil ..	103,808,000	100,738,000	103,858,000	106,628,000	109,198,000	114,068,000
Residual fuel oil ..	40,237,000	38,912,000	39,166,000	38,494,000	40,244,000	40,223,000
Lubricating oil ..	8,832,000	8,914,000	8,810,000	9,157,000	9,082,000	9,196,000
Paraffin wax ..	641,000	669,000	682,000	722,000	715,000	736,000
Coke ..	14,409,000	15,058,000	15,364,000	15,724,000	16,238,000	16,998,000
Asphalt ..	18,173,000	18,649,000	20,066,000	21,036,000	20,741,000	21,990,000
Road oil ..	1,081,000	1,014,000	1,044,000	1,153,000	1,110,000	1,086,000
<b>Argentina—</b>						
Aviation spirit ..	35,100	42,700	21,200	50,800	60,800	38,758
Motor spirit ..	2,532,200	2,730,900	3,092,900	3,300,000	3,409,500	3,476,403
Kerosine ..	972,200	1,140,000	982,690	907,900	853,900	798,790
Gas oil ..	1,424,400	1,382,900	1,940,600	2,402,600	2,518,200	2,675,600
Diesel oil ..	1,184,000	1,048,800	1,082,900	1,187,900	1,169,700	1,223,400
Fuel oil ..	6,288,500	6,829,700	7,691,700	7,876,700	7,727,700	7,896,500
Lubricating oil ..	108,100	126,400	141,500	128,800	115,000	105,900
<b>Bolivia—</b>						
Motor spirit ..	115,719	129,095	135,476	155,070	173,000	189,000
Kerosine ..	54,736	59,409	65,145	72,663	83,000	89,000
Diesel oil ..	57,005	61,213	72,083	74,222	91,000	85,000
Fuel oil ..	106,352	115,127	119,324	125,775	118,000	150,000
<b>Brazil—</b>						
Motor spirit ..	3,764,000	4,068,000	4,201,000	4,756,000	4,798,000	5,371,000
Kerosine ..	516,000	582,000	524,000	608,000	767,000	984,000
Diesel oil ..	3,052,000	3,560,000	3,784,000	3,891,000	4,058,000	4,798,000
Fuel oil ..	5,993,000	5,780,000	5,144,000	5,635,000	5,882,000	6,834,000
Lubricating oil ..	6,934	400	5,000	—	—	n.a.
Paraffin wax ..	10,410	572	6,135	3,231	131	n.a.
Asphalt ..	253,941	203,601	287,225	394,533	495,389	662,395
<b>Chile—</b>						
Aviation spirit ..	40,930	45,660	769,000	860,000	975,000	1,007,900
Motor spirit ..	651,850	695,820				
Kerosine ..	233,660	242,920	165,000	258,270	293,500	315,190
Diesel oil ..	361,450	418,410	940,000	1,320,000	1,530,000	1,759,900
Fuel oil ..	562,170	591,390				
<b>Colombia—</b>						
Aviation spirit ..	62,861	60,016	87,293	131,000	82,847	76,049
Motor spirit ..	1,190,552	1,257,750	1,375,405	1,525,000	1,475,979	1,537,472
Other spirit ..	58,400	63,600	n.a.	n.a.	n.a.	n.a.
Kerosine ..	230,285	228,143	246,918	268,000	323,274	376,479
Jet fuel ..	19,539	24,862	31,000	50,000	66,892	106,264
Gas oil ..	7,431	n.a.	n.a.	n.a.	40,322	37,853
Diesel oil ..	549,533	563,666	605,562	647,000	728,702	984,240
Fuel oil ..	1,340,586	1,274,819	1,462,791	1,669,000	2,110,210	2,406,399
Lubricating oil and grease ..	20,107	52,722	58,529	60,600	58,107	59,161
Coke ..	93,549	96,487	n.a.	n.a.	125,463	160,069
Asphalt ..	53,757	67,591	66,194	68,900	94,032	122,512
<b>Ecuador—</b>						
Motor spirit ..	134,430	233,739	247,521	248,000	261,251	319,000
Kerosine ..	45,743	53,841	57,239	60,600	63,412	123,000
Aviation turbine fuel ..	n.a.	6,937	23,041	n.a.	38,942	
Diesel oil ..	111,100	117,493	131,672	143,000	164,055	204,000
Residual fuel oil ..	169,870	189,018	215,846	219,000	226,516	277,000
<b>Peru—</b>						
Aviation spirit ..	5,000	5,000	6,000	4,000	4,000	n.a.
Motor spirit ..	625,000	659,000	686,000	791,000	837,000	n.a.
Kerosine ..	380,000	398,000	416,000	439,000	463,000	n.a.
Aviation turbine fuel ..	62,000	92,000	100,000	131,000	150,000	n.a.
Diesel oil ..	792,000	808,000	855,000	n.a.	n.a.	n.a.
Fuel oil ..	661,000	735,000	792,000	841,000	897,000	n.a.
Lubricating oil and grease ..	8,000	11,000	12,000	11,000	11,000	n.a.

## PRODUCTION OF PETROLEUM REFINERY PRODUCTS IN CERTAIN COUNTRIES (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
<b>Uruguay—</b>						
Motor spirit .. ..	251,538	257,373	255,675	263,815	261,064	(b) 230,000
Kerosine .. ..	165,549	175,300	161,996	165,992	159,522	} b 160,000
Aviation turbine fuel ..	14,322	15,585	14,006	16,459	18,894	
Gas oil .. ..	190,840	239,142	230,589	234,297	234,927	} b 270,000
Diesel oil .. ..	66,041	62,390	63,527	70,219	59,437	
Fuel oil .. ..	601,394	625,405	720,875	701,573	701,059	(b) 600,000
Lubricating oil .. ..	473	766	355	470	144	n.a.
Asphalt .. ..	14,900	12,800	13,200	20,100	13,000	n.a.
<b>Venezuela—</b>						
Motor spirit .. ..	5,824,489	5,469,000	5,998,000	5,808,000	5,923,000	6,664,000
Kerosine .. ..	1,125,419	1,490,000	1,218,000	772,000	641,000	603,000
Gas and diesel oils ..	10,792,154	10,534,000	9,982,000	9,766,000	8,253,000	9,357,000
Fuel oil .. ..	31,267,995	34,092,000	37,444,000	37,777,000	37,300,000	37,700,000
Lubricating oil .. ..	616,000	649,600	521,000	524,000	530,000	588,000
Asphalt .. ..	839,000	865,000	877,000	787,000	870,000	870,000
<b>Burma—</b>						
Motor spirit .. ..	142,090	139,450	151,000	155,000	168,000	154,000
Kerosine .. ..	108,720	117,330	139,000	188,000	178,000	231,000
Jet fuel .. ..	25,000	n.a.	n.a.	n.a.	n.a.	n.a.
Diesel oil .. ..	171,130	181,380	139,000	n.a.	n.a.	n.a.
Paraffin wax .. ..	18,631	13,824	n.a.	n.a.	n.a.	n.a.
<b>Formosa—</b>						
Aviation spirit .. ..	237,000	249,000	257,000	314,000	332,000	348,000
Motor spirit .. ..	31,500	31,300	24,100	27,100	20,600	21,800
Kerosine .. ..	(b) 145,000	177,000	213,000	n.a.	n.a.	n.a.
Jet fuel .. ..	185,800	234,200	295,900	321,600	415,500	456,000
Diesel oil .. ..	561,300	573,700	852,900	1,080,400	1,127,600	1,635,300
Fuel oil .. ..	—	—	4,100	17,100	17,300	22,500
Lubricating oil .. ..	51,202	39,852	52,716	78,384	96,892	116,777
Asphalt .. ..	—	—	—	—	—	—
<b>Indonesia—</b>						
Aviation spirit .. ..	61,000	33,000	21,000	16,000	16,000	n.a.
Motor spirit .. ..	1,700,000	1,345,000	1,531,000	1,229,000	1,304,000	n.a.
Kerosine .. ..	1,473,000	1,386,000	1,306,000	1,262,000	1,399,000	n.a.
Fuel oil .. ..	3,705,000	2,956,000	2,255,000	2,086,000	2,580,000	n.a.
Jet fuel .. ..	133,000	72,000	134,000	177,000	143,000	n.a.
Gas and diesel oils ..	2,352,000	2,343,000	1,647,000	1,489,000	1,539,000	n.a.
<b>Iran (a)—</b>						
Aviation spirit .. ..	554,000	563,000	710,000	725,000	722,000	728,000
Motor spirit .. ..	2,038,000	1,904,000	1,882,000	1,996,000	2,025,000	2,192,000
Kerosine .. ..	1,925,000	2,217,000	1,823,000	1,805,000	1,865,000	1,981,000
Aviation turbine fuel ..	896,000	925,000	1,197,000	1,292,000	1,263,000	1,547,000
Gas and diesel oils ..	2,898,000	2,741,000	2,866,000	3,034,000	3,019,000	3,272,000
Fuel oil .. ..	7,895,000	8,189,000	8,377,000	8,462,000	8,925,000	8,497,000
Lubricating oil .. ..	25,000	35,000	44,000	52,000	46,000	51,000
Bitumen .. ..	169,000	193,000	174,000	222,000	310,000	269,000
<b>Iraq—</b>						
Motor spirit .. ..	257,996	278,298	292,000	310,000	265,000	n.a.
Kerosine .. ..	382,116	459,133	451,000	462,000	400,000	n.a.
Aviation turbine fuel ..	27,015	43,614	44,000	n.a.	n.a.	n.a.
Gas oil .. ..	228,960	310,342	} 576,000	719,000	541,000	n.a.
Diesel oil .. ..	181,120	218,842				
Fuel oil .. ..	1,004,215	1,142,536	1,145,000	849,000	1,225,000	n.a.
<b>Israel—</b>						
Motor spirit .. ..	310,000	347,000	(b) 379,000	(b) 477,000	557,000	n.a.
Kerosine .. ..	239,000	308,000	n.a.	(b) 252,000	(b) 282,000	n.a.
Gas and diesel oils ..	717,000	791,000	(b) 1,310,000	(b) 903,000	1,146,000	n.a.
Fuel oil .. ..	1,091,000	1,241,000	(b) 1,376,000	(b) 1,424,000	1,963,000	n.a.

(a) Abadan Refinery only.

(b) Estimated.

## PRODUCTION OF PETROLEUM REFINERY PRODUCTS IN CERTAIN COUNTRIES (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Japan—</b>						
Aviation spirit .. ..	62,022	68,141	} 7,870,000	9,080,000	10,413,000	11,824,000
Motor spirit .. ..	6,628,860	7,096,906				
Kerosine .. ..	3,151,229	3,571,549	4,440,000	5,062,000	6,918,000	} 10,764,000
Jet fuel .. ..	546,788	806,754	1,030,000	1,198,000	1,951,000	
Gas oil .. ..	3,815,205	r 4,627,000	5,155,000	6,068,000	6,853,000	7,897,000
Diesel oil .. ..	1,629,237	2,116,674	2,516,000	3,368,000	4,167,000	5,390,000
Fuel oil .. ..	27,336,602	32,887,532	38,260,000	45,630,000	55,683,000	63,000,000
Lubricating oil .. ..	r 755,000	r 945,000	r 1,017,000	r 1,152,000	1,308,000	1,496,000
Paraffin wax .. ..	51,790	63,556	68,000	82,000	78,725	n.a.
Asphalt .. ..	654,916	920,744	n.a.	n.a.	1,800,391	n.a.
<b>Jordan—</b>						
Motor spirit .. ..	45,450	52,259	60,223	76,153	70,707	70,569
Kerosine .. ..	53,833	64,915	66,760	69,505	68,882	64,784
Gas oil .. ..	114,836	106,488	130,130	133,772	117,505	119,850
Fuel oil .. ..	47,712	75,147	80,529	89,527	89,532	87,616
Asphalt .. ..	27,049	26,474	28,492	40,498	29,895	33,053
<b>Korea (South)—</b>						
Motor spirit .. ..	—	66,810	161,768	231,583	308,414	451,900
Kerosine .. ..	—	40,133	65,105	93,437	172,897	251,364
Jet fuel .. ..	—	—	53,592	94,117	106,897	250,000
Diesel oil .. ..	—	157,170	420,173	527,598	557,787	1,057,000
Fuel oil .. ..	—	396,563	675,491	762,947	1,061,478	2,361,000
<b>Kuwait—</b>						
Motor spirit .. ..	180,000	186,000	193,000	218,000	260,000	276,000
Kerosine .. ..	64,000	67,000	69,000	85,000	92,000	97,000
Gas and diesel oils .. ..	2,402,000	2,623,000	2,561,000	2,739,000	2,401,000	2,646,000
Fuel oil .. ..	5,754,000	6,181,000	6,252,000	6,312,000	6,301,000	6,619,000
Bitumen .. ..	28,000	19,000	13,000	26,000	35,000	33,000
<b>Lebanon—</b>						
Motor spirit .. ..	159,000	221,054	280,000	248,000	298,000	342,000
Kerosine .. ..	121,900	119,920	126,500	153,000	177,000	187,000
Gas oil .. ..	173,500	216,146	230,000	226,000	265,000	276,000
Fuel oil .. ..	518,150	617,714	755,000	725,810	877,000	355,000
<b>Philippine Republic—</b>						
Motor spirit .. ..	965,500	1,050,000	1,087,000	1,193,000	1,427,000	1,574,000
Kerosine .. ..	273,000	292,900	279,100	426,000	} 364,000	} 392,000
Jet fuel .. ..	73,600	94,600	133,000	n.a.		
Gas and diesel oil .. ..	854,500	968,000	976,000	1,060,000	n.a.	1,540,000
Fuel oil .. ..	1,118,000	1,401,000	1,617,700	1,991,000	2,420,000	3,002,000
<b>Saudi Arabia—</b>						
Aviation spirit .. ..	37,657	40,853	27,099	36,279	13,000	16,098
Motor spirit .. ..	1,219,834	1,519,692	1,956,815	2,025,421	2,340,000	2,805,294
Kerosine .. ..	487,585	415,685	278,760	244,537	364,000	392,097
Jet fuel .. ..	595,458	748,920	1,062,143	1,307,877	1,200,000	1,677,024
Diesel oil .. ..	2,071,339	1,898,714	1,741,322	2,191,489	2,216,000	2,561,858
Fuel oil .. ..	7,809,318	8,270,362	9,305,802	8,798,702	9,421,000	11,137,972
Asphalt, etc. .. ..	46,330	59,811	44,663	104,010	n.a.	130,699
<b>Syria—</b>						
Motor spirit .. ..	123,000	(a) 140,000	154,000	163,000	165,000	n.a.
Kerosine .. ..	104,000	(a) 118,000	135,000	142,000	169,000	n.a.
Gas and diesel oil .. ..	255,000	(a) 290,000	276,000	277,000	250,000	n.a.
Fuel oil .. ..	324,000	(a) 369,000	383,000	407,000	448,000	n.a.
<b>Turkey—</b>						
Motor spirit .. ..	532,578	626,000	687,000	750,000	784,324	898,340
Kerosine .. ..	389,357	469,000	417,000	415,000	368,012	466,100
Jet fuel .. ..	—	14,000	65,000	80,000	172,605	157,634
Diesel oil .. ..	885,000	1,095,000	1,110,000	1,282,000	1,239,212	1,480,384
Fuel oil .. ..	1,406,693	1,640,000	1,670,000	1,900,000	2,266,277	2,694,395
Asphalt .. ..	117,509	99,000	131,000	137,000	182,929	183,440

(a) United States Bureau of Mines' estimate.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Crude petroleum (f) ..	1,420,842	338,542	267,809	125,485	189,316	328,251
Aviation spirit ..	180,071	116,719	134,957	143,471	146,856	144,153
Aviation turbine fuel (d) ..	347,064	380,122	455,554	373,776	288,820	256,561
Motor spirit ..	877,657	774,103	979,663	1,000,728	994,414	919,095
Other spirit ..	167,783	157,662	113,841	150,725	163,282	147,407
Kerosine (e) ..	697,914	560,870	654,757	724,566	739,497	924,172
Gas oil ..	2,956,580	2,964,586	3,333,104	3,482,086	3,445,056	} 4,653,007
Diesel oil ..	396,167	285,984	480,128	488,367	362,247	
Fuel oil ..	3,169,343	3,155,000	3,869,586	4,753,153	4,568,421	6,153,546
Lubricating oil ..	513,133	519,037	478,961	538,668	503,843	553,686
Greases (c) ..	33,846	34,966	33,391	30,873	30,878	32,926
Other heavy oils ..	81,688	190	7,065	3,053	1,914	—
Petroleum jelly ..	435	530	635	1,072	706	790
Petroleum waxes ..	8,348	6,077	4,561	3,428	3,883	3,041
Malta (bunkers) (b)—						
Aviation spirit ..	12,030	5,003	8,719	9,066	5,157	4,638
Aviation turbine fuel ..	38,265	1,793	40,736	66,630	56,772	74,559
Gas oil ..	6,580	12,048	8,209	4,968	7,488	10,612
Diesel oil ..	—	—	5,215	8,772	10,583	14,743
Fuel oil ..	2,081	10,507	8,876	21,506	45,549	25,153
Ghana—						
Gas oil (bunkers) ..	151	13,198	7,425	10,563	14,555	27,070
do. do. (b) ..	1,311	2,780	16	722	467	—
Diesel oil (bunkers) (b) ..	282	23,673	435	7,016	6,606	132
Fuel oil ..	17,299	196,634	183,536	206,257	233,331	200,994
do. (bunkers) (b) ..	793	3,201	550	—	149	—
Lubricating oil (bunkers) (b) ..	16	282	209	262	403	695
Kenya—						
Aviation spirit (bunkers) (b) ..	4,605	2,964	2,287	2,091	1,374	400
Motor spirit ..	n.a.	4,540	5,322	27,503	28,526	219,374
do. (bunkers) ..	(b) 6	(b) 2	(a) 1	13	(a) 1	3
Aviation turbine fuel (bunkers) ..	(b) 41,008	(b) 41,649	81,271	78,959	83,995	56,845
Kerosine ..	n.a.	2,186	3,512	7,713	7,888	5,808
Gas, diesel and fuel oils do. bunkers ..	(b) 124,472	(a) 134,614	(a) 135,768	171,183	518,828	542,497
Lubricating oil (bunkers) (b) ..	490	375	468	616	1,252	1,224
Asphalt and bitumen ..	n.a.	2,583	10,048	16,107	17,074	13,057
Mauritius (bunkers) (b)—						
Aviation spirit ..	1,615	n.a.	2,243	2,111	1,074	132
Aviation turbine fuel ..	1,427	n.a.	2,627	3,150	8,071	12,076
Fuel oils ..	8,224	n.a.	20,331	25,707	74,216	114,729

\*Excluding the United Kingdom, the following rates have been used for converting Imperial gallons to long tons: Aviation spirit 315, Motor spirit 305, White spirit 280, Aviation turbine fuel 275, Kerosine 275, Gas oil 260, Diesel oil 256, Fuel oil 240, Lubricating oil 250, Asphalt 220, Road oil 220, Crude petroleum 245 (except for countries mentioned in footnote (b) on page 240).

(a) Including foreign produce.

(e) Including kerosine jet type fuel.

(b) Foreign produce. See imports.

(f) Including partly refined.

(c) Including cable impregnating compounds.

(d) Wide cut gasoline.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
<b>Nigeria—</b>						
Crude petroleum ..	3,694,981	5,782,608	13,019,779	18,945,374	14,773,521	6,889,548
Motor spirit ..	—	—	—	51,520	15,511	9,845
do. (bunkers) ..	—	—	—	743	—	—
Aviation spirit ..	—	—	—	1,415	5,269	2,233
do. (bunkers) ..	—	—	—	96	237	—
do. do. (a) ..	1,222	71	300	992	421	n.a.
Aviation turbine fuel ..	—	—	—	3,066	2,943	3,550
do. (bunkers) ..	—	—	—	365	713	—
do. do. (a) ..	18,095	24,173	493	1,743	291	n.a.
Kerosine ..	—	—	—	745	7,707	1,261
do. (bunkers) ..	—	—	169	29	65	—
Gas oil ..	—	—	—	22,709	9,702	3,683
do. (bunkers) ..	—	—	—	2,275	3,009	463
do. do. (a) ..	(f)	(f)	(f)	(f)	(f)	n.a.
Diesel oil ..	—	—	—	4,601	9,375	3,869
do. (bunkers) ..	—	—	—	374	201	—
do. do. (a) ..	294	132	1,550	77	—	n.a.
Fuel oil ..	—	—	11	74,267	59,239	3,569
do. (bunkers) ..	—	—	625	5,695	8,139	163
do. do. (a) ..	(g) 9,503	(g) 13,865	(g) 16,065	(g) 6,720	(g) 3,328	n.a.
Asphalt and bitumen ..	—	—	10	8,435	3,942	1,448
<b>Sierra Leone (bunkers) (a)—</b>						
Aviation spirit ..	411	n.a.	n.a.	n.a.	n.a.	n.a.
Aviation turbine fuel ..	2,036	n.a.	n.a.	n.a.	n.a.	n.a.
Fuel and diesel oils ..	228,619	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Tanzania—</b>						
Motor spirit ..	—	—	—	3,649	91,237	124,260
Aviation spirit bunkers (a) ..	—	—	1,590	—	—	—
Aviation turbine fuel ..	(a) 6,615	(a) 5,911	—	(a) 9,529	12,907	14,790
do. (bunkers) ..	—	—	—	n.a.	10,082	19,943
Kerosine ..	—	—	—	620	9,097	12,004
Gas, diesel and fuel oils ..	(a) 3,873	(a) 512	(a) 2,224	(e) 41,624	(e) 210,103	(e) 366,476
do. (bunkers) ..	—	—	—	3,443	6,559	9,149
<b>Uganda (bunkers) (a)—</b>						
Aviation spirit ..	2,676	2,466	1,123	1,237	480	84
Aviation turbine fuel ..	8,211	11,300	—	—	—	—
<b>Canada—</b>						
Crude petroleum ..	12,116,775	13,501,180	14,401,380	17,670,192	20,045,942	22,331,729
Motor spirit ..	55,178	119,423	29,217	49,553	48,894	47,262
Fuel oil ..	310,417	337,289	297,737	345,683	495,403	686,755
Lubricating oil (c) ..	9,138	4,546	4,801	5,877	6,331	3,823
Liquified petroleum gas ..	142,797	384,801	625,941	822,613	988,373	1,074,810
Petroleum coke (d) ..	16,086	18,951	15,269	8,632	16,644	7,532
Natural gas (million cu.ft.) ..	340,953	404,143	403,908	426,223	505,165	607,355
<b>Barbados (bunkers)—</b>						
Aviation spirit (a) ..	1,376	1,443	2,005	1,320	3,271	794
Aviation turbine fuel (a) ..	8,077	7,635	9,566	22,062	14,281	7,461
Gas, diesel and fuel oils ..	427	118	559	7,638	4,157	3,164
Do. do. (a) ..	258,000	98,881	131,201	278,732	156,185	94,811

(a) Foreign produce. See imports.

(b) Including bunkers for military forces.

(c) Including grease.

(d) Including pitch coke.

(e) Including foreign produce.

(f) Included with fuel oil.

(g) Gas and fuel oils.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<i>(cont.)</i>						
<b>Bermuda (bunkers)(a)(f)</b>						
Aviation spirit .. ..	44,106	28,443	24,868	7,191	6,400	14,516
Motor spirit .. ..	3,676	2,426	2,350	2,924	3,167	1,534
Aviation turbine fuel ..	55,369	68,021	60,340	74,829	85,561	92,495
Kerosine .. ..	419	377	330	220	171	164
Fuel and Diesel oil ..	39,278	33,541	25,980	31,718	21,419	21,829
Lubricating oil .. ..	48	36	29	16	9	34
<b>Jamaica—</b>						
Aviation spirit (bunkers) (a)	7,703	(b) 6,927	(b) 4,861	(a) 267	<i>n.a.</i>	(b) 4,385
Motor spirit .. ..	—	33,564	75,774	112,898	56,321	31,061
Kerosine .. ..	—	10,086	21,118	21,216	9,770	4,359
do. (bunkers) .. ..	—	(b) 42,176	(b) 65,956	(a) 53,515	<i>n.a.</i>	<i>n.a.</i>
Gas oil .. ..	—	2,163	3,602	1	(e)	520
do. (bunkers) .. ..	(a) 8,269	(b) 7,473	(b) 7,520	(a) 1,718	<i>n.a.</i>	(b) 14,933
Diesel oil .. ..	—	65,544	87,588	83,167	(e)	40,927
do. (bunkers) .. ..	(a) 22,437	(b) 21,362	(b) 22,034	20,467	<i>n.a.</i>	(b) 19,869
Fuel oil .. ..	—	13,796	29,269	17,548	107,297	49,342
do. (bunkers) .. ..	(a) 2,309	(b) 107,095	(b) 146,260	(a) 128,985	<i>n.a.</i>	(a) 129,294
Lubricating oil .. ..	—	—	10,987	18,252	10,572	19,609
<b>Trinidad and Tobago—</b>						
Crude petroleum .. ..	932,488	1,337,201	1,329,220	930,596	803,169	1,942,362
Aviation spirit (d) .. ..	1,301,629	1,628,647	2,165,429	2,152,296	2,038,187	2,533,868
do. (bunkers) .. ..	9,288	37,296	27,541	32,620	28,323	35,635
Motor spirit .. ..	1,204,020	1,045,728	813,285	1,002,936	1,156,517	1,096,978
do. (bunkers) .. ..	2,987	28	11	437	941	24
Kerosine .. ..	92,986	155,196	112,076	18,962	7,168	12,582
do. (bunkers) .. ..	28,910	149	18	136	81	46
Gas oil .. ..	1,140,601	1,487,506	942,268	584,101	434,902	120,762
do. (bunkers) .. ..	57,456	37,615	37,644	45,971	54,773	54,218
Diesel oil .. ..	1,180,688	936,228	1,394,654	1,803,173	1,833,187	2,120,591
do. (bunkers) .. ..	186,619	187,445	152,723	131,697	165,959	155,617
Fuel oil .. ..	8,307,560	9,269,922	9,888,972	9,536,221	9,757,602	11,073,309
do. (bunkers) .. ..	1,376,901	1,627,337	1,329,922	1,152,768	1,049,038	1,388,553
Lubricating oil .. ..	64	51,128	95,742	154,277	141,246	171,488
Road oil .. ..	6,430	8,428	12,518	9,224	7,697	6,908
<b>Asphalt—</b>						
Dried .. ..	67,728	79,080	58,544	<i>r</i> 63,935	59,284	54,216
Asphalt cement .. ..	3,180	4,100	2,812	1,766	545	465
Bituminous asphalt ..	36,109	26,170	18,015	15,367	22,173	17,228
<b>Falkland Islands (bunkers) (a)—</b>						
Fuel oil .. ..	—	5,605	2,581	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Guyana (a)—</b>						
Aviation spirit (bunkers)	<i>n.a.</i>	926	149	4	—	—
<b>Abu Dhabi (c)—</b>						
Crude petroleum .. ..	70,415	5,919,230	8,928,097	12,135,404	12,157,754	14,758,077
<b>Bahrain Islands (c)—</b>						
Aviation and motor spirit	1,900,000	1,793,000	1,245,000	1,152,000	942,000	790,000
Aviation turbine fuel ..	474,000	596,000	848,000	1,049,000	1,399,000	1,585,000
Kerosine .. ..	640,000	557,000	502,000	431,000	406,000	447,000
Diesel oil .. ..	2,469,000	2,014,000	1,587,000	1,703,000	1,628,000	1,710,000
Fuel oil .. ..	4,152,000	3,126,000	3,125,000	3,299,000	4,255,000	4,150,000
do. (bunkers) .. ..	876,000	1,014,000	961,000	1,027,000	1,300,000	1,053,000
Asphalt .. ..	29,000	30,000	8,000	2,000	1,000	1,000

(a) Foreign produce. See imports.

(b) Including foreign produce.

(c) British Protected State.

(d) Including J.P.4 type aviation turbine fuel.

(e) Included with fuel oil.

(f) Including bunkers for military forces.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<i>(cont.)</i>						
<b>Brunei—</b>						
Crude petroleum (a) ..	3,424,099	3,463,277	3,868,849	4,544,422	4,973,838	5,842,863
Natural gas (million cubic feet) ..	2,204	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Ceylon (bunkers) (b)—</b>						
Aviation spirit ..	5,944	5,886	1,455	—	22,274	11,978
Gas oil ..	6,614	3,679	2,860	4,181	9,788	5,865
Diesel oil ..	24,035	29,045	24,408	27,266	31,580	61,159
Fuel oil ..	161,690	210,985	230,679	203,505	456,700	499,043
<b>Cyprus (bunkers) (b)—</b>						
Aviation spirit ..	1,506	1,737	2,189	1,478	1,357	1,308
<b>India (g)—</b>						
Motor spirit ..	366,115	369,862	n.a.	n.a.	n.a.	n.a.
Other spirit ..			n.a.	n.a.	n.a.	n.a.
Paraffin wax ..			9,370	11,535	n.a.	n.a.
<b>Malaysia (West)—</b>						
Crude petroleum ..	n.a.	n.a.	223,016	259,866	313,807	493,897
Aviation spirit ..	n.a.	n.a.	609	117	2,725	89
do. do. (bunkers) ..	n.a.	n.a.	10,198	16,158	12,113	14,322
Motor spirit ..	n.a.	n.a.	96,621	104,741	92,219	167,988
Aviation turbine fuel ..	n.a.	n.a.	17,701	22,675	40,622	5,209
Kerosine ..	n.a.	n.a.	21,645	32,271	20,090	104,540
Gas oil ..	n.a.	n.a.	54,722	36,031	72,299	70,176
Diesel oil ..	n.a.	n.a.	75,524	71,789	62,336	38,606
Fuel oil ..	n.a.	n.a.	242,780	309,915	246,188	188,296
Fuel and diesel oil (bunkers) ..	n.a.	n.a.	35,619	44,578	57,149	52,570
Petroleum coke ..	n.a.	n.a.	40,031	53,336	—	—
Asphalt and bitumen ..	n.a.	n.a.	4,256	4,400	12,519	12,401
<b>Qatar (e)—</b>						
Crude petroleum ..	8,971,403	8,754,450	8,903,998	8,936,394	8,909,704	9,058,678
<b>Sabah—</b>						
(bunkers) (b)—						
Aviation spirit ..	6,238	11,027	4,526	458	6,548	9,248
Fuel oil ..	10,180	8,259	9,964	400	11,798	10,801
<b>Sarawak—</b>						
Crude petroleum (c) ..	1,516,472	1,736,481	1,898,056	2,374,797	2,716,036	3,512,411
Motor spirit (d) ..	258,618	376,058	256,287	373,402	93,927	90,678
Kerosine ..	13,852	137,516	135,875	141,097	208,621	111,646
Aviation turbine fuel ..	—	6,408	172,065	138,291	477,603	578,887
Gas oil ..	36,731	121,482	142,350	138,899	138,542	128,243
Diesel oil ..	1,095,426	358,459	91,491	9,615	13,087	15,304
Fuel oil ..	393,537	708,362	1,100,749	1,314,507	1,327,893	1,400,178
do. (bunkers) (f) ..	46,377	37,828	23,312	23,959	20,882	15,438

(a) Exported to Sarawak for refining. Some, however, is re-exported from Sarawak and shown as exports from that country.

(b) Foreign produce. See imports.

(c) Including crude petroleum imported from Brunei as well as enriched waxy crude.

(d) Excluding motor spirit blended with crude petroleum and exported as enriched waxy crude.

(e) British Protected State.

(f) Including diesel oil bunkers.

(g) Years ended March 31 following that stated.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
<b>Singapore—</b>						
Crude petroleum ..	1,240,060	—	—	9,782	5	11,355
Aviation spirit ..	161,879	170,009	207,868	269,114	287,206	317,247
do. (bunkers) ..	47,752	54,190	73,009	66,712	65,273	73,082
Motor spirit ..	828,853	750,451	680,611	889,708	851,307	1,102,998
White spirit ..	72,666	44,016	22,046	29,050	103,762	25,575
Aviation turbine fuel ..	283,007	235,259	553,257	1,242,362	1,681,216	1,922,616
Kerosine ..	372,621	232,617	225,421	267,891	340,052	340,518
Gas oil ..	846,758	756,997	663,525	1,065,994	1,220,614	1,811,756
Diesel oil ..	376,104	300,227	401,057	461,577	492,696	482,098
Fuel oil ..	971,164	1,747,173	2,619,309	2,788,929	3,211,728	4,104,655
Fuel and diesel oil (bunkers) ..	2,606,992	2,470,657	2,854,708	3,022,486	3,519,190	4,065,527
Lubricating oil ..	31,224	58,355	74,011	95,104	98,170	113,372
Asphalt and bitumen ..	70,682	57,139	41,137	50,271	55,212	80,915
<b>Australia (a)—</b>						
Aviation spirit ..	1,983	1,344	736	5,626	3,360	11,572
do. do. (bunkers) ..	1,439	5,828	3,315	13,619	605	906
do. do. do. (d) ..	1,319	5,873	3,585	3,316	822	260
Motor spirit ..	126,490	141,515	52,813	46,336	128,540	217,962
Kerosine ..	20,810	3,650	8,773	11,413	12,539	22,360
Aviation turbine fuel ..	63,986	23,734	51,672	70,559	45,516	101,579
do. (bunkers) ..	5,125	32,881	72,183	112,942	24,787	58,335
do. do. (d) ..	792	2,400	11,802	13,887	82,799	109,378
Lubricating oil ..	14,813	50,610	52,227	62,046	90,669	94,679
Diesel and fuel oils ..	2,189,523	1,671,995	1,037,107	744,030	878,803	688,037
Fuel oil (bunkers)—						
Domestic produce ..	670,440	752,493	718,586	785,614	878,028	1,281,811
Foreign produce ..	5,448	8,845	4,614	2,506	3,230	9,256
<b>Fiji (bunkers)(d)—</b>						
Aviation spirit ..	2,353	2,085	1,669	1,574	3,079	1,028
Aviation turbine fuel ..	30,357	39,193	50,932	53,681	60,076	81,627
Diesel oil ..	13,415	9,574	9,378	11,755	12,856	14,623
Gas oil ..	1,521	1,460	3,008	2,797	2,387	4,379
Fuel oil ..	2,070	6,863	5,133	11,574	761	2,208
<b>New Zealand (a)—</b>						
Diesel oil ..	—	—	4,129	1,340	309	3,451
do. (bunkers) ..	—	—	47,092	90,809	99,576	106,918
do. (bunkers) (d) ..	29,970	23,826	29,319	13,484	6,942	2,891
Fuel oil ..	—	28,986	222,144	288,731	137,245	53,569
do. (bunkers) ..	—	—	14,256	58,729	100,040	112,597
do. (bunkers) (d) ..	24,110	40,911	43,232	13,734	5,789	4,094
Lubricating oil (bunkers) (d) ..	1,660	1,848	1,921	1,934	2,295	2,073
<b>Irish Republic—</b>						
Aviation spirit (d) (b) ..	3,248	3,801	3,859	3,837	1,964	1,040
do. (d) (c) ..	20,045	15,857	14,478	11,065	10,795	8,745
Motor spirit ..	6,709	6,527	9,862	8,180	41,937	—
Aviation turbine fuel (b) ..	—	—	—	—	2,985	51,937
do. (c) ..	3,545	—	—	—	4	n.a.
do. (d) (b) ..	14,073	15,399	6,111	38,691	47,197	—
do. (d) (c) ..	73,274	91,631	97,077	98,562	119,699	n.a.

(a) Years ended June 30 of that stated.

(b) Bunkers for foreign ships or aircraft only.

(c) Exports to Shannon Free Airport.

(d) Foreign produce. See imports.



## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>Irish Republic—(cont.)</b>						
Gas and diesel oils ..	142,944	144,111	211,183	86,391	314,900	111,099
do. (bunkers) (b)(a) ..	—	—	5,864	8,909	11,492	12,668
do. do. (a) ..	9,359	11,036	10,542	5,964	8,252	6,826
Fuel oil ..	38,264	21,204	62,378	12,221	197,199	210,407
do. (bunkers) (a) ..	81,632	93,248	101,646	91,970	125,096	106,296
<b>OTHER COUNTRIES</b>						
<b>Albania—</b>						
Crude petroleum ..	305,400	289,700	280,000	n.a.	n.a.	n.a.
Natural asphalt ..	11,200	10,000	11,000	n.a.	n.a.	n.a.
Other asphalt ..	193,000	238,400	264,000	n.a.	n.a.	n.a.
<b>Austria—</b>						
Crude petroleum ..	—	1	1	1	1	—
Motor spirit ..	52	59	21	184	294	252
Gas oil ..	202,674	128,922	123,974	24,562	7,981	770
Fuel oil ..	—	2	6	16	23	27
Lubricating oil, etc. ..	14,936	75,865	71,964	54,449	77,717	98,795
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Crude petroleum ..	—	28	—	157,143	271,482	148,174
Motor spirit ..	832,347	613,902	848,683	878,642	1,010,007	1,675,912
Kerosine ..	206,528	396,171	434,780	461,470	500,891	553,466
Gas oil ..	1,207,982	1,303,896	1,295,950	1,082,749	3,644,964	1,700,990
do. (bunkers) (a) ..	85,465	109,033	208,020	260,239	230,490	207,751
Fuel oil, etc. ..	1,002,879	730,742	521,286	847,546	859,378	1,444,441
do. (bunkers) (a) ..	1,219,691	1,412,951	1,592,888	1,529,519	1,556,793	1,792,148
Lubricating oil ..	123,106	129,520	154,133	154,196	162,374	192,467
do. (bunkers) (a) ..	5,234	9,872	7,006	6,877	6,642	10,442
Other heavy oils ..	4	29,885	2,576	1,888	—	1,134
Petroleum jelly ..	1,311	804	354	234	140	46
Paraffin wax ..	80	93	67	161	232	517
Ozokerite and ceresin (c) ..	68	28	44	40	20	25
Petroleum coke ..	27,549	40,410	25,228	26,836	31,447	26,855
Natural asphalt ..	193	255	254	368	193	132
Pitch ..	287,945	234,859	194,920	220,997	226,184	259,584
<b>Bulgaria—</b>						
Crude petroleum ..	78,400	40,177	3,871	24,310	n.a.	n.a.
<b>Denmark—</b>						
Aviation spirit ..	5,561	3,070	5,925	1,498	1,628	8,021
Motor spirit ..	80,335	171,466	259,965	319,570	287,386	310,598
White spirit ..	925	482	28	6	957	1,823
Kerosine ..	17,576	6,835	4,559	24,166	12,740	9,260
Gas oil ..	33,726	44,591	63,269	(b) 322,552	364,063	282,789
Diesel oil ..	8,313	65,087	146,981	(b) —	1,693	6,710
Fuel oil ..	215,527	308,744	193,071	(b) 32,761	110,925	227,636
Gas oil (bunkers) ..						
Diesel oil (bunkers) ..	314,810	352,949	376,058	446,632	477,208	444,749
Fuel oil (bunkers) ..						
Lubricating oil ..	4,331	7,998	10,690	16,743	15,653	7,844
Grease ..	1,401	933	910	1,308	799	1,219

(a) Bunkers for foreign ships or aircraft only.

(b) Foreign Produce. See imports.

(c) Including montan wax.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
France—						
Aviation spirit .. ..	16,894	11,788	(b) 2	(b) 7,371	(b) 399	(b) 359
Motor spirit .. ..	1,356,938	1,752,649	(b)1,575,749	(b)1,608,622	(b)1,595,203	(b)1,103,573
White spirit .. ..	13,922	23,262	(b) 21,386	(b) 22,320	(b) 27,207	(b) 30,703
Kerosine .. ..	444,225	220,200	(b) 202,247	(b) 49,123	(b) 26,801	(b) 12,057
Gas oil .. ..	2,268,847	2,514,422	(b)3,373,771	(b)4,203,045	(b)2,820,975	(b)2,575,585
do. (bunkers)— Domestic produce ..						
Fuel oil .. ..	2,585,524	3,025,240	(b)3,129,967	(b)4,935,240	(b)5,020,027	(b)4,193,721
do. (bunkers)— Domestic produce ..						
Lubricating oil ..	216,536	252,438	(b) 232,993	(b) 264,147	(b) 296,347	(b) 265,502
do. (bunkers)— Domestic produce ..						
Petroleum jelly ..	1,735	1,876	(b) 1,996	(b) 1,098	(b) 1,412	(b) 1,794
Paraffin wax .. ..	8,168	10,391	(b) 7,975	(b) 11,256	(b) 16,746	(b) 13,007
Ozokerite, ceresin, etc.	592	639	(b) 28	(b) 35	(b) 30	(b) 46
Petroleum coke ..	2,963	<i>n.a.</i>	(b) 34	(b) 11	(b) 1	(b) 21
Natural asphalt and bitumen .. ..	20,183	20,106	(b) 18,926	(b) 23,603	(b) 17,014	(b) 20,908
Mastic asphalt ..	2,956	3,160	(b) 1,949	(b) 2,475	(b) 2,585	(b) 4,860
Bitumen .. ..	130,436	235,651	(b) 267,377	(b) 366,088	(b) 401,194	(b) 372,596
Germany (Federal)—						
Crude Petroleum ..	39	27	21,499	138,621	80,397	31,966
Aviation spirit ..						
(bunkers) (a) ..	53,324	57,340	65,410	50,331	24,558	11,000
Motor spirit (e) ..	1,216,740	1,105,860	1,062,878	1,156,711	1,090,323	1,714,457
White spirit .. ..	8,624	10,272	9,057	6,232	8,094	5,999
Kerosine .. ..	30,352	16,477	4,515	11,936	24,248	28,994
Aviation turbine fuel ..	19,414	104,652	11,543	23,392	16,359	33,382
do. (bunkers) (a) ..	227,130	290,209	335,965	453,519	563,584	624,232
Gas and diesel oil ..	1,128,708	964,552	342,260	321,815	377,864	491,394
do. (bunkers) (a) ..	203,152	254,410	220,702	256,558	248,255	287,848
Fuel oil .. ..	1,892,879	2,735,669	2,732,093	2,737,497	3,531,802	3,910,547
do. (bunkers) (a) ..	835,672	1,222,496	1,286,208	1,332,908	1,108,016	1,297,899
Lubricating oil ..	87,891	97,296	98,917	153,096	191,272	256,863
do. (bunkers) (a) ..	9,970	9,901	—	—	—	—
Petroleum jelly ..	9,031	10,648	13,340	13,521	14,141	15,474
Paraffin wax .. ..	31,840	34,925	417,829	47,588	48,952	57,364
Ozokerite, etc. ..	38	36	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Natural asphalt and bitumen .. ..	504	2,055	1,627	847	1,329	1,529
Bitumen .. ..	131,010	177,352	222,349	220,830	251,592	321,616
Petroleum coke ..	141,538	148,452	161,075	150,956	148,502	184,294
Germany (East)—						
Motor spirit .. ..	412,176	418,138	465,532	114,188	492,215	539,510
Diesel oil .. ..	426,783	435,901	665,578	505,527	420,636	518,441
Greece—						
Diesel and fuel oils ..	19,346	20,326	2,869	46,596	121,279	74,156
Hungary—						
Motor spirit .. ..	81,177	121,638	148,000	160,000	209,636	240,032
Kerosine .. ..	236	208	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Gas oil .. ..	159,466	164,198	153,000	157,000	213,573	236,253
Fuel oil .. ..	227,028	258,571	175,000	311,000	444,861	550,834
Lubricating oil ..	13,319	13,546	13,523	13,492	13,925	11,226
Paraffin wax and ceresin	1,198	512	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Bitumen .. ..	194,237	165,822	167,000	198,000	178,141	147,239

(a) Bunkers for foreign ships or aircraft only.

(b) Owing to reclassification not strictly comparable with details shown for 1963 and 1964.

(c) Including aviation spirit.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
<b>Italy—</b>						
Crude petroleum ..	176,478	331	81	59	36	17
Aviation and motor spirits ..	1,785,448	1,852,096	2,572,511	3,482,393	4,209,041	2,286,435
do. (bunkers) (a) ..	321,208	305,687	63,519	103,000	37,187	72,763
White spirit ..	15,656	13,295	(g)	(g)	(g)	(g)
Kerosine ..	779,177	792,613	1,249,745	1,322,649	1,603,324	2,007,975
Lubricating oil ..	54,090	80,165	142,055	235,469	220,334	257,643
Gas oil ..	4,073,429	7,677,762	14,789,304	15,639,935	15,516,411	19,563,940
do. (bunkers) (a) ..	232,473	3,897,546	1,836,740	4,789,793	3,812,235	3,332,246
Fuel oil ..	2,576,418	(f)	(f)	(f)	(f)	(f)
do. (bunkers) (a) ..	2,553,257	(d)	(d)	(d)	(d)	(d)
Paraffin wax ..	1,346	1,246	749	1,954	1,728	1,383
Natural asphalt and bitumen ..	9,007	6,859	6,858	6,221	7,305	4,199
Pitch ..	140,220	132,350	113,820	122,864	186,686	211,434
<b>Netherlands—</b>						
Aviation spirit (bunkers) (a) ..	3,542	3,443	9,743	8,835	21,101	5,858
Motor spirit ..	2,780,236	2,940,537	3,132,500	3,766,313	3,436,552	3,559,065
Kerosine ..	558,292	647,964	735,480	735,739	615,041	712,643
Gas oil ..	2,264,160	2,085,516	2,893,940	3,615,192	3,804,952	4,104,821
do. (bunkers) (a) ..	330,132	352,607	502,628	502,666	599,617	646,991
Fuel oil ..	3,451,824	3,511,260	3,558,226	3,943,932	4,786,932	4,661,146
do. (bunkers) (a) ..	2,042,368	2,778,157	2,753,230	2,921,736	3,806,257	4,630,595
Lubricating oil ..	239,328	309,681	301,269	291,350	384,215	492,136
Petroleum jelly ..	6,315	7,620	8,379	7,368	7,350	10,160
Paraffin wax ..	10,854	13,890	13,429	12,529	21,438	25,227
Ozokerite and ceresin(e) ..	304	221	58	126	124	127
Pitch ..	364,785	377,831	341,067	356,127	251,573	163,001
Natural asphalt ..	43	—	51	81	77	36
Petroleum coke ..	54,713	56,681	57,443	51,402	7,659	496
<b>Norway—</b>						
Motor spirit ..	123,873	227,004	143,655	151,167	190,017	250,472
Kerosine ..	7,977	2,651	22	7	—	31
Fuel oil and solar oil ..	1,077,229	1,183,648	1,063,147	923,849	960,263	860,089
Lubricating oil ..	18,631	20,581	45,762	22,544	20,364	22,086
<b>Poland—</b>						
Kerosine ..	14,271	576,700	1,010,874	510,489	662,081	1,449,742
Fuel oils ..	545,841					
Lubricating oil ..	3,530					
Paraffin wax ..	2,974					
Asphalt ..	9,928					
<b>Portugal (b)—</b>						
Motor spirit ..	47,141	57,204	42,885	47,883	26,342	24,298
Kerosine ..	44,589	18,742	13	132,338	168	315
Fuel oil ..	113,912	151,212	126,282	48,501	36,263	138,371
do. (bunkers) (a) ..	3,428	26,734	57,569	44,298	22,323	12,921
Lubricating oil, etc. ..	2,363	2,693	4,115	5,131	6,740	8,603
Bitumen ..	20	204	7	30	145	787
Natural asphalt ..	274	487	332	48	301	74
<b>Roumania—</b>						
Motor spirit(c) ..	1,764,500	1,629,200	1,421,300	1,162,700	942,181	973,085
Kerosine ..	412,600	332,400	275,700	272,500	211,998	177,354
Gas oil ..	1,583,400	1,869,800	1,947,800	1,918,900	2,058,172	2,252,356
Fuel oil ..	1,618,500	1,864,500	1,612,700	1,928,700	1,762,025	1,651,104
Lubricating oil ..	270,500	298,300	289,200	269,800	365,436	352,051
Paraffin wax ..	24,700	20,600	19,500	20,000	24,310	21,849
Petroleum coke ..	54,300	55,400	50,700	36,300	44,781	40,648
Bitumen ..	99,300	103,200	104,500	68,600	56,592	37,105

(a) Bunkers for foreign ships or aircraft only.

(b) See imports for amounts imported for bunkering national ships.

(c) Including white spirit and special kerosine.

(d) Included with gas oil (bunkers).

(e) Including montan wax.

(f) Included with gas oil.

(g) Included with aviation and motor spirits.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Spain—</b>						
Motor spirit .. ..	61,555	117	100	13	351,033	1,012,791
Diesel oil .. ..	19,522	2,023	89,463	163,077	433,087	1,626,587
Fuel oil .. ..	—	—	39	233,683	979,296	2,138,738
<b>Sweden—</b>						
Motor spirit, etc. ..	87,017	172,440	127,591	143,763	287,728	506,570
White spirit .. ..	9,372	505	5	—	10	104
Kerosine .. ..	9,372	7,664	7,967	13,746	72,447	113,503
Fuel oil and gas oil ..	117,593	147,738	151,029	194,068	471,724	980,082
Lubricating oil and grease .. ..	41,330	47,649	46,809	47,283	48,567	62,456
Paraffin wax .. ..	11	3	39	16	93	42
Asphalt .. ..	42	26	38	—	9	9
Pitch .. ..	30,599	40,482	46,141	40,666	51,637	44,785
<b>Switzerland—</b>						
Motor spirit .. ..	567	11,521	21,606	15,637	10,589	12,195
Fuel oil .. ..	953	62,230	104,587	116,516	161,089	182,850
Lubricating oil and grease .. ..	419	1,379	843	1,157	2,612	6,171
Petroleum coke .. ..	15,570	17,568	9,430	7,081	10,746	10,050
Asphalt and bitumen ..	1,810	3,533	2,634	2,973	2,395	998
<b>U.S.S.R.—</b>						
Crude petroleum .. ..	29,765,300	36,111,200	42,746,000	49,519,700	45,555,652	58,280,500
Motor spirit .. ..	3,289,400	2,703,800	2,315,600	2,660,000	3,224,654	3,298,600
Kerosine .. ..	1,248,700	875,500	1,146,700	1,232,800	1,162,052	1,300,600
Diesel oil .. ..	7,370,100	6,743,200	7,244,500	8,157,600	8,479,528	9,929,000
Fuel oil .. ..	8,440,900	8,913,300	9,556,200	10,469,200	10,989,845	11,497,600
Lubricating oil and grease .. ..	381,200	290,000	271,400	265,600	262,585	301,100
Paraffin wax .. ..	28,700	32,900	27,500	29,300	24,113	23,400
Bitumen .. ..	18,300	23,100	22,900	29,700	32,184	37,300
<b>Yugoslavia—</b>						
Crude petroleum .. ..	447,903	310,843	142,442	318,900	316,720	287,585
Aviation spirit .. ..	654	17	1,261	1,001	871	747
Motor spirit .. ..	9,771	21,026	22,120	161,626	88,814	125,483
White spirit .. ..	247	379	143	293	17	165
Aviation turbine fuel ..	1,536	—	—	12,804	13,515	17,445
Gas oil .. ..	3,904	1,735	19,695	184,822	265,030	32,496
Fuel oil .. ..	65,276	73,660	132,492	409,443	273,266	80,738
Lubricating oil .. ..	46,016	44,757	51,895	42,863	54,298	15,524
<b>Algeria—</b>						
Crude petroleum .. ..	23,309,700	<i>n.a.</i>	27,027,830	34,057,108	35,483,667	<i>n.a.</i>
<b>Angola—</b>						
Crude petroleum .. ..	312,697	355,348	122,378	1	3	16,499
Fuel oil .. ..	168,262	196,979	203,199	186,500	46,932	253,046
<b>Canary Islands—</b>						
Motor spirit (a) .. ..	189,775	246,218	292,170	172,197	124,140	173,220
Kerosine (a) .. ..	68,377	122,899	108,042	167,149	131,269	65,394
Diesel (a) (b) .. ..	166,484	154,187	196,898	134,972	134,375	94,232
do. (bunkers) (b) ..	119,693	92,134	8,463	57,776	70,945	55,953
Fuel oil (a) (b) .. ..	375,377	592,709	699,500	396,689	92,563	85,389
do. (bunkers) (b) ..	342,856	319,201	33,577	297,156	480,190	385,409
Paraffin wax (a) .. ..	—	—	339	9	454	—
Asphalt (a) .. ..	46,962	37,304	33,735	76,529	57,768	48,600
<b>Ceuta (c)—</b>						
Diesel oil .. ..	28	—	—	—	—	—
do. (bunkers) .. ..	95,360	21,118	24,285	28,597	36,686	28,601
Fuel oil (bunkers) ..	396,006	122,857	157,590	175,780	149,872	98,700
<b>Congo (Republic of)—</b>						
Crude petroleum .. ..	99,464	77,951	69,880	64,153	37,793	<i>n.a.</i>

(a) Excluding exports to Spain and other Spanish Dependencies.

(b) Including foreign produce.

(c) Foreign produce. See imports.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Egypt—</b>						
Crude petroleum ..	3,386,654	2,982,145	1,592,062	1,509,830	503,217	743,507
Motor spirit ..	145,663	470,451	431,176	588,759	383,974	366,577
Kerosine ..	3,937	12,795	15,340	44,462	43,157	38,678
Gas and diesel oils ..	829,686	1,127,705	1,733,455	1,077,438	583,621	177,878
Fuel oil ..						
do. (bunkers) (d) ..						
<b>Gabon—</b>						
Crude petroleum ..	928,871	1,051,237	1,260,982	1,364,557	3,136,002	3,789,982
<b>Libya—</b>						
Crude petroleum ..	23,859,392	44,901,448	63,304,220	71,084,574	81,446,489	122,745,990
<b>Morocco—</b>						
Gas oil ..	3,089	<i>n.a.</i>	39,728	325	7,610	<i>n.a.</i>
<b>South Africa—</b>						
Motor spirit ..	137	4,030	2,784	<i>r</i> 50,446	70,233	58,823
do. (bunkers) (c) ..	5,823	1,272				
Kerosine ..	9,100	22,796	23,415	<i>r</i> 75,956	75,487	29,938
Gas oil (bunkers) (c) ..	14,069	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Diesel oil ..	25,410	64,688	100,391	<i>r</i> 215,602	350,488	238,723
do. (bunkers) ..	17,410	52,816				
do. (bunkers) (c) ..	23,559	8,191				
Fuel oil ..	36,074	587,379	984,725	<i>r</i> 1,212,175	2,319,479	2,217,771
do. (bunkers) ..	360,575	732,558				
do. (bunkers) (c) ..	127,583	18,946				
Asphalt and bitumen ..	26,614	6,095	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Tunisia (bunkers)—</b>						
Aviation spirit ..	—	5,698	—	—	—	<i>n.a.</i>
Fuel oil ..	—	254	3,976	1,821	851	<i>n.a.</i>
Lubricating oil and grease ..	123	143	193	194	176	<i>n.a.</i>
<b>Mexico—</b>						
Crude petroleum ..	989,559	1,113,693	1,037,149	1,453,597	1,413,367	<i>n.a.</i>
Motor spirit ..	20,141	4,739	873	9,601	36,472	2,930
Fuel oil ..	1,578,429	1,378,775	1,482,139	1,022,564	1,121,445	2,050,999
do. (bunkers) ..	55,118	24,679	22,912	34,630	4,386	12,041
Gas oil ..	37,166	302	22	225	2,993	84
Paraffin wax ..	1,664	1,794	2,783	949	1,224	1,582
Natural gas ( <i>million cu. ft.</i> ) (a) ..	47,621	59,510	54,327	16,096	54,365	49,317
<b>Netherlands Antilles—</b>						
Crude petroleum ..	289,000	478,000	369,000	339,000	348,000	162,000
Aviation spirit ..	1,563,000	1,558,000	1,504,000	1,138,000	1,062,000	714,000
Motor spirit ..	2,508,000	2,825,000	3,031,000	3,109,000	3,248,000	3,089,000
White spirit ..	56,000	74,000	72,000	50,000	61,000	34,000
Kerosine ..	859,000	724,000	642,000	444,000	530,000	726,000
Aviation turbine fuel ..	<i>n.a.</i>	2,882,000	3,008,000	3,641,000	4,168,000	4,053,000
Gas oil ..	4,705,000	3,488,000	2,836,000	3,701,000	2,790,000	1,715,000
Diesel oil ..	1,465,000	1,678,000	1,245,000	1,396,000	1,466,000	1,853,000
Fuel oil ..	21,357,000	21,858,000	21,860,000	19,453,000	20,570,000	21,469,000
Lubricating oil ..	599,000	809,000	939,000	654,000	420,000	483,000
Asphalt ..	808,000	898,000	865,000	934,000	999,000	1,080,000
<b>United States—</b>						
Crude petroleum ..	242,465	181,480	224,071	521,432	3,829,808	754,636
Natural gasoline ..	2,224	1,661	(b)	(b)	(b)	(b)
Aviation spirit ..	139,047	97,177	96,747	139,134	210,779	67,763
Motor spirit ..	91,183	51,278	65,843	61,923	152,110	63,007
Other finished light products ..	<i>n.a.</i>	<i>n.a.</i>	261,456	66,325	42,199	60,490
Kerosine ..	65,321	20,319	21,163	31,636	20,034	77,774
Aviation turbine fuel ..	21,173	21,597	19,625	15,028	36,331	32,100

(a) Imports into the United States.

(b) Included with motor spirit.

(c) Foreign produce. See imports.

(d) Bunkers of foreign produce.

EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>United States—(cont.)</b>						
Gas oil and distillate fuel oil .. .. .	2,353,099	910,949	592,233	522,030	587,017	300,862
Residual fuel oil .. .. .	2,228,511	2,790,584	2,187,049	1,931,417	3,225,123	2,912,090
Fuel oil (bunkers) .. .. .	9,168,000	9,205,000	8,520,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Lubricating oil .. .. .	2,444,273	2,410,537	1,986,713	2,067,445	2,400,000	2,100,000
Transformer oil .. .. .	51,194	57,372	50,882	51,819	42,293	49,364
Greases .. .. .	50,244	52,362	50,686	49,911	46,779	38,734
Paraffin wax .. .. .	148,049	179,597	174,514	198,689	175,007	159,906
Petroleum jelly .. .. .	32,100	31,624	29,378	26,544	24,328	25,237
Natural asphalt and bitumen .. .. .	36,478	34,161	37,826	36,252	34,125	34,771
Other asphalt, etc. .. .. .	106,467	99,635	55,292	60,615	44,616	50,486
Petroleum coke .. .. .	1,921,902	2,431,794	2,114,689	2,588,429	2,925,923	3,483,701
Liquefied petroleum gases .. .. .	387,870	452,705	633,744	689,406	554,090	580,657
Natural gas (million cu. ft.) .. .. .	15,964	17,275	23,891	51,754	91,145	100,716
<b>Argentina—</b>						
Crude petroleum .. .. .	100,260	15,960	—	3,039	9,093	185,001
Kerosine .. .. .	7,482	—	1,033	191	38	4
Gas oil .. .. .	33,458	—	5	154,547	46	183
Fuel oil .. .. .	610,169	469,865	878,065	985,792	669,911	907,417
Paraffin wax .. .. .	790	974	758	1,354	1,593	3,550
Asphalt .. .. .	3,271	2,068	1,351	5,723	6,495	4,050
Grahamite ("Rafaelite") .. .. .	828	1,052	443	150	314	137
<b>Bolivia—</b>						
Crude petroleum .. .. .	96,868	39,995	36,104	66,824	300,000	<i>n.a.</i>
Motor spirit .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	5	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	6	<i>n.a.</i>	<i>n.a.</i>
<b>Brazil—</b>						
Crude petroleum .. .. .	354,445	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Fuel oil .. .. .	31,732	728	<i>n.a.</i>	<i>n.a.</i>	85,145	46,000
<b>Colombia—</b>						
Crude petroleum .. .. .	4,295,293	4,181,307	5,521,144	4,816,877	4,243,239	<i>n.a.</i>
Gas and diesel oil .. .. .	17,071	—	—	—	—	<i>n.a.</i>
Fuel oil .. .. .	344,781	686,455	701,951	904,405	1,166,024	<i>n.a.</i>
<b>Ecuador—</b>						
Crude petroleum .. .. .	160,972	76,000	76,147	61,700	37,400	<i>n.a.</i>
<b>Peru—</b>						
Crude petroleum .. .. .	370,882	393,550	338,623	274,495	333,630	<i>n.a.</i>
Natural gasoline .. .. .	—	—	6	—	378	<i>n.a.</i>
Aviation spirit .. .. .	—	225	—	—	7	<i>n.a.</i>
Motor spirit .. .. .	39	1	—	362	—	<i>n.a.</i>
Kerosine .. .. .	322	40	61	36	88	<i>n.a.</i>
Gas oil (a) .. .. .	24,096	6,508	6,000	8,685	32,569	<i>n.a.</i>
Fuel oil and diesel oil .. .. .	75,851	62,964	75,743	41,573	66,322	<i>n.a.</i>
do. (bunkers) .. .. .	27,228	26,371	40,577	38,770	31,648	<i>n.a.</i>
Lubricating oil and grease .. .. .	2,585	1,365	3,686	1,988	748	<i>n.a.</i>
Asphalt .. .. .	—	2	—	—	—	<i>n.a.</i>
<b>Venezuela—</b>						
Crude petroleum .. .. .	113,892,005	120,452,116	119,472,921	116,117,048	124,245,602	127,075,154
Motor spirit .. .. .	2,677,331	2,187,050	2,984,333	2,326,263	2,055,951	2,731,607
Kerosine .. .. .	1,208,577	1,524,263	1,924,508	2,090,325	2,736,613	2,609,130
Aviation turbine fuel .. .. .	218,864	305,882	270,875	177,971	352,639	131,752
Gas oil .. .. .	4,794,759	4,013,734	3,252,247	—	—	—
Diesel oil .. .. .	2,898,506	2,467,774	2,308,104	41,877,901	42,284,214	40,526,700
Fuel oil .. .. .	30,836,490	34,196,501	36,775,054	—	—	—
Lubricating oil .. .. .	259,662	233,360	274,689	255,380	287,061	381,018
Paraffin wax .. .. .	—	—	1,707	—	26	20
Asphalt .. .. .	500,893	478,564	517,804	495,596	552,653	420,179

(a) Including bunkers.

## EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Burma—</b>						
Paraffin wax .. ..	10,661	6,555	4,608	7,970	<i>n.a.</i>	<i>n.a.</i>
<b>Formosa—</b>						
Motor spirit, etc. .. ..	—	1,267	4,104	4,242	9,936	<i>n.a.</i>
Fuel oil .. ..	50,304	80,384	36,524	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Lubricating oil .. ..	12	30	480	23,938	48,876	<i>n.a.</i>
Asphalt .. ..	27,639	12,776	12,221	17,957	27,047	<i>n.a.</i>
<b>Indonesia—</b>						
Crude petroleum .. ..	9,398,856	8,392,000	8,128,000	8,007,000	9,508,000	12,274,000
Motor spirit .. ..	938,825	5,246,000	5,985,000	5,605,000	5,396,000	5,526,000
White spirit .. ..						
Kerosine .. ..						
Gas and diesel oils .. ..	4,193,290	5,246,000	5,985,000	5,605,000	5,396,000	5,526,000
do. do. (bunker oil)						
Fuel oil .. ..						
do. (bunker oil) .. ..	44,063	5,246,000	5,985,000	5,605,000	5,396,000	5,526,000
Lubricating oil .. ..						
Paraffin wax .. ..						
<b>Iran (c)—</b>						
Crude petroleum .. ..	51,383,320	57,128,588	74,122,716	74,774,554	119,379,493	117,003,307
Motor spirit .. ..	2,539,360	2,805,275	3,002,058	3,705,045	2,982,303	4,040,605
Kerosine .. ..	654,616	826,136	565,977	497,150	466,756	783,473
Gas oil .. ..	1,115,294	1,183,547	1,120,734	1,217,418	799,408	1,246,425
Diesel oil .. ..	473,513	386,888	289,941	319,437	365,184	303,532
Fuel oil .. ..	7,091,693	7,990,372	7,802,112	7,776,523	9,308,964	10,858,112
Pitch .. ..	75,884	88,182	37,439	72,295	91,132	67,416
<b>Iraq—</b>						
Crude petroleum .. ..	53,237,116	58,246,932	60,674,147	62,014,787	56,120,790	51,973,014
Motor spirit .. ..	1,426	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. ..	4	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Japan—</b>						
Motor spirit .. ..	238,943	260,413	393,580	369,613	323,065	125,443
Kerosine .. ..	84,275	175,850	178,905	294,266	302,666	193,161
Gas oil .. ..	75,125	163,658	178,561	194,680	174,259	114,429
Lubricating oils .. ..	401,245	90,317	76,361	220,880	82,700	151,710
Paraffin wax .. ..	8,270	11,696	12,737	18,219	14,405	17,781
Asphalt and pitch .. ..	173,592	94,569	91,804	61,086	97,796	127,853
<b>Jordan—</b>						
Motor spirit .. ..	484	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. ..	56	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Asphalt and bitumen .. ..	9,094	6,350	15,037	20,224	7,985	7,880
<b>Kuwait—</b>						
Crude petroleum .. ..	85,323,283	94,443,539	96,261,808	101,684,739	102,313,966	107,452,430
Light distillate .. ..	610,000	1,017,000	6,669,724	6,551,509	6,738,000	10,584,562
Gas oil .. ..	2,144,000	2,446,000				
Diesel oil .. ..	26,000	34,000				
do. (bunkers) .. ..	(b)	(b)	3,673,359	3,664,397	<i>n.a.</i>	<i>n.a.</i>
Fuel oil .. ..	2,064,000	2,291,000				
do. (bunkers) .. ..	3,833,000	3,991,854				
<b>Neutral Zone (a)—</b>						
Crude petroleum .. ..	13,273,000	15,527,000	15,575,000	18,644,000	19,700,000	21,200,000
Fuel oil .. ..	2,288,000	2,622,000	1,458,000	646,000	<i>n.a.</i>	<i>n.a.</i>
<b>Saudi Arabia—</b>						
Crude petroleum .. ..	66,472,079	70,832,950	84,213,009	102,459,954	110,729,266	119,503,878
Aviation spirit .. ..	12,700	16,000	10,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Motor spirit .. ..	967,000	1,234,200	1,771,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. ..	384,500	280,100	136,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Aviation turbine fuel .. ..	566,400	752,600	1,040,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Diesel oil .. ..	1,871,000	1,557,200	1,527,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Fuel oil .. ..	5,759,700	5,922,700	6,438,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Neutral Zone of Kuwait and Saudi Arabia.

(b) Included with fuel oil.

(c) Years ended March 20 following that stated

EXPORTS OF PETROLEUM AND ALLIED PRODUCTS (*cont.*)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Southern Yemen (b) (a)</b>						
Aviation and motor spirits .. .. .	793,513	946,288	1,046,853	1,053,213	730,217	705,608
Kerosine .. .. .	601,913	684,838	620,220	656,209	557,036	500,991
Gas, diesel and fuel oils	2,451,748	2,475,113	2,522,760	2,245,863	3,058,156	3,010,455
Fuel oils (bunkers) ..	3,786,449	3,875,597	3,215,970	3,615,681	1,374,883	424,370
<b>Syria—</b>						
Natural asphalt.. ..	<i>n.a.</i>	100	551	296	285	98
<b>Turkey—</b>						
Motor spirit .. .. .	41,194	46,261	17,615	28,297	5,925	<i>n.a.</i>
Fuel oil .. .. .	663,747	679,382	490,006	381,768	33,009	146,307

(a) Domestic and foreign produce.

(b) Previously Aden.



**IMPORTS OF PETROLEUM AND ALLIED PRODUCTS\***  
(Less Re-exports)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Crude petroleum (g) ..	54,173,381	59,339,000	65,653,203	70,152,881	72,667,395	81,177,261
Aviation spirit (a) ..	170,971	145,257	131,192	132,604	153,849	152,583
Aviation turbine fuel ..	51,227	39,081	32,171	12,199	76,728	85,510
Motor spirit (f) ..	2,888,706	3,151,744	3,163,714	3,462,064	4,427,020	4,502,485
Other spirit ..	986,046	1,762,400	2,091,415	2,922,562	4,104,008	4,394,127
Kerosine ..	791,324	572,547	633,259	666,755	624,426	633,495
Aviation jet fuel ..	216,085	242,715	358,350	355,182	541,277	587,670
Fuel oil (a) ..	8,474,633	8,852,982	10,258,862	9,958,374	9,216,054	7,040,996
Diesel oil ..	154,312	226,710	219,980	337,479	224,991	} 3,463,495
Gas oil ..	2,766,285	2,711,069	2,246,371	2,735,003	3,332,459	
Lubricating oil ..	528,036	532,319	560,608	603,118	639,136	626,790
Greases ..	2,589	752	450	487	347	487
Other oils ..	26,837	2,532	1,752	2,204	2,629	2,747
Mineral jelly ..	3,691	3,920	3,097	3,116	2,851	2,714
Paraffin wax ..	22,730	10,719	11,969	35,611	14,629	12,287
Other petroleum wax ..	764,142	159,074	105,696	75,299	180,433	171,021
Petroleum coke ..	68,012	94,884	92,685	93,197	83,229	72,151
Asphalt and bitumen (d)	82,122	98,060	81,151	76,888	66,827	64,516
Natural gas (Million cu. ft.) ..	—	3,200	22,700	22,200	26,800	34,800
<b>Channel Islands—</b>						
Aviation spirit ..	3,427	3,514	2,734	2,021	1,314	905
Motor spirit ..	27,631	19,432	31,387	23,116	35,043	36,755
Other spirit (b) ..	299	51	128	132	145	147
Kerosine (a) ..	14,037	14,425	18,513	22,137	25,850	22,098
Gas and fuel oil ..	167,218	174,609	201,906	75,074	239,961	253,770
Lubricating oil ..	1,645	1,831	1,745	2,470	1,685	1,429
Greases (b) ..	48	164	23	30	47	35
<b>Gibraltar—</b>						
Aviation spirit (e) (h) ..	4,000	5,000	9,033	10,118	10,070	3,446
Motor spirit ..	8,400	10,000	3,375	3,354	2,913	3,085
Diesel oil ..	} (e) 192,000	(e) 179,000	{ (c) 11,181	(c) 20,399	13,991	9,463
Fuel oil ..						
Lubricating oil ..	1,848	2,250	1,709	1,595	2,561	646
Kerosine ..	65	90	31	33	22	8
<b>Malta—</b>						
Aviation spirit (a) ..	14,428	12,044	9,080	2,131	5,400	5,960
Motor spirit ..	21,445	19,238	23,979	20,264	29,701	27,235
Aviation turbine fuel (a)	47,607	38,831	40,505	44,818	24,038	11,019
Kerosine ..	24,112	30,026	19,953	28,367	22,455	27,471
Fuel oil (a) ..	58,597	91,040	89,835	75,724	130,715	139,850
Gas oil (a) ..	18,301	22,596	33,494	36,441	31,697	36,152
Diesel oil (a) ..	3,939	8,379	1,112	1,540	9,796	16,057
Lubricating oil ..	1,146	1,536	1,339	1,851	1,789	1,712
Paraffin wax ..	421	400	15	215	421	232
Bitumen ..	2,038	1,721	1,999	1,993	3,306	2,344
<b>Gambia—</b>						
Motor spirit ..	3,438	3,690	3,857	4,785	4,869	5,549
Kerosine ..	776	737	860	913	1,190	1,011
Aviation turbine fuel ..	—	—	—	—	2	(c) 6
Other fuel oils ..	14	—	—	—	—	—
Gas oil ..	3,001	1,554	} 3,966	4,684	4,572	5,000
Diesel oil ..	587	1,856				
Lubricating oil ..	294	251	203	3,326	517	313
Asphalt and bitumen ..	689	827	—	11	6	1

\*Excluding the United Kingdom, the following rates have been used for converting Imperial gallons to long tons: Aviation spirit 315, Motor spirit 305, Aviation turbine fuel 275, Kerosine 275, Gas oil 260, Diesel oil 256, Fuel oil 240, Lubricating oil 250, Crude petroleum 245, Asphalt 220, Road oil 220.

(a) Including imports for bunkering purposes.

(b) Jersey only.

(c) Excess of re-exports.

(d) Natural.

(e) Total imports before deduction of re-exports.

(f) Including white spirit.

(g) Including partly refined.

(h) Including aviation turbine fuel.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES (cont.)						
<b>Ghana—</b>						
Crude petroleum ..	205,594	549,593	604,293	487,215	814,973	895,049
Aviation spirit ..	2,859	4,937	1,236	2,055	1,063	8,636
Motor spirit ..	92,810	1,225	1,079	6,295	75	16
White spirit ..	18	345	406	269	383	613
Kerosine ..	26,421	20	—	1	—	—
Aviation turbine fuel ..	12,866	12,288	20,390	8,347	25,232	18,023
Fuel oil (b) ..	52,516	7,002	7,673	—	—	3
Gas oil (b) ..	156,137	222	3,040	—	—	4
Diesel oil ..	14,811	750	2	1	4,110	636
Lubricating oil (b) ..	14,359	15,095	20,759	10,718	15,176	13,869
Greases ..	1,398	954	986	796	3,433	856
Petroleum jelly ..	1,095	259	606	1,255	1,145	929
Asphalt and bitumen ..	7,480	9,489	12,008	9,282	4,320	10,484
<b>Kenya—</b>						
Crude petroleum ..	217,566	1,476,566	1,814,865	1,819,368	1,892,312	1,931,922
Aviation spirit (b) ..	15,033	11,319	5,830	9,861	6,243	5,591
Motor spirit (b) ..	105,171	14,689	821	12,507	4,550	39,996
Kerosine ..	(b) 14,811	(b)(c) 38,628	(c) 5,350	(c) 86,022	(c) 31,877	(c) 80,111
Gas, diesel, fuel oils (b) ..	(c) 576,269	(b)(c) 53,227	(c) 97,819	(c) 15,494	(c) 93,065	(c) 40,964
Lubricating oil (b) ..	5,455	8,529	14,547	8,812	12,307	18,188
Greases ..	679	134	723	463	616	1,484
Petroleum jelly and paraffin wax ..	617	447	903	772	701	534
Asphalt ..	9,493	4,244	842	1,000	2,598	2,203
<b>Malawi—</b>						
Aviation spirit ..	} n.a.	21,102	n.a.	1,598	1,500	1,441
Motor spirit ..		17,895	15,709	20,251	20,089	27,637
Kerosine ..		6,203	6,132	7,925	8,904	10,258
Aviation turbine fuel ..		556	436	2,468	2,669	3,424
White spirit ..		15	2	26	104	154
Gas oil ..		} 23,086	} 1,933	} 2,326	} 31,370	} 46,500
Diesel oil ..						
Fuel oil ..						
Lubricating oil ..						
Grease ..						
Asphalt and bitumen ..	744	1,501	1,318	2,029	2,256	
<b>Mauritius—</b>						
Aviation spirit (b) ..	1,225	1,202	2,607	2,004	851	843
Motor spirit ..	24,161	21,692	23,159	20,266	27,009	20,007
Aviation turbine fuel (b) ..	1,620	3,019	3,453	1,724	8,904	13,678
Kerosine ..	5,165	7,668	13,549	12,226	17,112	12,353
Lubricating oils ..	1,792	2,130	2,292	1,581	2,260	3,257
Gas, diesel, fuel oils (b) ..	34,617	68,393	58,138	52,689	116,127	169,644
Grease ..	185	130	114	108	131	190
Asphalt and pitch ..	2,739	4,455	5,867	1,795	1,792	2,137
Asphalt, natural ..	498	512	1,433	559	1,340	734
<b>Nigeria—</b>						
Aviation spirit (b) ..	(a) 19,374	50,661	6,719	(a) 178	14,751	12,298
Motor spirit ..	228,929	270,871	245,782	(a) 3,459	117,615	257,434
White spirit ..	23,736	1,336	746	1,613	1,870	1,726
Aviation turbine fuel (b) ..	20,730	77,987	64,928	2,754	19,141	67,376
Kerosine ..	132,889	411,782	84,678	13,895	57,810	125,541
Gas oil (b) ..	259,010	320,850	340,225	16,858	129,420	324,078
Diesel oil (b) ..	6,866	(a) 2,613	(a) 862	(a) 2,405	8,803	1,609
Fuel oil (b) ..	199,517	229,817	255,080	(a) 124,689	137,829	261,488
Lubricating oil ..	22,916	24,352	23,000	30,492	33,088	22,756
Petroleum jelly ..	1,734	1,372	960	1,996	2,361	1,703
Asphalt and bitumen ..	9,739	8,698	23,440	(a) 2,354	(a) 7,970	12,407

(a) Excess of re-exports.

(c) Including aviation turbine fuel.

 (b) Including imports for bunkering purposes.  
 See exports.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<i>(cont.)</i>						
<b>Rhodesia (e)—</b>						
Aviation spirit .. ..	7,542	4,333	4,802	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Motor spirit .. ..	237,509	148,162	53,682	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. ..	44,564	30,157	32,473	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Aviation jet fuel .. ..	35,661	32,319	10,110	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
White spirit .. ..	2,260	1,853	976	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other oils .. ..	1,052	1,064	1,218	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Gas oil .. ..	202,243	148,703	46,425	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Fuel oil .. ..	6,105	955	210	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Lubricating oil .. ..	18,263	12,329	13,754	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Greases (c) .. ..	1,601	1,286	1,634	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Paraffin wax .. ..	1,437	2,095	1,671	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Asphalt and bitumen .. ..	17,406	15,009	5,212	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>St. Helena—</b>						
Motor spirit .. ..	270	295	292	313	404	221
Kerosine .. ..	148	105	134	92	238	135
Fuel oils .. ..	115	264	614	397	364	512
Lubricating oil .. ..	17	19	16	12	6	13
<b>Seychelles—</b>						
Motor spirit .. ..	521	639	773	920	1,044	1,161
Kerosine .. ..	544	445	531	604	777	937
Fuel oil .. ..	1,660	2,538	2,885	3,500	4,081	7,263
<b>Sierra Leone—</b>						
Aviation spirit (a) .. ..	1,391	2,065	2,494	1,499	3,173	<i>n.a.</i>
Motor spirit .. ..	21,680	20,973	25,748	24,647	18,818	<i>n.a.</i>
Aviation turbine fuel (a) .. ..	1,924	<i>n.a.</i>	6,157	3,069	2,135	<i>n.a.</i>
Kerosine .. ..	12,886	15,615	9,830	10,131	14,723	<i>n.a.</i>
Gas oil (a) .. ..	131,787	244,060	(d) 3,392	149,449	132,569	<i>n.a.</i>
Diesel oil (a) .. ..						
Fuel oil (a) .. ..	177,673	16,218	25,085	9,833	13,663	<i>n.a.</i>
Lubricating oil .. ..	2,475	3,557	2,174	2,141	2,479	<i>n.a.</i>
Asphalt and bitumen .. ..	5,676	2,947	3,500	<i>n.a.</i>	108	<i>n.a.</i>
<b>Tanzania—</b>						
Crude petroleum .. ..	—	—	—	281,468	658,102	737,397
Aviation spirit (a) .. ..	1,512	3,777	4,669	3,073	5,133	1,663
Motor spirit .. ..	61,057	43,446	11,587	(d) 32,672	21,353	47,708
Aviation turbine fuel (a) .. ..	<i>n.a.</i>	6,232	<i>n.a.</i>	14,783	5,997	12,616
Kerosine .. ..	39,115	32,543	18,972	10,424	2,751	1,648
Gas, diesel, fuel oils (a) .. ..	205,094	66,499	45,553	(d) 26,239	60,031	125,304
Lubricating oil .. ..	6,400	6,622	6,567	9,202	10,417	11,833
Greases .. ..	513	348	473	541	460	763
Petroleum jelly and paraffin wax .. ..	83	81	116	200	151	248
Asphalt .. ..	4,600	910	140	810	819	424
<b>Uganda—</b>						
Aviation spirit (a) .. ..	3,265	3,336	3,604	2,984	4,603	1,131
Motor spirit .. ..	62,152	24,449	37,515	—	—	—
Kerosine .. ..	(a)(b) 32,828	(a)(b) 19,499	(a)(b) 22,152	314	(b) 4,976	521
Gas, diesel, fuel oils .. ..	44,465	19,998	23,731	12	—	—
Lubricating oil .. ..	3,874	4,059	4,440	4,405	5,005	5,528
Greases .. ..	305	317	299	329	378	377
Petroleum jelly and paraffin wax .. ..	156	193	177	166	244	185
Asphalt .. ..	709	626	289	51	(d) 68	412
<b>Zambia—</b>						
Aviation spirit .. ..	} <i>n.a.</i>	2,528	3,183	1,255	3,835	3,237
Motor spirit .. ..		72,769	93,293	69,920	88,174	89,405
Aviation turbine fuel .. ..		2,141	4,141	12,430	13,972	20,994
Kerosine .. ..		11,177	14,208	7,632	14,025	16,954
White spirit .. ..		123	530	36	58	548

(a) Including imports for bunkering purposes. See exports.

(d) Excess of re-exports.

(b) Including aviation turbine fuel.

(c) Including mineral jelly.

(e) Figures for 1963 relate to Rhodesia and Nyasaland.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968			
<b>COMMONWEALTH COUNTRIES (cont.)</b>									
<b>Zambia (cont.)—</b>									
Gas oil .. .. .	} <i>n.a.</i>	{ 50,529	{ 65,741	{ 78,293	{ 140,916	179,177			
Diesel oil .. .. .							815	2,088	4,009
Fuel oil .. .. .							816	2,116	4,276
Lubricating oil and grease .. .. .							6,862	10,837	11,317
Paraffin wax .. .. .							381	716	1,390
<b>Canada—</b>									
Crude petroleum .. .. .	21,102,981	19,137,461	19,224,555	20,868,127	22,771,331	23,698,478			
Aviation spirit .. .. .	38,818	38,279	19,008	17,357	40,185	14,986			
Motor spirit .. .. .	242,898	236,183	252,221	276,032	475,491	478,359			
Aviation turbine fuel .. .. .	(c) 25,058	166,594	261,089	265,885	417,594	618,407			
Kerosine, etc. .. .. .	25,058	22,525	34,946	51,946	234,895	272,257			
Lubricating oils .. .. .	157,164	187,759	225,931	256,473	228,788	232,443			
Diesel oil .. .. .	382,818	418,501	866,260	852,732	635,768	829,903			
Fuel oil .. .. .	3,416,641	4,193,310	6,210,475	5,979,186	7,048,184	7,026,868			
Other petroleum oils .. .. .	5,226	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>			
Liquefied petroleum gas .. .. .	8,945	7,135	7,965	6,680	22,361	32,740			
Grease .. .. .	6,534	6,331	6,814	5,984	5,746	5,962			
Petroleum jelly .. .. .	(c) 1,478	1,478	1,476	2,084	2,266	2,443			
Paraffin wax .. .. .	16,751	15,510	14,971	6,701	7,000	10,155			
Refined asphalts and road oils .. .. .	51,306	{ 39,918	{ 55,784	{ 25,463	{ 51,301	{ 51,706			
Natural asphalt .. .. .		{ 5,968	{ 4,432	{ 11,616	{ 4,627	{ 3,015			
Petroleum coke .. .. .	328,943	(d) 391,381	(d) 366,308	(d) 445,673	(d) 505,211	(d) 501,256			
Natural gas (million cubic feet) .. .. .	6,877	8,046	15,673	43,551	52,872	88,228			
<b>Antigua—</b>									
Aviation spirit .. .. .	5,178	4,096	3,266	4,874	7,397	<i>n.a.</i>			
Motor spirit .. .. .	3,629	1,856	3,433	5,747	63,125	<i>n.a.</i>			
Kerosine .. .. .	21,125	10,626	18,635	35,105	20,579	<i>n.a.</i>			
Fuel oils .. .. .	7,482	5,314	10,377	117,090	7,821	<i>n.a.</i>			
Lubricating oil .. .. .	235	229	322	2,798	1,423	<i>n.a.</i>			
<b>Bahamas—</b>									
Motor spirit .. .. .	42,357	46,056	49,046	47,600	60,682	65,797			
Kerosine .. .. .	818	5,822	5,764	8,898	18,440	31,582			
Fuel oils .. .. .	80,258	113,587	103,820	107,896	139,025	150,971			
Lubricating oil .. .. .	1,220	1,680	1,768	1,912	6,856	2,100			
<b>Barbados—</b>									
Crude petroleum .. .. .	29,266	24,589	39,036	72,276	91,892	93,227			
Aviation spirit (b) .. .. .	2,512	1,880	2,108	3,259	13	521			
Motor spirit .. .. .	21,725	20,411	12,675	14,557	2,790	36			
Kerosine (a) (b) .. .. .	17,850	17,997	19,811	13,108	14,389	33,354			
Gas oil and diesel oil (b) .. .. .	} 262,301	} 93,853	} 147,956	} 275,091	} 241,302	{ 90,430			
Fuel oil (b) .. .. .									
Lubricating oil .. .. .							862	831	1,030
<b>Bermuda (b)—</b>									
Aviation and motor spirits .. .. .	59,517	55,053	49,206	40,552	33,162	16,169			
Aviation turbine fuel .. .. .	37,794	20,711	46,023	30,635	46,288	99,260			
Kerosine .. .. .	16,583	27,398	34,045	35,664	28,856	13,720			
Diesel oil .. .. .	40,413	41,819	22,713	844,453	806,867	42,758			
Fuel oil .. .. .	22,759	29,610	34,509	12,916	33,373	25,507			
Lubricating oil .. .. .	894	941	718	945	1,150	1,095			
Asphalt .. .. .	—	1,832	1,157	1,130	2,580	2,920			

(a) Including aviation turbine fuel.

(b) Including imports for bunkering purposes. See exports.

(c) Included with "Other products".

(d) Including pitch coke.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
<b>British Honduras—</b>						
Aviation spirit .. ..	489	143	30	—	1,208	—
Motor spirit .. ..	6,688	9,288	7,873	9,385	10,746	8,365
Kerosine .. ..	3,497	3,633	3,748	4,435	3,897	3,811
Diesel and fuel oils ..	7,881	8,620	14,335	12,873	19,255	17,330
Lubricating oil .. ..	6,648	522	770	948	809	884
Asphalt, etc. .. ..	1,447	42	14	731	1,174	2,386
<b>Cayman Islands—</b>						
Aviation and motor spirits .. ..	1,584	2,295	1,780	2,479	3,123	2,209
Kerosine .. ..	754	1,083	925	885	514	140
Diesel oil .. ..	1,036	1,321	908	1,823	1,820	2,294
<b>Dominica—</b>						
Aviation and motor spirits .. ..	3,176	2,665	3,093	3,407	3,816	4,076
Kerosine .. ..	1,176	1,185	1,312	1,180	1,471	1,475
Fuel oil and diesel oil ..	988	1,166	1,299	1,356	1,855	1,724
Lubricating oil .. ..	71	107	130	133	160	112
Road oil .. ..	239	496	1,535	550	574	535
<b>Grenada—</b>						
Aviation and motor spirits .. ..	3,498	3,878	4,231	4,873	5,373	6,202
Kerosine .. ..	1,458	1,947	2,285	2,479	2,704	2,786
Fuel oils .. ..	1,257	708	1,468	2,285	3,759	3,765
Lubricating oil .. ..	90	108	178	133	177	499
Road oil .. ..	27	605	6,451	446	16,493	1,434
<b>Jamaica—</b>						
Crude Petroleum .. ..	—	548,332	1,563,971	1,326,919	951,574	1,130,507
Aviation spirit .. ..	(a) 14,765	(a) 11,207	(a) 6,576	(a) 3,657	8,833	(a) 2,620
Motor spirit .. ..	83,602	36,731	750	109	12,408	12,582
Kerosine .. ..	74,290	48,530	1,559	(a) 5,516	34,907	(a) 39,625
Gas oil .. ..	(a) 49,644	(a) 30,463	(a) 18,695	(a) 659	53,580	(a) 37,871
Diesel oil .. ..	(a) 83,216	(a) 35,127	(a) 12,629	(a) 15,177	76,735	(a) 57,218
Fuel oil .. ..	(a) 519,478	(a) 427,901	(a) 47,467	(a) 127,880	318,813	(a) 262,694
Lubricating oil .. ..	5,135	5,818	6,456	8,591	4,990	7,319
Grease .. ..	300	324	8	338	365	395
Petroleum jelly .. ..	279	296	230	322	333	290
Paraffin wax .. ..	23	57	101	82	176	316
Natural asphalt .. ..	3,708	6,589	1,804	792	1,439	6,496
<b>Montserrat—</b>						
Motor spirit .. ..	251	517	28	n.a.	1,001	n.a.
Kerosine .. ..	105	326	222	n.a.	279	n.a.
Fuel oils .. ..	322	517	917	n.a.	1,167	n.a.
Lubricating oil .. ..	46	61	31	n.a.	95	n.a.
<b>St. Kitts—</b>						
Motor spirit .. ..	1,559	1,707	1,983	2,295	2,320	n.a.
Kerosine .. ..	1,793	1,983	2,079	2,284	1,987	n.a.
Fuel oils .. ..	2,201	1,679	2,801	2,949	1,138	n.a.
Lubricating oil .. ..	146	161	154	173	333	n.a.
<b>St. Lucia—</b>						
Motor spirit .. ..	2,758	3,067	3,550	4,165	4,408	4,741
Kerosine .. ..	1,174	1,187	1,296	1,481	1,557	1,533
Fuel oil .. ..	2,804	3,181	3,351	3,738	4,756	5,114
Lubricating oil .. ..	142	128	229	189	207	174
Road oil .. ..	699	1,056	10	1	2,493	1,339
<b>St. Vincent—</b>						
Aviation and motor spirits .. ..	3,427	2,708	2,484	2,987	2,973	n.a.
Kerosine .. ..	1,232	1,643	1,503	1,718	1,721	n.a.
Gas, diesel and fuel oils .. ..	819	982	810	1,025	899	n.a.

(a) Including imports for bunkering purposes.  
See exports.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968					
<b>COMMONWEALTH COUNTRIES (cont.)</b>											
St. Vincent (cont.)—											
Lubricating oil .. .. .	101	296	87	86	64	n.a.					
Road oil .. .. .	389	585	804	833	623	n.a.					
Asphalt .. .. .	—	n.a.	19	20	28	n.a.					
Trinidad and Tobago—											
Crude petroleum .. .. .	9,740,022	11,998,998	12,832,504	12,761,889	11,180,069	12,642,930					
Aviation and motor spirits .. .. .	13,496	46,484	128	31,028	77,543	13,819					
Fuel oil .. .. .	8	<sup>(c)</sup> 1	5	29,931	61,021	9,091					
Lubricating oil .. .. .	8,286	8,048	4,452	4,114	3,821	4,263					
Greases .. .. .							232	297	265	265	242
Petroleum jelly .. .. .							146	126	108	157	100
Paraffin wax .. .. .	21	96	217	438	615	550					
Virgin Islands—											
Motor spirit .. .. .	891	1,241	1,320	1,522	183	2,993					
Kerosine .. .. .	395	317	386	638	472	559					
Diesel oil .. .. .	372	578	791	1,397	926	823					
Lubricating oil .. .. .	35	31	64	106	293	542					
Falkland Islands—											
Motor spirit .. .. .	77	303	201	268	317	272					
Kerosine .. .. .	7	24	8	14	18	8					
Gas and diesel oils .. .. .	11,498	4,127	2,612	3,238	5,783	169					
Fuel oil (b) .. .. .	14,944	5,705	3,127	n.a.	n.a.	n.a.					
Lubricating oil .. .. .	12	40	23	20	32	29					
Guyana—											
Aviation spirit (b) .. .. .	n.a.	3,472	3,739	2,460	4,075	4,329					
Motor spirit .. .. .	n.a.	21,329	22,178	27,614	25,638	35,872					
Kerosine .. .. .	n.a.	18,681	22,369	35,130	25,698	25,658					
Gas, diesel and fuel oils .. .. .	n.a.	480,647	317,086	324,948	366,485	365,083					
Lubricating oil .. .. .	n.a.	2,263	3,259	3,486	3,896	4,316					
Grease .. .. .	n.a.	237	349	360	491	436					
Paraffin wax .. .. .	n.a.	33	21	40	27	24					
Petroleum jelly .. .. .	n.a.	54	56	89	66	117					
Road oil .. .. .	n.a.	652	1,201	3,108	355	348					
Asphalt and bitumen .. .. .	n.a.	1,548	3,922	10,071	11,371	10,708					
Asphalt natural .. .. .	n.a.	191	351	153	798	415					
Bahrain Islands (a)—											
Crude petroleum .. .. .	8,799,000	7,666,000	6,740,000	6,753,000	8,459,000	7,552,000					
Brunei—											
Aviation and motor spirits .. .. .	272	509	1,023	2,124	2,729	2,905					
Kerosine .. .. .	1,741	1,557	717	1,764	1,309	2,331					
Diesel oil .. .. .	<sup>(c)</sup> 98	<sup>(c)</sup> 8	<sup>(c)</sup> 16	8	15	2					
Fuel oil .. .. .	—	<sup>(c)</sup> 3	<sup>(c)</sup> 1	4	—	179					
Lubricating oil .. .. .	934	1,019	1,292	1,813	1,623	1,863					
Grease .. .. .	50	95	25	53	35	58					
Ceylon—											
Aviation spirit (b) .. .. .	1,683	929	9,327	13,334	12,791	13,410					
Motor spirit .. .. .	136,683	102,780	161,813	159,313	159,266	219,506					
Kerosine .. .. .	136,826	151,694	180,783	291,577	224,329	260,772					
Gas oil (b) .. .. .	129,409	111,428	186,450	138,080	193,525	260,773					
Diesel oil (b) .. .. .	131,569	136,650	141,058	165,925	168,234	171,120					
Fuel oil (b) .. .. .	332,784	305,286	287,568	549,078	457,181	447,858					
Lubricating oil .. .. .	16,363	9,857	14,463	15,259	12,498	12,056					
Other oils and greases .. .. .	174	117	399	653	250	688					
Paraffin wax .. .. .	108	642	615	1,735	803	612					
Asphalt (incl. natural) .. .. .	4,183	10,314	5,777	21,161	18,602	4,380					

(a) British Protected State.

(b) Including imports for bunkering purposes. See exports.

(c) Excess of re-exports.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
<b>Cyprus—</b>						
Aviation spirit (a) ..	3,617	6,392	6,211	2,253	1,544	2,064
Motor spirit ..	56,798	54,782	63,870	68,336	75,637	77,034
Aviation turbine fuel ..	29,303	20,734	4,393	3,624	—	—
Kerosine, etc. ..	24,501	26,560	18,766	30,360	34,597	63,382
Gas oil ..	76,916	82,122	86,365	86,436	99,896	134,118
Other fuel oils ..	126,936	99,707	162,584	189,224	192,040	228,249
Lubricating oil ..	4,370	2,715	4,382	4,354	4,898	5,299
Paraffin wax ..	93	206	111	126	152	n.a.
Asphalt and bitumen ..	15,872	10,480	10,600	12,156	15,215	13,698
<b>Hong Kong—</b>						
Aviation spirit ..	4,885	3,273	4,977	11,019	11,502	3,729
Motor spirit ..	66,346	64,359	65,285	74,777	80,600	83,093
White spirit ..	8,168	9,690	14,866	20,869	31,406	28,117
Aviation turbine fuel ..	106,830	98,127	159,299	161,536	201,869	244,270
Kerosine ..	141,708	130,675	130,538	169,500	178,538	173,563
Diesel oil and gas oil ..	271,116	264,440	300,774	377,854	389,758	460,656
Fuel oil ..	1,124,850	1,225,510	1,356,817	1,389,896	1,754,796	1,872,851
Lubricating oil ..	13,430	19,708	13,828	16,761	15,624	24,306
Greases ..	904	849	1,060	979	848	974
Petroleum jelly ..	315	376	183	290	310	303
Paraffin wax ..	1,317	1,141	1,120	7,132	5,727	4,248
Asphalt and bitumen ..	10,958	13,547	12,542	12,469	12,621	12,650
Asphalt (natural) ..	403	325	357	323	215	185
<b>India (b)—</b>						
Crude petroleum ..	7,024,269	4,161,948	5,427,392	5,067,363	9,788,560	5,969,060
Aviation and motor spirits ..	80,038	63,114	n.a.	n.a.	n.a.	n.a.
Other spirit ..						
Kerosine ..	1,289,740	848,808	n.a.	n.a.	n.a.	n.a.
Diesel oil ..	560,081	3,721,319	n.a.	n.a.	n.a.	n.a.
Fuel oil ..	905,390	296,173	n.a.	n.a.	n.a.	n.a.
Lubricating oil and grease ..	380,703	281,209	n.a.	n.a.	n.a.	n.a.
Petroleum jelly ..	1,570	3,622	n.a.	n.a.	n.a.	n.a.
Paraffin wax ..	—	2	n.a.	n.a.	n.a.	n.a.
Asphalt and bitumen ..	6,963	3,056	642	310	2,366	498
<b>Malaysia (West)—</b>						
Crude petroleum ..	n.a.	n.a.	2,224,834	2,645,259	2,856,612	3,082,882
Aviation spirit ..	n.a.	n.a.	1,866	4,159	349	155
Motor spirit ..	n.a.	n.a.	96,897	82,464	92,436	91,940
White spirit ..	n.a.	n.a.	8,969	5,755	10,955	8,159
Aviation turbine fuel ..	n.a.	n.a.	14,033	21,052	9,409	2,447
Kerosine ..	n.a.	n.a.	43,543	41,458	41,240	49,114
Gas oil ..	n.a.	n.a.	223,253	286,927	342,530	376,012
Diesel oil ..	n.a.	n.a.	30,671	37,594	41,509	38,642
Fuel oil ..	n.a.	n.a.	16,578	35,865	20,526	45,740
Lubricating oil ..	n.a.	n.a.	21,917	22,534	24,078	22,998
Paraffin wax ..	n.a.	n.a.	3,087	2,521	2,409	2,945
Petroleum jelly ..	n.a.	n.a.	349	391	452	389
Grease ..	n.a.	n.a.	1,392	1,244	1,389	1,094
Asphalt and bitumen ..	n.a.	n.a.	10,773	9,901	8,411	9,910
Natural asphalt ..	n.a.	n.a.	144	264	1,084	405
<b>Pakistan—</b>						
Motor spirit ..	88,402	31,782	n.a.	n.a.	n.a.	n.a.
Kerosine ..	157,995	1,026,625	n.a.	n.a.	n.a.	n.a.
Diesel oil ..	827,844	1,039,519	n.a.	n.a.	n.a.	n.a.
Fuel oil ..						
Lubricating oil ..	84,816	52,903	n.a.	n.a.	n.a.	n.a.
Paraffin wax ..	1,155	2,293	n.a.	n.a.	n.a.	n.a.
Asphalt ..	30,140	53,809	n.a.	n.a.	n.a.	n.a.

(a) Including imports for bunkering purposes. See exports.

(c) Excess of re-exports.

(b) Years ended March 31 following that stated.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES (cont.)						
Sabah—						
Aviation and motor spirits (a) .. ..	23,974	21,584	20,762	r 42,988	27,997	47,522
Kerosine .. ..	12,771	11,115	(c) 24,389	(c) 20,092	(c) 23,056	(c) 33,897
Diesel oil (a) .. ..	44,314	49,016	54,665	66,862	66,454	98,556
Fuel oil (a) .. ..	8,519	8,819	10,492	11,878	13,654	14,028
Lubricating oil .. ..	3,292	3,323	4,691	5,082	4,970	5,981
Sarawak—						
Crude petroleum (d) .. ..	3,382,548	3,494,507	3,826,614	r 4,519,558	4,924,312	5,818,018
Aviation spirit .. ..	226	1,921	4,062	2,463	526	550
Motor spirit .. ..	14,489	15,447	22,005	22,775	22,725	28,652
Kerosine .. ..	13,176	13,874	9,423	9,516	9,847	17,248
Aviation turbine fuel .. ..	—	3,392	20,641	18,945	13,070	6,533
Gas oil .. ..	18,342	28,777	21,981	25,132	25,167	28,554
Diesel oil .. ..	4,319	7,130	22,288	19,878	15,343	18,417
Fuel oil .. ..	(b) 8,895	310	999	4,985	2,614	3,778
Lubricating oil .. ..	2,776	2,024	3,746	4,061	4,206	4,380
Paraffin wax .. ..	12	11	5	5	7	8
Mineral jelly .. ..	39	22	32	19	19	24
Singapore—						
Crude petroleum .. ..	3,561,908	2,298,787	2,611,311	3,616,063	5,427,414	8,894,082
Aviation spirit .. ..	158,218	150,415	221,543	270,271	318,957	351,439
Motor spirit .. ..	657,002	573,634	443,463	584,147	521,547	513,677
White spirit .. ..	157,860	48,312	38,684	38,721	35,710	39,524
Aviation turbine fuel .. ..	206,981	173,903	542,677	980,487	1,364,987	897,038
Kerosine .. ..	340,838	293,804	443,462	353,304	294,688	271,128
Gas oil .. ..	819,839	655,721	677,199	819,726	900,700	1,172,689
Diesel oil .. ..	545,693	358,887	201,630	238,024	206,812	144,259
Fuel oil .. ..	2,457,507	3,428,784	4,165,714	3,466,158	3,581,234	3,735,555
Lubricating oil .. ..	50,528	63,912	88,181	120,708	117,406	148,969
Petroleum jelly .. ..	578	298	347	232	388	386
Grease .. ..	1,349	505	736	690	881	702
Asphalt and bitumen .. ..	13,414	4,879	5,888	6,062	3,163	6,259
Petroleum coke .. ..	6	3	26,065	21,048	76,522	3,004
Australia (g)—						
Crude petroleum (e) .. ..	15,053,555	15,573,406	16,855,183	18,049,343	20,228,316	20,397,361
Aviation spirit (a) .. ..	46,889	63,736	68,573	63,711	60,763	51,005
Motor spirit .. ..	723,805	704,752	688,752	714,006	370,863	317,848
White spirit .. ..	49,014	49,279	25,130	(f) 6,207	(f) 4,180	(f) 4,815
Kerosine .. ..	224,597	166,176	92,450	87,425	50,921	57,458
Aviation turbine fuel (a) .. ..	119,923	87,207	150,619	177,143	83,164	47,316
Lubricating oil .. ..	235,195	183,843	119,769	73,524	57,039	50,469
Gas, diesel and fuel oils (a) (e) .. ..	189,503	220,561	300,963	309,953	212,896	191,570
Other oils .. ..	11,795	10,725	7,776	n.a.	n.a.	n.a.
Petroleum jelly .. ..	1,817	1,711	1,748	2,043	901	1,479
Paraffin wax .. ..	8,871	10,764	8,700	13,040	10,825	11,747
Natural asphalt .. ..	1,777	1,494	486	3,711	644	1,068
Bitumen and pitch .. ..	6,175	1,610	2,207	190	230	205
Fiji—						
Aviation spirit (a) .. ..	3,733	3,472	3,253	3,698	2,287	2,519
Motor spirit .. ..	21,256	27,865	26,944	22,462	24,430	25,415
Aviation turbine fuel (a) .. ..	32,028	43,009	55,310	53,285	63,223	66,928
Kerosine .. ..	7,502	9,552	10,995	7,922	8,186	10,284
Gas oil (a) .. ..	10,113	19,066	24,075	16,332	23,208	23,097
Diesel oil (a) .. ..	42,535	50,453	41,482	46,594	40,067	50,652
Fuel oil (a) .. ..	4,366	38,405	16,599	23,081	19,989	25,651
Lubricating oil .. ..	1,593	2,242	1,967	2,187	2,082	2,131
Greases .. ..	174	188	217	150	190	169
Bitumen .. ..	1,595	1,793	2,832	1,665	1,956	1,124

(a) Including imports for bunkering purposes. See exports.

(b) Excess of re-exports.

(c) Including aviation turbine fuel.

(d) Total imports before deduction of re-exports.

(e) Revised series up to 1967. "Topped crudes" previously included with "Gas, diesel and fuel oils," now included with "Crude petroleum".

(f) Owing to reclassification not strictly comparable with earlier years.

(g) Years ended June 30 of that stated.



## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>New Guinea (c)—</b>						
Aviation and motor spirits .. .. .	26,979	25,955	26,042	32,477	37,161	42,413
Kerosine .. .. .	4,926	4,647	6,739	5,477	5,273	(d) 12,584
Fuel oils .. .. .	27,587	26,122	30,703	43,750	55,051	66,210
Lubricating oil .. .. .	1,261	1,342	1,892	2,597	2,332	2,511
<b>New Hebrides—</b>						
Aviation spirit .. .. .	207	257	258	307	402	471
Motor spirit .. .. .	1,882	1,992	1,748	2,227	1,921	2,785
Kerosine .. .. .	1,049	593	712	730	520	1,136
Lubricating oil .. .. .	300	268	438	333	496	335
Other oils .. .. .	5,465	6,469	8,084	8,099	11,053	14,714
<b>New Zealand (c)—</b>						
Crude petroleum .. .. .	—	189,467	2,599,763	2,732,753	2,907,971	2,450,180
Aviation spirit (a) .. .. .	980,930	1,021,616	512,473	101,123	242,003	233,462
Motor spirit .. .. .						
White spirit .. .. .	16,890	20,740	26,528	20,864	23,189	16,628
Aviation turbine fuel .. .. .	47,763	59,242	84,904	93,272	115,837	108,124
Kerosine .. .. .	29,706	48,431	37,633	31,766	33,243	30,722
Gas oil .. .. .	306,196	391,742	204,988	74,589	165,056	122,425
Diesel oil (a) .. .. .	95,430	106,976				
Fuel oil (a) .. .. .	366,137	379,428	67,709	n.a.	5,239	—
Lubricating oil (a) .. .. .	39,990	41,071	47,174	5,472	49,319	46,736
Transformer oil .. .. .	1,327	2,198	2,089	389	247	n.a.
Petroleum jelly .. .. .	346	353	385	387	388	n.a.
Paraffin wax .. .. .	1,677	1,738	2,169	3,045	1,937	1,576
Asphalt and bitumen .. .. .	63,636	62,203	31,908	911	671	n.a.
do. natural .. .. .	637	436	368	446	352	202
<b>Papua (c)—</b>						
Aviation and motor spirits .. .. .	13,528	18,814	14,265	13,314	21,621	19,432
Kerosine .. .. .	2,182	2,401	(d) 5,398	(d) 6,872	(d) 8,094	(d) 9,046
Fuel oil .. .. .	6,781	7,947	18,111	15,482	15,880	18,529
Lubricating oil .. .. .	512	834	885	1,018	973	975
<b>Solomon Islands—</b>						
Aviation spirit .. .. .	172	269	404	401	349	315
Aviation turbine fuel .. .. .						
Motor spirit .. .. .	899	1,020	1,218	1,268	1,545	1,937
Kerosine .. .. .	591	708	771	758	837	951
Fuel oils .. .. .	3,176	4,210	5,078	5,243	7,642	8,702
Lubricating oil .. .. .	145	189	300	287	367	445
<b>Western Samoa—</b>						
Motor spirit .. .. .	4,019	4,575	4,383	4,386	4,583	4,306
Kerosine .. .. .	910	1,000	1,021	1,013	1,091	1,154
Fuel oil .. .. .	1,854	1,961	2,675	2,163	2,569	2,919
Lubricating oil .. .. .	104	175	200	155	207	185
<b>Irish Republic—</b>						
Crude petroleum .. .. .	1,740,789	1,861,734	2,167,718	1,669,114	2,681,472	2,445,050
Aviation spirit (a) .. .. .	21,025	22,503	15,883	17,265	11,567	11,527
Motor spirit .. .. .	7,876	25,055	14,790	91,638	50,238	43,810
White spirit .. .. .	2,984	4,539	3,925	3,293	3,720	3,583
Kerosine .. .. .	88,594	83,867	77,865	87,697	70,096	86,401
Aviation turbine fuel (a) .. .. .	94,896	124,715	129,881	139,499	162,949	156,971
Gas and diesel oils (a) .. .. .	9,428	10,597	25,712	85,976	46,614	63,805
Fuel oil (a) .. .. .	254,397	277,448	394,628	623,516	763,130	763,242
Lubricating oil .. .. .	22,426	26,846	23,831	28,916	29,286	32,100
Greases .. .. .	241	352	267	276	317	549
Other oils .. .. .	3,050	2,341	3,188	11,464	40,118	48,002
Paraffin wax (b) .. .. .	2,783	1,930	1,817	2,897	2,386	2,374
Asphalt and bitumen .. .. .	3,244	5,089	2,657	3,227	11,896	66,513
do. natural .. .. .	7,711	3,198	12	781	580	3,101

(a) Including imports for bunkering purposes. See exports. (c) Years ended June 30 of that stated.

(b) Including other mineral jellies and waxes.

(d) Including aviation turbine fuel.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Crude petroleum ..	811,662	775,394	651,219	1,143,989	1,073,627	1,471,914
Motor spirit .. ..	514,900	468,158	459,211	592,388	578,517	703,012
White spirit .. ..	6,409	6,589	7,013	7,263	6,251	4,929
Gas oil .. .. .	69,110	79,937	102,391	110,526	113,381	104,692
Fuel oil .. .. .	1,007,613	1,222,641	1,177,398	1,196,339	1,208,651	1,657,194
Lubricating oil, etc. ..	43,412	48,044	49,104	69,879	54,562	56,531
Petroleum jelly .. ..	272	293	295	320	308	355
Paraffin wax .. ..	6,344	6,856	7,205	7,068	7,237	8,073
Ozokerite and ceresin (a)	283	205	143	118	175	93
Natural asphalt .. ..	2,392	1,921	1,817	1,312	1,074	865
Petroleum coke .. ..	8,763	10,794	6,601	15,560	15,871	10,272
Bitumen, etc. .. ..	106,379	112,647	131,762	157,975	188,801	193,815
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Crude petroleum ..	11,860,905	13,074,070	15,222,247	16,325,827	17,309,891	23,024,873
Motor spirit, etc. ..	343,866	269,138	324,763	362,132	418,734	614,226
Kerosine .. .. .	22,002	28,607	16,981	17,142	55,702	144,450
Gas oil .. .. .	1,123,187	1,146,457	1,507,141	1,863,925	2,238,959	2,031,746
Fuel oil .. .. .	2,168,449	2,793,024	2,150,607	2,510,756	2,513,771	2,835,255
Lubricating oil .. ..	205,704	220,214	208,609	263,043	274,770	291,897
Other heavy oils .. ..	55,885	13,096	36,164	21,789	16,310	15,367
Petroleum jelly .. ..	1,348	1,204	1,196	1,289	982	935
Paraffin wax .. ..	6,711	8,007	7,067	7,063	7,974	8,232
Ozokerite and ceresin (a)	163	109	318	339	198	150
Petroleum coke .. ..	79,173	81,684	84,624	96,694	89,062	107,053
Natural asphalt .. ..	4,264	4,972	3,399	7,354	7,583	4,188
Pitch .. .. .	25,515	26,967	33,139	39,483	41,269	52,925
<b>Bulgaria—</b>						
Crude petroleum ..	444,000	1,782,000	2,165,000	2,562,873	2,758,730	<i>n.a.</i>
<b>Denmark—</b>						
Crude petroleum ..	1,719,782	2,924,240	3,296,634	4,571,483	6,434,807	6,646,697
Aviation spirit .. ..	33,274	58,450	63,751	57,405	51,027	45,718
Motor spirit .. .. .	896,982	983,904	1,112,099	1,017,074	781,043	891,031
White spirit .. .. .	17,106	17,758	13,312	10,618	11,886	12,954
Kerosine .. .. .	391,897	150,999	144,582	146,544	110,227	116,341
Gas oil .. .. .	1,298,907	1,201,468	1,004,792	(b)3,075,648	(b)2,659,224	(b)2,952,453
Diesel oil .. .. .	1,056,309	1,251,575	1,736,059	(b) 159,931	(b) 46,543	(b) 62,075
Fuel oil .. .. .	2,378,893	2,653,885	2,725,151	2,696,835	2,160,704	2,787,653
Lubricating oil .. ..	66,115	85,701	80,994	103,692	85,481	97,418
Grease .. .. .	1,427	1,320	1,788	1,759	1,333	1,428
Petroleum jelly .. ..	504	450	511	525	582	507
Ozokerite, etc. .. ..	1,093	1,164	799	1,008	1,247	1,036
Paraffin wax .. .. .	5,768	6,328	7,283	7,958	8,011	8,545
Natural asphalt .. ..	1,976	2,473	1,434	1,407	1,384	1,703
Other asphalt .. ..	108,790	149,529	177,851	187,780	207,964	202,191
<b>Faroe Islands—</b>						
Motor spirit .. .. .	2,578	2,302	2,950	3,217	3,644	<i>n.a.</i>
Kerosine .. .. .	2,080	3,398	3,860	2,363	3,357	<i>n.a.</i>
Fuel oils .. .. .	31,553	30,280	34,421	36,478	45,144	<i>n.a.</i>
Lubricating oil, etc. ..	492	530	615	600	559	<i>n.a.</i>
<b>Finland—</b>						
Crude petroleum ..	1,524,865	3,040,341	2,271,436	2,600,668	4,891,801	5,722,367
Motor spirit .. .. .	18,911	12,210	26,457	<i>n.a.</i>	83,141	48,093
White spirit .. .. .	5,255	5,189	8,194	5,698	4,587	6,057
Kerosine .. .. .	26,507	17,300	23,183	25,433	20,729	23,201
do. Power .. .. .	6	35	2	39	—	2
Fuel oil .. .. .	1,913,954	2,192,472	3,131,687	1,591,760	2,968,904	2,831,357
Lubricating oil .. ..	46,839	59,540	64,440	77,011	65,665	65,094
Petroleum jelly .. ..	470	330	337	394	318	329
Paraffin wax .. .. .	6,912	7,157	8,553	8,103	7,106	7,404
Asphalt, etc. .. ..	14,600	18,446	17,720	19,812	24,827	28,339

(a) Including montan wax.

(b) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>France—</b>						
Crude petroleum ..	42,574,849	48,496,711	57,631,540	61,760,699	71,205,103	51,483,730
Aviation spirit ..	102,261	95,643	(a) 43,283	(a) 77,561	(a) 75,113	(a) 43,084
Motor spirit ..	586,656	499,056	(a) 422,244	(a) 433,651	(a) 432,820	(a) 608,817
White spirit ..	8,913	8,725	(a) 10,776	(a) 11,660	(a) 14,965	(a) 17,861
Kerosine ..	10,028	5,227	(a) 6,555	(a) 7,011	(a) 9,742	(a) 9,971
Lubricating oil ..	19,269	25,898	(a) 28,521	(a) 45,574	(a) 28,502	(a) 16,243
Fuel oil ..	2,529,976	2,588,116	(a) 2,259,217	(a) 2,25,457	(a) 1,210,171	(a) 1,020,055
Gas oil ..	426,176	632,382	(a) 516,782	a 2,275,057	(a) 2,523,082	(a) 2,771,952
Petroleum coke ..	336,418	386,727	196,674	174,183	120,460	116,269
Paraffin wax ..	5,342	4,379	5,097	2,776	2,789	4,504
Ozokerite and ceresin ..	8,679	9,097	130	90	72	89
Petroleum jelly ..	696	706	564	512	581	757
Natural asphalt and bitumen ..	2,153	1,629	2,136	3,052	2,281	2,750
Bitumen ..	184	313	656	3,730	7,212	7,446
Natural gas (mill. cu. ft.)	n.a.	n.a.	11	22	12	10
<b>Germany (Federal)—</b>						
Crude petroleum ..	39,444,856	50,466,543	58,135,270	66,617,607	70,862,200	82,743,329
Aviation spirit ..	159,415	177,076	} 990,978	1,401,074	{ 170,981	198,600
Motor spirit ..	424,246	646,571				
White spirit ..	12,354	21,990	25,037	31,111	35,347	41,471
Kerosine ..	20,092	32,613	15,276	13,020	23,236	45,849
Aviation turbine fuel ..	122,150	190,925	216,711	265,989	350,118	371,959
Gas and diesel oil ..	1,419,579	2,137,570	2,475,567	1,415,487	1,153,249	1,432,161
Fuel oil ..	10,267,190	8,882,234	10,019,372	11,760,103	12,451,914	13,701,558
Lubricating oil, etc. ..	175,330	242,406	189,533	189,373	149,805	171,880
Petroleum jelly ..	1,388	1,741	1,564	1,437	1,359	1,893
Paraffin wax ..	20,959	24,839	21,083	28,565	32,891	31,583
Ozokerite, etc. ..	5	3	—	—	—	—
Natural asphalt and bitumen ..	16,717	18,118	16,437	20,913	18,483	19,628
Bitumen ..	845,838	671,130	488,400	528,359	314,397	271,252
Petroleum coke ..	165,580	194,787	278,803	368,761	317,573	318,555
<b>Germany (East)—</b>						
Crude petroleum ..	3,113,000	4,193,000	5,051,000	6,338,000	6,535,000	7,912,000
<b>Greece—</b>						
Crude petroleum ..	2,129,000	1,678,770	2,548,843	3,064,299	3,929,393	3,791,407
Aviation spirit ..	11,295	11,690	11,927	8,956	10,700	13,452
Motor spirit ..	16,175	15,202	102,142	153,978	82,652	79,749
White spirit ..	1,440	1,866	2,476	2,915	3,746	3,400
Kerosine ..	503	1,359	3,938	3,744	7,513	833
Fuel oil and diesel oil ..	1,385,879	1,220,547	1,978,947	1,275,318	1,031,261	976,434
Lubricating oil, etc. ..	26,809	31,839	37,746	36,815	41,725	47,117
Petroleum jelly ..	101	107	130	108	104	118
Paraffin wax ..	427	448	332	354	265	272
Asphalt and bitumen ..	7,223	16,083	6,605	991	1,518	832
<b>Hungary—</b>						
Crude petroleum ..	1,799,056	1,994,252	2,215,000	2,865,000	2,909,314	3,169,144
Motor spirit ..	88,136	120,656	106,000	55,000	69,879	71,483
Kerosine ..	—	29,320	—	—	—	—
Gas oil ..	177,466	221,783	157,000	129,000	127,947	144,735
Fuel oil ..	133,221	201,134	100,000	258,000	340,535	327,830
<b>Iceland—</b>						
Aviation spirit ..	12,857	14,991	15,265	4,720	11,311	3,301
Motor spirit ..	47,810	42,154	47,247	50,922	52,273	52,000
White spirit ..	491	833	15	485	484	910
Kerosine ..	1,272	3,868	490	835	741	1,369
Gas oil and fuel oil ..	343,875	346,170	374,813	403,481	386,985	332,939
Lubricating oil ..	} 4,267	4,380	4,707	5,204	4,413	4,557
Greases ..						
Paraffin wax ..	188	203	152	174	107	111
Petroleum jelly ..	18	6	16	10	7	14
Asphalt ..	885	416	827	2,174	1,356	2,705

(a) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Italy—</b>						
Crude petroleum ..	45,366,105	54,241,053	66,225,989	74,937,863	85,074,155	86,183,840
Aviation and motor spirits ..	118,775	144,256	279,956	375,110	518,075	168,425
Kerosine ..	3,136	9,632	6,647	6,071	25,469	22,508
Gas oil ..	35,701	1,733,178	1,906,575	2,454,650	2,910,669	3,340,273
Fuel oil ..	3,102,497					
Lubricating oil ..	155,336	145,004	93,198	92,664	117,168	159,453
Petroleum jelly ..	2,140	2,121	1,788	1,646	1,718	1,928
Paraffin wax ..	25,197	29,175	12,864	34,609	37,530	39,681
Pitch ..	200	1,895	330	437	2,697	31,459
Petroleum coke ..	191,438	238,427	220,682	266,364	264,906	267,778
Ozokerite and ceresin ..	280	(a)	(a)	(a)	(a)	(a)
Natural asphalt and bitumen ..	2,496	2,697	2,541	2,569	3,300	2,127
<b>Netherlands—</b>						
Crude petroleum ..	20,560,260	23,067,690	25,962,556	29,174,723	31,367,387	35,230,537
Motor spirit, etc. ..	120,656	277,575	389,719	302,675	502,368	344,861
Kerosine ..	345,505	369,995	374,078	296,709	423,885	566,341
Gas oil ..	1,232,137	1,365,985	1,280,555	1,776,059	1,769,166	1,808,224
Fuel oil ..	2,936,625	3,688,683	4,017,995	3,854,840	4,040,041	2,363,260
Lubricating oil ..	157,096	175,801	123,483	346,038	311,731	363,035
Petroleum jelly ..	2,734	2,570	2,401	1,936	2,164	2,336
Paraffin wax ..	16,939	25,577	16,059	17,419	17,247	16,102
Ozokerite and ceresin (b)	128	166	196	195	158	244
Pitch ..	92,933	115,106	116,099	145,862	189,534	244,332
Petroleum coke ..	39,033	51,592	53,351	97,201	116,697	124,687
Natural asphalt ..	1,417	1,336	1,494	953	1,463	1,936
<b>Norway—</b>						
Crude petroleum ..	2,495,638	2,655,006	2,710,089	2,887,864	3,141,973	4,847,957
Aviation spirit ..	32,381	36,874	45,340	29,880	43,657	28,734
Motor spirit ..	406,661	399,795	444,463	473,503	543,019	443,296
White spirit ..	16,372	19,013	17,254	19,908	19,765	22,988
Kerosine ..	116,888	111,214	134,467	202,092	193,112	188,406
Aviation turbine fuel ..	76,359	93,579	67,222	112,688	106,622	73,034
Diesel oil ..	239,655	295,300	295,781	321,923	314,328	137,067
Gas oil ..	813,741	777,961	855,565	1,018,095	1,060,722	954,485
Fuel oil ..	1,273,368	1,498,522	1,156,662	1,542,826	1,402,718	1,050,526
Lubricating oil ..	39,471	44,548	21,157	51,152	52,893	53,986
Petroleum jelly ..	273	299	339	410	344	714
Paraffin wax ..	2,735	3,149	4,020	4,017	4,124	3,749
Greases ..	1,690	1,791	2,024	1,770	1,722	1,757
Pitch ..	30,929	41,908	51,892	49,679	76,203	99,834
Petroleum coke ..	113,108	144,290	173,943	169,530	190,371	246,092
Asphalt, etc. ..	425	1,889	1,524	1,607	1,323	1,259
<b>Poland—</b>						
Crude petroleum ..	1,393,200	1,680,900	3,164,788	3,293,857	3,551,100	5,493,357
Motor spirit ..	1,090,800					
Kerosine ..	51,800	2,883,060	2,212,454	2,304,654	2,739,971	2,494,898
Fuel oils ..	1,454,700					
Lubricating oil ..	81,178					
Paraffin wax ..	16,640					
Asphalt ..	68,991					
Petroleum coke ..	22,364					

(a) Included with paraffin wax.

(b) Including montan wax.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Portugal—</b>						
Crude petroleum .. ..	1,474,027	1,495,275	1,689,700	1,532,394	1,723,699	1,781,116
Motor spirit .. ..	21,628	51,366	89,855	100,821	129,848	195,981
Kerosine .. ..	19,426	18,446	11,548	18,037	17,640	12,474
Aviation turbine fuel .. ..	674	4,551	11,348	7,154	6,927	12,708
Gas oil and diesel oil .. ..	322,393	316,220	282,578	262,135	331,165	398,994
Fuel oil .. ..	284,625	266,167	343,815	340,242	353,000	401,444
Lubricating oil .. ..	34,796	39,059	45,843	46,527	48,425	52,050
Petroleum jelly .. ..	153	118	140	144	142	243
Paraffin wax .. ..	2,832	3,582	3,134	3,340	5,097	3,985
Ozokerite and ceresin .. ..	49	167	67	105	87	162
Bitumen .. ..	39,084	40,960	25,475	41,720	35,767	31,885
Natural asphalt .. ..	6,108	615	3,015	1,218	1,581	1,943
<b>Spain—</b>						
Crude petroleum .. ..	5,798,073	7,392,403	7,941,114	9,975,330	14,391,362	20,269,613
Motor spirit (a) .. ..	37,715	40,520	50,406	38,391	45,770	61,072
Kerosine (a) .. ..	9,075	16,798	3,924	46,461	65,376	77,806
Aviation turbine fuel .. ..	49,982	67,690	87,353	102,841	56,802	85,414
Diesel oil (a) .. ..	40,085	27,535	3,880	7,168	6,990	36,422
Lubricating oil (a) .. ..	6,779	32,902	12,593	35,394	14,739	13,626
Fuel oil (a) .. ..	34,390	28,241	132,774	145,101	54,662	79,302
Petroleum jelly (a) .. ..	850	1,400	1,274	1,308	1,328	1,388
Paraffin wax (a) .. ..	1,113	4,326	3,261	7,428	9,052	2,889
Asphalt (a) .. ..	1,062	834	1,407	17,951	34,323	18,202
<b>Sweden—</b>						
Crude petroleum .. ..	2,633,817	3,440,800	3,665,812	3,497,967	5,874,998	8,770,385
Motor spirit, etc. .. ..	r 1,976,014	r 2,199,336	2,378,378	r 2,480,620	r 2,525,072	2,489,852
White spirit .. ..	r 55,718	r 67,702	68,078	60,022	66,093	38,635
Kerosine .. ..	r 361,915	r 354,271	348,161	420,475	312,830	346,330
Fuel oil and gas oil .. ..	r 10,675,903	r 11,452,297	12,078,102	15,373,951	12,994,579	13,698,608
Lubricating oil and grease .. ..	123,743	151,360	154,603	151,604	172,458	183,682
Petroleum jelly .. ..	858	979	836	723	839	980
Paraffin wax .. ..	7,631	7,956	7,080	7,597	6,398	6,285
Ozokerite, ceresin, etc. .. ..	1,925	2,129	1,997	1,792	1,687	1,833
Asphalt .. ..	683	920	1,021	1,095	713	897
Pitch .. ..	9,441	9,545	10,473	21,778	38,755	50,816
Petroleum coke .. ..	12,700	10,053	24,824	18,966	18,932	31,443
<b>Switzerland—</b>						
Crude petroleum .. ..	353,368	824,788	1,190,104	2,315,440	3,873,852	4,506,002
Motor spirit .. ..	1,253,188	1,274,386	1,313,958	1,319,360	1,121,731	1,209,635
White spirit .. ..	7,796	8,501	9,490	9,280	9,392	11,060
Kerosine .. ..	19,844	16,235	15,954	16,201	10,762	11,520
Gas and diesel oils .. ..	494,894	544,227	583,021	488,924	303,341	335,077
Fuel oil .. ..	4,192,766	3,905,578	4,617,356	4,180,938	3,543,772	4,126,988
Lubricating oil and grease .. ..	77,762	73,660	73,345	74,189	80,787	81,716
Petroleum jelly .. ..	702	742	829	781	781	818
Paraffin wax and ceresin .. ..	6,090	6,720	7,413	6,465	7,271	7,843
Asphalt and bitumen .. ..	191,804	215,752	230,619	264,506	264,238	229,203
Petroleum coke .. ..	65,173	49,363	53,550	49,449	10,672	53,746
<b>U.S.S.R.—</b>						
Crude petroleum .. ..	535,000	—	—	—	—	—
Motor spirit .. ..	1,510,800	1,363,800	1,202,100	922,200	741,304	682,700
Kerosine .. ..	200,400	148,800	166,300	46,900	12,007	6,900
Diesel oil .. ..	237,700	226,500	223,000	142,000	238,276	182,900
Fuel oil .. ..	50,200	51,700	49,600	324,300	158,260	31,200
Lubricating oil and grease .. ..	144,500	152,100	146,400	132,000	134,344	94,500
Paraffin wax .. ..	26,500	17,500	11,800	9,800	7,874	6,300
Bitumen .. ..	67,000	71,700	65,100	40,100	25,100	21,500

(a) Excluding imports from Canary Islands.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Yugoslavia—</b>						
Crude petroleum .. ..	765,773	748,243	1,089,520	2,167,417	2,506,361	2,640,801
Aviation spirit .. ..	10,466	23,186	27,191	27,760	19,204	19,883
Motor spirit .. ..	1	—	1	1,523	7,209	13,638
Kerosine .. ..	4,509	5,549	2,527	8,573	12,992	23,893
Aviation turbine fuel ..	—	4	—	—	19	1,076
Fuel oils .. ..	137,381	258,315	134,896	181,658	567,208	818,300
Lubricating oil .. ..	21,671	49,722	14,070	42,880	31,368	21,946
Greases .. ..	334	639	160	508	368	303
Paraffin wax .. ..	2,755	3,856	5,035	5,905	3,400	2,859
Petroleum jelly .. ..	648	691	273	288	260	334
Ozokerite and ceresin ..	327	570	489	416	266	194
Petroleum coke .. ..	15,255	18,553	21,150	25,992	22,988	22,938
Pitch .. ..	21,240	76,349	59,823	17,640	39,022	56,769
<b>Algeria—</b>						
Motor spirit .. ..	<i>n.a.</i>	<i>n.a.</i>	15,836	31,672	10,069	<i>n.a.</i>
Kerosine .. ..	<i>n.a.</i>	<i>n.a.</i>	1,651	—	159	<i>n.a.</i>
Gas oil .. ..	<i>n.a.</i>	<i>n.a.</i>	5,687	4,521	2,450	<i>n.a.</i>
Fuel oil and diesel oil ..	<i>n.a.</i>	<i>n.a.</i>	4,229	3,500	3,777	<i>n.a.</i>
Lubricating oil .. ..	<i>n.a.</i>	<i>n.a.</i>	31,080	26,880	30,907	<i>n.a.</i>
<b>Angola—</b>						
Crude petroleum .. ..	—	—	—	—	34,853	57,139
Motor spirit .. ..	10,375	10,140	6,450	6,688	7,227	7,165
Kerosine .. ..	6,834	6,019	4,705	6,109	7,231	7,935
Gas oil and fuel oil .. ..	15,525	11,960	21,720	32,246	70,096	144,559
Lubricating oil .. ..	9,680	9,463	11,168	13,199	12,812	15,137
Paraffin wax .. ..	61	32	73	78	170	326
Petroleum jelly .. ..	34	41	33	20	32	43
Asphalt and bitumen .. ..	4,078	34	22	4,928	1	1,000
<b>Cameroun—</b>						
Motor spirit, etc. .. ..	48,792	58,358	48,895	53,070	70,930	<i>n.a.</i>
Kerosine .. ..	26,760	30,008	25,189	29,760	39,990	<i>n.a.</i>
Gas and fuel oil .. ..	34,907	44,640	39,710	41,840	63,130	<i>n.a.</i>
Lubricating oil .. ..	4,107	8,171	4,942	3,890	6,160	<i>n.a.</i>
<b>Canary Islands—</b>						
Crude petroleum .. ..	4,554,742	5,044,962	5,243,457	6,051,080	6,490,223	7,580,247
Motor spirit .. ..	—	16,157	21,248	23,670	31,995	38,787
Diesel (b) .. ..	6,312	—	—	6,889	—	19,541
<b>Cape Verde Islands—</b>						
Motor spirit .. ..	599	629	958	700	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. ..	1,988	2,212	2,360	2,618	<i>n.a.</i>	<i>n.a.</i>
<b>Central African Republic—</b>						
Aviation spirit .. ..		88	3,499	2,442	2,110	<i>n.a.</i>
Motor spirit .. ..		11,414	12,941	10,865	11,888	<i>n.a.</i>
Kerosine .. ..		4,202	4,760	4,282	4,888	<i>n.a.</i>
Gas oil .. ..		8,872	10,855	10,135	12,250	<i>n.a.</i>
Diesel oil .. ..		835	1,007	200	894	<i>n.a.</i>
<b>Ceuta (a)—</b>						
Kerosine .. ..	—	84	—	—	—	—
Diesel (b) .. ..	121,271	47,924	37,639	41,471	22,305	28,102
Fuel oil (b) .. ..	292,915	44,762	62,477	56,996	38,654	32,148
Lubricating oil .. ..	3,523	3,212	3,632	3,424	3,363	3,335
<b>Congo (Republic of)—</b>						
Aviation spirit .. ..		10,635	3,344	2,562	1,809	
Motor spirit .. ..		19,519	15,843	19,044	17,493	
Kerosine .. ..		21,572	7,889	19,080	13,736	
Gas oil .. ..		39,276	39,766	45,743	50,866	
Fuel oil .. ..		4,273	7,615	18,851	19,324	
Lubricating oil .. ..		3,498	3,786	3,574	5,823	

(a) Excluding imports from Spain and Canary Islands.

(b) Imported chiefly for bunkering purposes. See exports.

(c) Included in Equatorial African Community.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968	
<b>OTHER COUNTRIES</b>							
<i>(cont.)</i>							
<b>Dahomey—</b>							
Aviation spirit .. .. .	13,021	478	492	176	332	<i>n.a.</i>	
Motor spirit .. .. .		15,140	16,722	13,094	15,242	12,200	
Kerosine .. .. .		12,116	13,664	13,398	10,056	11,194	7,000
Gas oil .. .. .		13,641	15,124	16,211	13,263	16,299	<i>n.a.</i>
Fuel oils .. .. .		777	729	1,145	844	943	<i>n.a.</i>
Lubricating oil .. .. .		1,348	1,264	1,398	1,215	1,031	1,130
<b>Egypt—</b>							
Crude petroleum .. .. .	4,254,450	4,674,980	3,918,497	3,827,174	2,433,075	1,230,452	
Motor spirit .. .. .	23,149	8,743	11,059	16,568	11,058	10,099	
Kerosine .. .. .	138,623	21,713	35,367	139,518	74,210	264,895	
Fuel oil .. .. .	106,839	88,800	1,388	333	467	<i>n.a.</i>	
Gas oil .. .. .	63,206	34,677	11,378	2,272	31,648	<i>n.a.</i>	
Diesel oil .. .. .	3,149	12,290	2,684	148	3,161	11,192	
Lubricating oil .. .. .	65,497	57,036	44,985	84,654	59,349	67,628	
Paraffin wax .. .. .	<i>n.a.</i>	<i>n.a.</i>	3,240	2,474	1,237	2,192	
Ozokerite and ceresin .. .. .							
Asphalt and bitumen .. .. .	2,365	2	491	3	65	389	
<b>Equatorial African Community—</b>							
Aviation spirit .. .. .	<i>n.a.</i>	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	
Motor spirit .. .. .	<i>n.a.</i>	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	
Kerosine .. .. .	<i>n.a.</i>	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	
Gas oil .. .. .	<i>n.a.</i>	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	
Fuel oil .. .. .	<i>n.a.</i>	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	
Lubricating oil, etc. .. .. .	<i>n.a.</i>	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	( <i>c</i> )	
<b>Ethiopia (a)—</b>							
Aviation spirit .. .. .	1,684	6,489	<i>n.a.</i>	10,586	8,235	3,156	
Motor spirit .. .. .	171,223	90,942	<i>n.a.</i>	58,690	43,871	15,457	
Kerosine .. .. .	3,995	3,758	<i>n.a.</i>	5,223	6,265	2,944	
Gas and fuel oils .. .. .	13,528	21,420	<i>n.a.</i>	77,272	148,718	22,292	
Lubricating oil and grease .. .. .	3,864	4,368	<i>n.a.</i>	5,066	6,652	7,390	
<b>French Somaliland—</b>							
Motor spirit .. .. .	4,557	4,651	16,250	6,803	4,966	<i>n.a.</i>	
Kerosine .. .. .	1,050	1,493		2,472	1,964	<i>n.a.</i>	
Fuel oil, etc. .. .. .	6,772	8,928		17,790	10,027	<i>n.a.</i>	
Lubricating oil .. .. .	457	585		467	548	<i>n.a.</i>	
<b>Gabon—</b>							
Aviation spirit .. .. .	(b)	3,313	3,080	2,972	2,545	98,000	
Motor spirit .. .. .		11,793	13,275	14,197	14,299		
Kerosine .. .. .		4,621	4,236	4,841	1,595		
Gas oil .. .. .		35,620	40,765	53,136	50,768		
Fuel oil .. .. .		142	207	212	210		
Lubricating oil .. .. .		3,142	2,825	3,736	3,295		
<b>Ivory Coast—</b>							
Crude petroleum .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	606,560	<i>n.a.</i>	<i>n.a.</i>	
Aviation spirit .. .. .	1,449	1,222	1,938	896	1,422	<i>n.a.</i>	
Motor spirit .. .. .	86,259	107,574	98,599	2,663	58	<i>n.a.</i>	
Kerosine .. .. .	28,983	32,951	30,125	674	26	<i>n.a.</i>	
Gas oil .. .. .	52,088	69,090	66,497	237	21	<i>n.a.</i>	
Fuel oils .. .. .	29,957	51,722	41,221	286	—	<i>n.a.</i>	
Lubricating oil .. .. .	8,111	10,541	9,832	10,509	11,321	<i>n.a.</i>	
<b>Liberia—</b>							
Motor spirit .. .. .	18,000	23,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Kerosine .. .. .	8,300	8,100	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Diesel oil, etc. .. .. .	58,000	58,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Lubricating oil .. .. .	4,000	4,500	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
<b>Libya—</b>							
Motor spirit .. .. .	73,902	96,029	100,428	108,007	131,461	132,917	
Kerosine, etc. .. .. .	29,145	37,615	41,272	77,089	22,428	19,836	
Gas oil and diesel oil .. .. .	103,779	158,373	151,608	206,746	197,376	236,090	
Fuel oil .. .. .	17,208	24,237	32,674	59,290	41,285	49,044	
Lubricating oil, etc. .. .. .	8,260	12,170	9,245	9,991	12,029	17,159	

(a) Years ended September 10.

(b) Included in Equatorial African Community.

(c) See Central African Republic, Congo (Republic of) and Gabon.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Malagasy Republic—</b>						
Aviation spirit .. ..	4,815	5,985	5,865	5,511	5,583	7,714
Motor spirit .. ..	55,918	60,557	61,573	61,951	10,042	5,677
Kerosine .. ..	18,167	20,236	20,196	17,801	5,027	2,424
Gas oil .. ..	50,385	50,523	72,290	63,190	9,927	7,579
Fuel oils .. ..	1,482	1,357	2,810	2,350	9,348	n.a.
Lubricating oil .. ..	6,348	6,372	5,892	5,653	7,111	6,987
Road oil, etc. .. ..	4,759	6,063	6,395	8,407	7,574	9,555
Paraffin wax .. ..	665	1,427	1,743	2,337	2,397	3,120
Petroleum jelly .. ..	29	16	22	41	34	55
Asphalt and bitumen .. ..	427	347	24	38	113	2,959
<b>Mali—</b>						
Aviation spirit .. ..	5,702	69,142	1,874	1,219	863	n.a.
Motor spirit .. ..	27,028		31,326	34,540	40,012	n.a.
Kerosine .. ..	10,034		10,132	8,953	10,981	n.a.
Gas and fuel oil .. ..	18,122		23,651	20,865	23,840	n.a.
Lubricating oil .. ..	2,378		2,149	1,955	2,142	n.a.
<b>Morocco—</b>						
Crude petroleum .. ..	451,162	1,094,507	1,103,106	1,100,303	1,079,796	1,217,329
Aviation spirit .. ..	6,084	3,873	4,520	6,514	9,149	6,020
Motor spirit .. ..	2,603	1,304	1,811	1,252	1,368	2,494
White spirit .. ..	1,739	1,444	2,354	2,911	5,848	2,412
Kerosine .. ..	17,290	21,883	21,135	23,468	23,028	42,346
Gas oil .. ..	6,846	9,185	6,559	187	19,476	18,344
Fuel oil .. ..	9,704	4,827	3,434	706	19,647	7,997
Lubricating oil, etc. .. ..	17,673	13,866	15,443	19,272	20,895	23,023
Paraffin wax .. ..	5,193	7,522	5,119	7,791	2,938	3,200
Asphalt, bitumen, etc. .. ..	27,345	33,047	37,082	18,914	22,818	30,723
<b>Mozambique—</b>						
Motor spirit .. ..	10,421	27,488	22,067	27,842	29,100	n.a.
Kerosine .. ..	15,878	25,168	18,603	21,186	19,800	n.a.
Fuel oil .. ..	18,374	50,402	40,319	49,980	62,100	n.a.
Lubricating oil .. ..	6,487	9,243	8,848	9,769	9,700	n.a.
Paraffin wax .. ..	79	76	35	2	n.a.	n.a.
Petroleum jelly .. ..	43	44	8	5	n.a.	n.a.
Asphalt and bitumen (a) .. ..	4,303	8,014	6,435	3,999	n.a.	n.a.
<b>Niger—</b>						
Aviation spirit .. ..	1,336	1,757	1,292	n.a.	1,447	n.a.
Motor spirit .. ..	11,091	14,366	11,759	13,779	11,301	n.a.
Kerosine .. ..	3,634	4,747	4,532	—	6,274	n.a.
Gas oil .. ..	9,659	n.a.	2,704	—	14,774	n.a.
Fuel oils .. ..	2,485	3,251	3,961	—	5,783	n.a.
Lubricating oil .. ..	530	1,077	1,062	—	1,166	n.a.
<b>Reunion—</b>						
Motor spirit, etc. .. ..	22,293	25,549	27,635	29,264	32,187	n.a.
Kerosine .. ..	3,866	4,490	6,508	8,268	8,878	n.a.
Fuel oil, etc. .. ..	8,732	9,153	11,470	16,623	22,267	n.a.
Lubricating oil .. ..	2,360	1,083	1,303	1,625	1,505	n.a.
<b>S. Tome and Principe—</b>						
Motor spirit .. ..	n.a.	1,168	1,287	1,419	n.a.	n.a.
Gas and diesel oils .. ..	n.a.	1,275	1,369	1,489	n.a.	n.a.
<b>Senegal—</b>						
Aviation spirit .. ..	5,563	4,696	2,717	1,980	1,954	n.a.
Motor spirit .. ..	65,401	37,865	42,776	72,342	64,354	n.a.
Kerosine .. ..	18,276	6,043	6,937	13,441	11,076	n.a.
Gas oil .. ..	16,767	9,775	10,849	17,197	18,463	n.a.
Fuel oils .. ..	146,546	51,348	77,247	79,001	120,053	n.a.
Lubricating oil .. ..	3,645	4,022	4,151	4,914	39,156	n.a.
<b>Somali Republic (b)—</b>						
Aviation and motor spirit .. ..	5,212	6,052	3,849	n.a.	n.a.	n.a.
Kerosine .. ..	959	1,114	970	n.a.	n.a.	n.a.
Gas oil .. ..	2,927	4,437	3,586	n.a.	n.a.	n.a.
Lubricating oil .. ..	202	454	133	n.a.	n.a.	n.a.

(a) Including coal tar and pitch.

(b) Former British Protectorate only.



## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968	
<b>OTHER COUNTRIES</b>							
<i>(cont.)</i>							
<b>South Africa—</b>							
Crude petroleum .. .. .	2,267,049	(c)5,105,000	(c)5,361,429	(c)5,737,106	c10,468,210	(c)7,807,228	
Motor spirit (b) .. .. .	1,056,403	(d) 656,839	(d) 698,243	(d) 774,626	(d) 365,420	(d) 642,236	
Other spirit .. .. .	19,184	(d) 6	—	n.a.	n.a.	n.a.	
White spirit .. .. .	33,111	36,979	39,925	35,207	26,657	24,114	
Kerosine .. .. .	381,895	(d) 411,669	(d) 340,309	(d) 421,913	(d) 428,721	(d) 394,793	
Gas oil (b) .. .. .	581,604	(d)357,188	(d) 459,223	(d) 608,160	(d) 436,648	(d) 411,672	
Diesel oil (b) .. .. .	23,688		(d) 3,858	(d) 85,013	(d) 18,988	(d) 618,296	(d) 165,162
Fuel oil (b) .. .. .	128,292	(d) 149,892	(d) 195,092	(d) 187,184	(d) 203,000	(d) 148,120	
Lubricating oil .. .. .	101,208	n.a.	n.a.	n.a.	n.a.	n.a.	
Transformer oil .. .. .	5,619	n.a.	n.a.	n.a.	n.a.	n.a.	
Road oil .. .. .	9	n.a.	n.a.	n.a.	n.a.	n.a.	
Other oils .. .. .	25,209	(d) 129,604	n.a.	n.a.	n.a.	n.a.	
Paraffin wax .. .. .	13,878	18,724	10,777	10,223	17,025	14,347	
Asphalt and bitumen .. .. .	32,208	6,087	4,961	14,502	8,254	8,685	
Petroleum jelly .. .. .	3,434	3,471	3,924	4,038	4,077	4,169	
<b>Sudan—</b>							
Aviation spirit (b) .. .. .	8,613	10,463	5,740	3,575	14,059	n.a.	
Motor spirit .. .. .	81,302	76,849	42,596	(a) 9,348	15,048	n.a.	
Kerosine .. .. .	68,468	64,173	31,126	4,909	23,275	n.a.	
Gas oil .. .. .	141,880	113,564	80,413	22,896	62,909	50,817	
Diesel oil .. .. .	34,321	60,737	10,491	2,160	13,345	79,232	
Fuel oil .. .. .	195,514	158,034	44,039	(a) 9,923	66,744	123,194	
Lubricating oil, etc. .. .. .	13,471	11,902	11,306	(a) 6,600	12,701	19,929	
Petroleum jelly .. .. .	10	19	38	63	77	84	
Paraffin wax .. .. .	172	36	76	125	74	64	
Asphalt and bitumen .. .. .	8,040	7,455	3,847	2,155	1,339	n.a.	
<b>Togo—</b>							
Motor spirit .. .. .	7,282	7,868	8,321	9,710	10,587	n.a.	
Kerosine .. .. .	7,627	8,490	8,605	10,071	13,221	n.a.	
Fuel oil .. .. .	20,526	25,251	26,514	37,966	39,923	n.a.	
Lubricating oil .. .. .	776	1,155	1,084	1,273	930	n.a.	
<b>Tunisia—</b>							
Aviation spirit .. .. .	75,979	18,070	1,782	1,356	674	n.a.	
Motor spirit .. .. .		441	566	597	784	3,200	
White spirit .. .. .	51,560	18,324	2,127	3,783	481		
Kerosine .. .. .	262,607	68,393	n.a.	3,193	15,882	9,600	
Fuel oil .. .. .	136,013	25,164	1,920	225	—	n.a.	
Gas oil .. .. .	10,864	12,718	10,677	13,488	10,541	13,000	
Lubricating oil .. .. .	1	39	44	25	28	n.a.	
Petroleum jelly .. .. .	171	81	180	218	273	n.a.	
Paraffin wax .. .. .	<b>Upper Volta—</b>						
Aviation spirit .. .. .	564	34,672	29,905	n.a.	n.a.	173	
Motor spirit .. .. .	11,816						13,550
Kerosine .. .. .	4,681						6,163
Gas oil .. .. .	5,362						5,507
Fuel oils .. .. .	5,932						8,373
Lubricating oil .. .. .	1,061	1,404					
<b>Costa Rica—</b>							
Motor spirit .. .. .	62,019	61,982	65,992	69,357	42,928	34,849	
Kerosine .. .. .	13,398	12,143	14,214	14,870	14,654	25,197	
Diesel oil, etc. .. .. .	99,964	136,016	170,828	177,817	100,594	89,864	
Fuel oil .. .. .	15,070	—	—	17,201	105,372	n.a.	
Lubricating oil .. .. .	10,196	10,601	10,318	10,210	9,308	40,084	
Grease .. .. .	266	293	364	294	360	356	
Petroleum jelly .. .. .	125	128	198	133	258	102	
Paraffin wax .. .. .	1,591	1,634	1,751	1,947	1,740	1,762	
Asphalt .. .. .	2,841	7,119	10,033	7,511	10,366	8,826	

(a) Excess of re-exports.

(b) Including imports for bunkering purposes. See exports.

(c) Including partly-refined. (d) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
<b>Cuba—</b>						
Crude Petroleum ..	3,791,189	1,414,836	n.a.	n.a.	n.a.	n.a.
Aviation fuel ..	44,243	36,233	n.a.	n.a.	n.a.	n.a.
Motor spirit ..	152,020	83,582	72,831	61,021	n.a.	n.a.
Gas, oil ..	10,696	183,234	n.a.	n.a.	n.a.	n.a.
Lubricating oil ..	50,966	62,474	} 66,926	67,910	n.a.	n.a.
Lubricating greases ..	1,574	1,652			n.a.	n.a.
Petroleum jelly ..	1,010	1,054	n.a.	n.a.	n.a.	n.a.
<b>Dominican Republic—</b>						
Aviation spirit ..	—	3,000	—	n.a.	n.a.	n.a.
Motor spirit ..	98,000	140,000	70,200	n.a.	n.a.	n.a.
Kerosine ..	19,000	23,000	10,596	n.a.	n.a.	n.a.
Diesel oil ..	50,000	58,000	n.a.	n.a.	n.a.	n.a.
Fuel oil ..	195,000	235,000	n.a.	n.a.	n.a.	n.a.
Lubricating oil, etc. ..	7,746	9,281	9,304	n.a.	n.a.	n.a.
<b>French West Indies—</b>						
<b>Guadeloupe—</b>						
Motor spirit, etc. ..	29,463	29,089	31,588	35,092	43,544	n.a.
Kerosine ..	17,006	16,891	12,026	12,481	13,915	n.a.
Gas and fuel oil ..	15,889	20,523	20,353	29,046	32,790	n.a.
Lubricating oil ..	2,443	2,252	2,516	2,012	2,111	n.a.
<b>Martinique—</b>						
Motor spirit, etc. ..	57,629	28,581	30,584	30,394	36,781	n.a.
Kerosine ..	12,974	11,704	11,395	12,288	13,474	n.a.
Gas and fuel oil ..	27,227	33,535	32,948	37,868	39,269	n.a.
Lubricating oil ..	2,975	2,586	3,521	3,383	3,842	n.a.
<b>Greenland—</b>						
Motor spirit ..	2,773	3,314	4,710	5,152	5,418	n.a.
Kerosine ..	3,423	3,389	8,002	5,323	5,061	n.a.
Fuel oil ..	53,904	66,478	72,765	79,743	84,700	n.a.
Lubricating oil ..	644	613	1,392	1,343	1,114	n.a.
<b>Guatemala—</b>						
Crude petroleum, etc. ..	157,902	188,765	210,911	239,227	202,848	n.a.
Aviation spirit ..	} 92,205	89,915	260,023	11,731	13,594	16,604
Motor spirit ..						
Kerosine ..	49,924	44,356	17,986	1,455	1,488	4,061
Diesel oil ..	} 52,144	271,035	99,887	123,000	112,000	89,000
Fuel oil ..						
Lubricating oil ..	8,717	9,347	10,210	6,666	7,484	9,392
Grease ..	633	510	729	619	745	992
Asphalt ..	n.a.	n.a.	4	3	5	3
Paraffin wax, etc. ..	5,529	7,133	6,196	7,117	7,640	7,364
<b>Honduras—</b>						
Crude petroleum ..	67,196	68,514	68,809	131,356	90,536	336,049
Motor spirit ..	44,006	50,651	48,677	53,745	56,319	57,070
Kerosine ..	13,397	15,230	16,790	19,540	18,819	18,707
Gas, diesel and fuel oils ..	92,640	83,545	90,051	97,834	235,630	208,972
Lubricating oil ..	4,003	} 4,073	4,028	} 3,352	3,605	6,141
Greases ..	392					
Pitch, asphalt, etc. ..	442	702	2,305	1,973	2,189	4,211
<b>Mexico—</b>						
Crude petroleum ..	20,798	82,290	(a) 33	(a) 18	(a) —	(a) 80
Aviation spirit ..	3,129	3,715	(a) 6,238	(a) 23,633	(a) 14,154	(a) 37,198
Motor spirit ..	7,092	9,632	(a) 2,786	(a) 116,225	(a) 12,282	(a) n.a.
Kerosine ..	150	113	(a) 218	(a) 88	(a) 126	(a) 506
Gas oil ..	334	26,716	(a) 10,747	(a) 44	(a) 177	(a) 954
Fuel oil ..	159,354	207,153	n.a.	(a) 46,259	(a) 71,882	(a) 466,659
Lubricating oil ..	5,204	7,776	(a) 22,096	(a) 27,083	(a) 56,153	(a) 69,498
Grease ..	3,718	2,597	(a) 1,762	(a) 985	(a) 2,912	(a) 1,751
Paraffin wax ..	22,655	19,967	20,733	23,421	27,148	19,753
Petroleum jelly ..	2,176	1,641	2,002	1,382	919	201
Asphalt ..	814	505	157	442	607	435
Asphalt rock ..	136	252	352	585	1,102	32
Natural gas (million cu. ft.)	9,384	9,299	8,252	8,809	9,669	11,016

(a) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Netherlands Antilles—</b>						
Crude petroleum .. .. .	38,356,000	40,252,000	40,223,000	39,133,000	40,781,000	38,671,000
Aviation spirit .. .. .	483,000	700,000	589,000	287,000	201,000	<i>n.a.</i>
Motor spirit .. .. .	455,000	215,000	366,000	251,000	349,000	300,000
Kerosine .. .. .	46,000	100,000	230,000	241,000	156,000	175,000
Fuel oil .. .. .	4,000,000	2,542,000	899,000	760,000	1,333,000	2,010,000
Diesel oil .. .. .	20,000	3,000	91,000	104,000	213,000	68,800
Gas oil .. .. .	172,000	64,000	123,000	191,000	262,000	<i>n.a.</i>
Lubricating oil, etc. .. .. .	—	2,000	10,000	7,000	—	10,800
Asphalt .. .. .	—	—	10,000	3,000	2,000	<i>n.a.</i>
<b>Nicaragua—</b>						
Crude petroleum .. .. .	143,211	268,983	273,166	206,265	335,210	337,331
Aviation spirit .. .. .	} 40,796	14,173	11,891	14,648	11,952	22,811
Motor spirit .. .. .						
Kerosine .. .. .	17,432	10,480	2,113	4,182	12,049	9,413
Fuel oil .. .. .	62,414	8,525	8,781	14,122	13,360	19,814
Lubricating oil .. .. .	3,954	6,287	5,713	5,389	7,172	7,312
Paraffin wax .. .. .	} 915	1,107	913	1,358	1,133	1,295
Petroleum jelly .. .. .						
Natural asphalt .. .. .	—	—	3	3	—	27
<b>Panama Republic—</b>						
Aviation spirit .. .. .	32,692	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Motor spirit .. .. .	363	459	493	414	358	<i>n.a.</i>
Kerosine .. .. .	1,692	770	1,055	498	282	<i>n.a.</i>
Diesel oil .. .. .	12,620	13,010	16,362	} 18,935	35,681	<i>n.a.</i>
Fuel oil .. .. .	98,231	30,758	19,902			
Lubricating oil .. .. .	5,749	4,200	6,126	} 4,944	5,856	<i>n.a.</i>
Grease .. .. .	399	249	370			
Paraffin wax, etc. .. .. .	847	628	622	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>St. Pierre and Miquelon—</b>						
Motor spirit .. .. .	563	645	701	733	832	<i>n.a.</i>
Gas oil and fuel oil .. .. .	10,957	20,194	16,534	22,145	36,338	<i>n.a.</i>
Lubricating oil .. .. .	217	365	370	453	457	<i>n.a.</i>
<b>Salvador—</b>						
Motor spirit .. .. .	7,422	18,218	6,751	5,818	4,699	1,488
Kerosine .. .. .	25,118	26,491	10,338	1,840	2,477	2,030
Gas oil and diesel oil .. .. .	31,750	8,915	1,140	1,424	1,861	225
Fuel oil .. .. .	368,135	467,183	305,327	484,815	472,373	490,302
Lubricating oil .. .. .	4,436	4,301	4,958	4,958	4,784	4,562
Grease .. .. .	388	384	503	523	503	737
Paraffin wax, etc. .. .. .	1,230	1,242	1,633	1,795	1,485	1,679
Petroleum jelly .. .. .	239	193	277	198	195	238
Asphalt .. .. .	5,056	6,202	5,431	6,228	7,359	6,405
<b>United States—</b>						
Crude petroleum .. .. .	64,946,020	68,882,069	71,641,242	76,062,104	72,432,447	81,042,928
Aviation spirit .. .. .	} 304,265	387,799	270,509	584,257	250,006	333,259
Motor spirit, etc. .. .. .						
Naphtha, etc. .. .. .	1,078,140	2,721,273	433,455	<i>n.a.</i>	<i>n.a.</i>	
Kerosine .. .. .	28,326	18,967	64,031	200	277,433	240,983
Aviation turbine fuel .. .. .	3,325,304	3,102,997	4,051,197	4,220,937	4,102,932	5,223,774
Fuel oil .. .. .	39,616,420	43,300,000	} 51,082,146	55,488,474	57,443,671	62,675,927
Gas oil and diesel oil .. .. .	1,241,000	1,600,000				
Lubricating oil, etc. .. .. .	3,473	5,223	4,451	4,480	5,600	<i>n.a.</i>
Paraffin wax, etc. .. .. .	668	1,331	1,499	777	<i>n.a.</i>	<i>n.a.</i>
Ozokerite and ceresin .. .. .	3,067	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Asphalt (petroleum) .. .. .	819,876	} 995,000	1,049,700	1,028,051	1,301,014	1,068,279
Natural asphalt and bitumen .. .. .	25,389					
Natural gas ( <i>million cu. ft.</i> ) .. .. .	406,204	427,641	453,199	480,000	564,000	<i>n.a.</i>

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Argentina—</b>						
Crude petroleum .. .. .	854,790	1,454,214	3,495,878	3,646,397	2,251,675	1,753,685
Motor spirit .. .. .	34,062	27,466	62,783	24,972	10,409	79,629
Kerosine .. .. .	30,667	16,151	13,051	84	7,820	—
Gas oil .. .. .	396,336	753,379	530,187	434,230	150,464	360,003
Fuel oil .. .. .	—	—	—	15,796	—	—
Diesel oil .. .. .	57,217	277,531	46,149	—	3,856	12,388
Lubricating oil .. .. .	72,287	67,956	104,547	93,923	72,369	64,008
Grease .. .. .	132	337	353	139	99	29
Paraffin wax .. .. .	15	53	59	2	1	—
Petroleum jelly .. .. .	53	234	69	65	—	48
<b>Bolivia—</b>						
Aviation spirit .. .. .	11,931	12,530	10,567	14,402	13,248	<i>n.a.</i>
Motor spirit .. .. .	67	22	43	30	—	<i>n.a.</i>
Kerosine .. .. .	82	53	88	82	<i>n.a.</i>	<i>n.a.</i>
Fuel oil .. .. .	163	411	211	207	334	<i>n.a.</i>
Lubricating oil and grease .. .. .	1,363	1,052	1,290	2,191	934	<i>n.a.</i>
Paraffin wax, etc. .. .. .	1,845	1,989	2,117	2,550	2,953	<i>n.a.</i>
Tar, pitch, etc. .. .. .	10	5	26	17	26	<i>n.a.</i>
<b>Brazil—</b>						
Crude petroleum .. .. .	10,210,620	10,632,724	10,085,482	11,143,663	10,392,489	12,326,904
Aviation spirit .. .. .	200,977	145,817	159,987	128,930	143,741	107,506
Motor spirit .. .. .	313,385	145,522	<i>n.a.</i>	<i>n.a.</i>	233,765	524,071
White spirit .. .. .	1	2	<i>n.a.</i>	3	24	—
Kerosine .. .. .	16,427	245,129	271,738	263,836	219,891	<i>n.a.</i>
Diesel oil .. .. .	53,631	<i>n.a.</i>	—	—	19,375	—
Fuel oil .. .. .	—	<i>n.a.</i>	19,157	17,071	52,783	490,072
Lubricating oil .. .. .	214,240	260,651	206,339	272,834	275,720	328,812
Transformer oil .. .. .	10,291	7,335	5,928	9,743	10,276	10,242
Petroleum jelly .. .. .	1,461	1,610	1,053	1,561	1,360	1,769
Greases .. .. .	79	16	23	83	37	80
Paraffin wax .. .. .	16,441	14,161	12,267	19,747	21,779	26,810
Ozokerite and ceresin .. .. .	230	317	125	558	93	116
Asphalt and bitumen .. .. .	515	498	365	711	335	542
<b>Chile—</b>						
Aviation spirit .. .. .	697	824	343	9,682	<i>n.a.</i>	<i>n.a.</i>
Motor spirit .. .. .	12,612	14,126	9,759	2,309	21,230	<i>n.a.</i>
Kerosine .. .. .	71,849	44,536	66,353	72,605	52,265	<i>n.a.</i>
Diesel oil .. .. .	140,322	277,147	114,266	117,992	122,815	<i>n.a.</i>
Residual fuel oil (a) .. .. .	951,231	888,813	1,200,269	2,403,942	2,422,303	<i>n.a.</i>
Lubricating oil .. .. .	12,600	9,482	9,611	<i>n.a.</i>	6,639	<i>n.a.</i>
Petroleum jelly .. .. .	347	222	271	<i>n.a.</i>	134	<i>n.a.</i>
Greases .. .. .	2,080	1,629	1,911	<i>n.a.</i>	1,090	<i>n.a.</i>
Paraffin wax .. .. .	13,371	7,789	11,186	9,601	10,781	<i>n.a.</i>
Natural asphalt .. .. .	1,405	433	358	501	291	<i>n.a.</i>
<b>Colombia—</b>						
Aviation spirit .. .. .	31,329	42,308	11,838	9,841	2	1
Motor spirit .. .. .	3,814	1,100	22	31,510	54,474	9
Kerosine .. .. .	402	55	41	187	8,003	430
Gas oil and diesel oil .. .. .	—	28	9	264	6,964	—
Fuel oils .. .. .	—	—	333	—	—	—
Lubricating oil .. .. .	27,846	15,672	9,663	4,426	5,956	2,655
Petroleum jelly .. .. .	692	409	300	974	415	502
Paraffin wax .. .. .	24,783	27,860	19,871	30,685	22,217	24,493
Natural asphalt .. .. .	9	12	61	257	58	186
<b>Ecuador—</b>						
Motor spirit .. .. .	29,656	<i>n.a.</i>	15,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Lubricating oil and greases .. .. .	6,434	9,995	6,580	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Petroleum jelly .. .. .	106	103	113	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Paraffin wax .. .. .	3,909	3,894	3,979	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Natural asphalt .. .. .	8,643	2,021	9,309	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Including crude petroleum.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>French Guiana—</b>						
Motor spirit, etc. ..	4,036	4,236	4,653	4,923	6,980	<i>n.a.</i>
Kerosine .. ..	1,107	655	955	948	994	<i>n.a.</i>
Fuel oil, etc. ..	4,549	4,803	6,126	6,655	13,901	<i>n.a.</i>
Lubricating oil ..	219	210	481	186	685	<i>n.a.</i>
<b>Paraguay—</b>						
Motor spirit .. ..	40,000	41,000	41,000	31,000	10,000	<i>n.a.</i>
Kerosine .. ..	19,000	17,000	24,000	14,000	800	<i>n.a.</i>
Fuel oil, etc. ..	70,000	76,000	108,000	72,000	24,000	<i>n.a.</i>
Lubricating oil ..	3,200	2,500	4,200	5,200	2,800	<i>n.a.</i>
<b>Peru—</b>						
Aviation spirit ..	27,954	29,018	42,878	40,531	15,038	<i>n.a.</i>
Motor spirit .. ..	44,382	74,149	133,044	239,505	111,974	<i>n.a.</i>
Diesel oil and fuel oil ..	441,214	534,835	470,729	625,913	29,424	<i>n.a.</i>
Lubricating oil ..	15,025	13,883	30,668	31,560	6,886	<i>n.a.</i>
Petroleum jelly ..	228	197	283	332	302	<i>n.a.</i>
Paraffin wax .. ..	9,749	10,259	12,168	11,295	11,353	<i>n.a.</i>
Asphalt and bitumen ..	339	2,397	928	689	194	<i>n.a.</i>
Greases .. ..	1,860	1,886	2,404	1,898	4,849	<i>n.a.</i>
Ozokerite .. ..	28	22	46	104	36	<i>n.a.</i>
<b>Surinam—</b>						
Motor spirit .. ..	17,518	18,739	16,038	19,068	20,931	<i>n.a.</i>
Kerosine .. ..	5,352	5,310	5,534	5,771	6,658	<i>n.a.</i>
Gas oil .. ..	67,189	78,292	77,962	76,412	95,921	<i>n.a.</i>
Diesel oil .. ..						
Fuel oil .. ..	74,189	97,119	147,216	229,307	363,068	<i>n.a.</i>
Lubricating oil ..	3,949	3,204	4,200	3,443	4,536	<i>n.a.</i>
Asphalt .. ..	529	1,250	1,452	1,301	5,102	<i>n.a.</i>
<b>Uruguay—</b>						
Crude petroleum ..	1,449,000	1,522,000	1,180,993	1,769,276	1,523,146	<i>n.a.</i>
Motor spirit, etc. ..	6,000	7,000	18,805	2,185	10,003	<i>n.a.</i>
Kerosine .. ..	—	15,000	<i>n.a.</i>	7,300	4,683	<i>n.a.</i>
Gas oil .. ..	48,000	23,000	7,601	9,929	9,310	<i>n.a.</i>
Diesel oil .. ..						
Fuel oil .. ..			36,968	99,921	16,831	<i>n.a.</i>
Lubricating oil and greases .. ..	12,600	13,300	10,841	11,584	10,886	<i>n.a.</i>
Paraffin wax .. ..	<i>n.a.</i>	<i>n.a.</i>	289	350	300	<i>n.a.</i>
<b>Venezuela—</b>						
Motor spirit .. ..	3,088	16,075	3,630	4,393	22,877	5,870
White spirit .. ..	856	1,215	1,101	1,383	716	1,306
Gas and fuel oils ..	34	62	10	13	13	16
Lubricating oil and grease .. ..	8,278	8,059	5,528	3,890	5,089	5,961
Paraffin wax .. ..	5,761	9,128	5,034	2,906	248	201
Petroleum jelly ..	424	625	759	714	716	928
Asphalt .. ..	177	236	161	85	241	614
Bitumen, pitch, etc. ..	664	<i>n.a.</i>	1,517	1,081	1,479	1,000
<b>Burma—</b>						
Crude petroleum ..	—	156,615	200,499	262,600	<i>n.a.</i>	<i>n.a.</i>
Motor spirit .. ..	5,341	—	3	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. ..	12,515	—	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Gas and diesel oils ..	14,720	21,442	24,008	7,810	<i>n.a.</i>	<i>n.a.</i>
Lubricating oil ..	6,368	15,230	13,709	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Grease .. ..	480	* 511	657	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Paraffin wax .. ..	—	—	2	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Petroleum jelly ..	461	234	443	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Asphalt .. ..	15,530	21,304	14,692	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Formosa—</b>						
Crude petroleum ..	1,470,384	1,265,815	1,377,198	2,554,553	1,300,029	<i>n.a.</i>
Motor spirit .. ..	—	4	—	6	1	<i>n.a.</i>
Lubricating oil ..	17,961	23,490	25,388	27,967	26,393	<i>n.a.</i>
Grease .. ..	372	1,316	1,469	1,585	2,082	<i>n.a.</i>
Paraffin wax .. ..	1,836	1,965	2,291	3,427	3,176	<i>n.a.</i>
Asphalt .. ..	2,731	3,961	3,561	5,295	2,383	<i>n.a.</i>

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Indonesia—</b>						
Motor spirit .. ..	147,000	126,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Kerosine, etc. .. .	64,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Lubricating oil .. .	65,000	70,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Iran (a)—</b>						
Lubricating oil .. .	8,130	3,975	1,408	3,329	2,638	6,629
Paraffin wax .. ..	1,100	1,287	651	969	900	1,136
Petroleum jelly .. .	414	327	753	434	417	747
<b>Iraq—</b>						
Lubricating oil .. .	1,279	1,400	4,733	3,309	5,773	<i>n.a.</i>
<b>Israel (b)—</b>						
Lubricating oils .. .	17,376	18,386	17,196	8,608	2,140	6,571
Paraffin wax .. ..	1,839	2,143	2,193	944	556	826
Petroleum jelly .. .	295	117	169	176	131	216
Asphalt .. .. .	156	204	128	256	259	204
<b>Japan—</b>						
Crude petroleum .. .	51,075,352	64,806,881	75,548,739	89,189,290	108,301,570	125,545,036
Aviation spirit .. .	69,302	37,982	36,093	14,891	1,061	40
Motor spirit .. .. .	14,726	367,120	473,284	933,682	1,311,725	2,480,834
Kerosine .. .. .	44,444	13,425	} 25,730	31,164	41,148	142,064
Aviation turbine fuel	62,465	14,410				
Gas oil .. .. .	1,840	26,878	29,607	1,962	124,869	171,489
Fuel oil .. .. .	9,910,848	11,147,377	13,022,633	11,269,248	12,924,290	15,801,211
Lubricating oil .. .	330,415	431,289	282,986	340,463	519,387	399,684
Grease .. .. .	69,760	7,124	2,502	2,758	4,803	4,449
Petroleum jelly .. .	1,814	3,846	3,617	3,634	3,401	4,259
Paraffin wax .. ..	4,096	5,252	4,851	6,335	10,178	9,465
Gilsonite .. .. .	3,589	3,882	3,214	2,800	3,074	2,845
Asphalt and bitumen	66	327	340	2,735	112	83
Petroleum coke .. .	582,629	875,447	945,625	1,080,842	1,278,957	1,727,493
<b>Jordan—</b>						
Crude petroleum .. .	324,039	353,597	403,231	462,185	408,587	410,127
Motor spirit .. .. .	1,182	5,109	9,850	5,550	4,295	1,354
Kerosine .. .. .	16,005	10,787	22,790	19,450	16,951	29,578
Fuel oil, etc. .. .	30,985	6,411	<i>n.a.</i>	<i>n.a.</i>	2,000	<i>n.a.</i>
Lubricating oil .. .	4,691	5,776	5,905	5,931	5,367	6,407
Natural asphalt .. .	9,094	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Korea (South)—</b>						
Crude petroleum .. .	14,100	396,349	709,378	1,325,472	<i>n.a.</i>	<i>n.a.</i>
Aviation spirit .. .	9,003	1	1,000	3,206	<i>n.a.</i>	<i>n.a.</i>
Motor spirit .. .. .	62,956	26	2,000	15,552	<i>n.a.</i>	<i>n.a.</i>
Kerosine .. .. .	51,141	7	—	—	<i>n.a.</i>	<i>n.a.</i>
Gas, diesel and fuel oils	1,089,530	113,956	129,000	304,691	<i>n.a.</i>	<i>n.a.</i>
Lubricating oils .. .	31,865	2,898	4,081	22,960	<i>n.a.</i>	<i>n.a.</i>
Greases .. .. .	941	309	97	181	<i>n.a.</i>	<i>n.a.</i>
Petroleum jelly .. .	268	174	260	142	<i>n.a.</i>	<i>n.a.</i>
Paraffin wax .. ..	6,983	2,655	4,594	2,867	<i>n.a.</i>	<i>n.a.</i>
Asphalt and pitch ..	63,960	28,279	39,089	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Laos—</b>						
Aviation spirit .. .	21,000	15,000	12,000	26,000	<i>n.a.</i>	<i>n.a.</i>
Motor spirit .. .. .	16,000	17,000	22,000	24,000	22,600	<i>n.a.</i>
Kerosine .. .. .	4,000	3,000	5,000	7,000	7,200	<i>n.a.</i>
Gas oil .. .. .	6,000	9,000	13,000	11,000	14,200	<i>n.a.</i>
Fuel oil .. .. .	3,000	4,000	5,000	6,000	2,700	<i>n.a.</i>
Lubricating oil .. .	1,000	3,000	2,000	3,000	1,200	<i>n.a.</i>
<b>Lebanon—</b>						
Crude petroleum .. .	1,087,000	1,366,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Motor spirit .. .. .	202,814	230,974	265,613	296,610	296,291	<i>n.a.</i>
Kerosine .. .. .	46,271	47,065	41,406	44,178	47,568	<i>n.a.</i>
Fuel oil .. .. .	473,280	454,011	511,585	539,192	548,529	<i>n.a.</i>
Lubricating oil .. .	9,218	8,386	10,575	12,515	1,308	<i>n.a.</i>
Paraffin wax .. ..	239	578	364	401	494	<i>n.a.</i>
Natural asphalt .. .	1,125	1,600	149	6	24	<i>n.a.</i>

(a) Years ended March 20 of year following that stated.

(b) Figures include amounts obtained from imported crude petroleum.

## IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
<b>Philippine Republic—</b>						
Crude petroleum ..	3,559,994	4,148,988	4,461,889	5,227,000	6,218,000	n.a.
Aviation spirit ..	20,248	29,359	26,902	142,200	34,839	n.a.
Motor spirit ..	15,825	6,950	32,500			30,412
Kerosine ..	5,340	850	19,422	52,300	9,882	n.a.
Diesel oil ..	40,532	9,301	25,532	n.a.	21,810	n.a.
Fuel oils ..	3,594	111	101	n.a.	326	n.a.
Lubricating oils ..	56,423	83,859	78,863	83,700	100,693	n.a.
Grease ..	2,906	3,694	2,612			1,996
Petroleum jelly ..	1,213	1,181	1,910	n.a.	1,713	n.a.
Paraffin wax ..	7,336	7,286	7,910	n.a.	8,126	n.a.
Asphalt ..	955	2,124	1,199	n.a.	327	n.a.
<b>Southern Yemen (b)</b>						
Crude petroleum ..	6,305,476	6,758,120	6,895,912	6,840,415	5,761,180	4,811,743
Motor spirit ..	35,393	75,569	114,508	89,886	28,288	131,685
Kerosine ..	—	10,881	7,310	—	—	3,945
Gas and fuel oils (a) ..	1,621,335	1,603,304	919,467	1,086,884	328,464	151,673
Lubricating oil and greases ..	6,815	7,198	5,775	8,295	6,464	3,118
<b>Syria—</b>						
Crude petroleum ..	866,569	998,843	1,001,359	1,038,142	896,962	1,047,320
Motor spirit ..	7,332	17,236	9,982	8,110	4,097	3,987
Kerosine ..	7,606	8,109	8,827	7,392	7,822	23,709
Fuel oil and diesel oil ..	n.a.	33,780	129,583	985,993	408,794	574,358
Lubricating oil ..	16,925	10,709	17,437	22,928	11,371	30,455
Natural asphalt ..	8,504	2,122	609	92	1,359	2,818
<b>Thailand—</b>						
Aviation spirit ..	27,508	45,696	36,162	73,297	78,889	14,566
Motor spirit ..	361,583	337,535	132,053	120,960	161,969	107,229
Kerosine ..	128,123	223,642	382,604	1,271,115	770,134	114,176
Gas, diesel and fuel oils ..	990,294	1,009,916	645,040	644,794	810,485	1,202,042
Lubricating oil ..	39,540	52,411	58,768	75,326	95,737	86,818
Grease ..	2,917	3,028	2,986	3,952	5,617	4,146
Paraffin wax ..	2,057	3,123	1,942	4,229	3,681	3,453
Petroleum jelly ..	796	757	1,090	1,139	1,077	977
Asphalt ..	44,842	42,202	9,642	1,047	4,245	45,829
<b>Turkey—</b>						
Crude petroleum ..	3,032,060	3,375,961	3,003,288	2,763,059	2,441,205	2,921,669
Motor spirit ..	4,879	2,530	4,599	1,482	19,319	35,171
Kerosine ..	37,893	26,518	33,230	22,331	43,643	47,143
Gas and diesel oils ..	7	—	1	57,633	154,309	166,750
Fuel oil ..	100	—	—	10,931	14,499	72,379
Lubricating oils and grease ..	90,317	59,737	50,844	83,712	88,654	122,681
Paraffin wax ..	1,741	1,420	2,124	2,572	2,667	2,960
Petroleum jelly ..	163	201	304	496	240	184
Asphalt ..	14	1	2	18	—	11
<b>Vietnam (South)—</b>						
Aviation spirit ..	137,100	121	83	n.a.	n.a.	n.a.
Motor spirit ..		124,154	158,222	n.a.	n.a.	n.a.
Kerosine ..	79,000	72,845	92,271	n.a.	n.a.	n.a.
Gas oil ..	354,700	80,612	88,832	n.a.	n.a.	n.a.
Fuel oils ..		293,542	384,842	n.a.	n.a.	n.a.
Lubricating oils and grease ..	20,728	n.a.	n.a.	n.a.	n.a.	n.a.
Petroleum jelly ..	120	n.a.	n.a.	n.a.	n.a.	n.a.
Paraffin wax ..	3,771	n.a.	n.a.	n.a.	n.a.	n.a.
<b>French Polynesia—</b>						
Motor spirit, etc. ..	25,464	10,044	16,743	22,839	n.a.	n.a.
Kerosine ..		3,783	4,156	9,713	n.a.	n.a.
Other oils ..		19,897	45,337	49,829	n.a.	n.a.

(a) Including imports for bunkering purposes. See exports.

(b) Previously Aden.

IMPORTS OF PETROLEUM AND ALLIED PRODUCTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
New Caledonia—						
Motor spirit, etc. ..	16,690	18,923	21,095	21,695	21,740	<i>n.a.</i>
Kerosine ..	3,789	3,542	4,438	3,737	4,008	<i>n.a.</i>
Gas and fuel oils ..	47,549	16,971	133,798	193,671	193,303	<i>n.a.</i>
Lubricating oil, etc. ..	64,243	11,669	8,226	2,226	2,542	<i>n.a.</i>



**PHOSPHATES**  
**PRODUCTION OF PHOSPHATE ROCK**  
(Including Apatite)

Long tons

Producing Country	Estimated Tribasic Phosphate of Lime Content or equivalent						
	1963	1964	1965	1966	1967	1968	1968
<b>COMMONWEALTH COUNTRIES</b>							
Kenya (a)	—	—	—	318	341	n.a.	—
Rhodesia (d)	—	1,964	n.a.	n.a.	n.a.	n.a.	75
Seychelles (a) (b)	6,965	3,787	5,904	3,805	3,480	5,929	n.a.
Uganda (d)	6,959	9,393	16,123	15,548	10,668	9,322	4,000
Christmas Island (b)(g)	651,461	774,801	739,568	950,517	984,125	1,123,269	14,500
India (d)	12,920	3,985	6,964	15,980	11,447	6,300	808,000
Australia—							6,000
Phosphate rock	4,909	5,689	4,504	5,715	11,770	5,744	2,500
Guano	16	—	15	—	—	—	10
Nauru Island (b)	1,547,242	1,820,066	1,456,535	2,004,592	1,766,567	2,218,549	1,331,000
Ocean Island (b)	356,128	322,848	359,322	374,030	445,150	519,407	278,000
<b>TOTAL</b>	<b>2,587,000</b>	<b>2,943,000</b>	<b>2,591,000</b>	<b>3,372,000</b>	<b>3,236,000</b>	<b>3,891,000</b>	<b>1,253,000</b>
<b>OTHER COUNTRIES</b>							
Belgium (e)	13,416	21,707	(c) 20,000	25,000	26,600	(c) 29,500	4,000
France (e)	50,000	42,000	34,000	36,000	63,000	n.a.	10,000
Poland	64,000	88,000	92,000	f 92,000	f 89,000	94,000	26,000
U.S.S.R. (f)—							
Apatite	4,690,000	r 6,279,000	r 7,430,000	7,873,000	8,661,000	9,546,000	r 5,350,000
Phosphate rock	3,750,000	r 4,285,000	r 5,955,000	6,642,000	7,384,000	7,875,000	r 2,340,000
Algeria	342,642	71,726	84,813	63,631	198,000	f 200,000	48,000
Egypt	602,403	603,552	584,322	650,398	672,414	1,418,089	370,000
Morocco	8,413,403	9,938,045	9,669,209	9,290,173	10,378,490	10,345,770	7,310,000
							r 6,331,000
							r 3,250,000
							3,630,000
							4,030,000
							133,000
							43,000
							400,000
							6,800,000
							7,110,000
							7,693,000
							6,709,000
							7,380,000
							5,000
							7,700
							27,600
							8,134,000
							4,300,000
							134,000
							430,000
							7,637,000

(g) In addition, the following amounts of phosphate dust were exported (long tons): 1963—80,552; 1964—72,416; 1965—90,033; 1966—89,453; 1967—89,773; 1968—70,635.

(d) Apatite.  
(e) Including phosphatic chalk.  
(f) United States Bureau of Mines' estimate.

(a) Phosphatic guano.  
(b) Exports.  
(c) Estimated.

PRODUCTION OF PHOSPHATE ROCK (cont.)

Long tons

Producing Country	Estimated Tribasic Phosphate of Lime Content or equivalent						
	1963	1964	1965	1966	1967	1968	1968
<b>OTHER COUNTRIES</b>							
<i>(cont.)</i>							
Senegal—							
Phosphate rock ..	457,599	666,387	889,106	974,000	1,100,000	1,090,000	380,000
Aluminium phosphates ..	123,827	119,029	132,809	142,494	158,735	160,000	78,000
South Africa—							
Phosphate rock (h) ..	447,729	569,754	600,142	1,046,539	1,330,606	1,540,692	264,000
Guano ..	2,552	4,279	3,307	3,303	3,396	3,186	600
South West Africa (f) ..	1,354	412	1,384	1,804	n.a.	n.a.	300
Togo ..	509,700	755,400	958,268	1,134,000	1,122,000	1,353,000	411,000
Tunisia ..	2,333,281	2,707,492	2,991,826	3,165,407	2,841,000	3,389,248	1,517,000
Mexico ..	(g) 30,000	27,454	(g) 39,000	(a) 94,000	48,000	42,000	19,500
Netherlands Antilles (b) ..	126,254	117,666	113,075	145,140	99,648	91,667	92,000
United States (e) ..	19,855,000	22,960,000	26,282,000	34,866,000	35,509,000	36,831,250	13,592,000
Argentina (f) ..	798	177	118	64	232	n.a.	n.a.
Brazil—							
Apatite ..	211,888	191,996	188,806	290,552	496,859	n.a.	147,000
Phosphate rock ..	62,503	50,334	85,535	81,837	49,259	n.a.	40,600
Chile—							
Apatite ..	13,689	12,931	10,111	—	—	—	8,000
Guano ..	22,000	15,000	21,000	15,000	16,000	22,000	9,000
Peru (f) ..	189,000	201,860	167,214	54,000	64,000	74,000	50,000
China (a) (d) ..	700,000	800,000	900,000	1,000,000	1,000,000	1,000,000	500,000
Indonesia (g) ..	30,000	(c) 30,000	(c) 30,000	(c) 30,000	(c) 30,000	n.a.	13,000
Israel ..	295,000	236,000	382,000	a 394,000	a 590,000	765,000	190,000
Jordan ..	604,732	555,539	814,865	1,019,576	1,065,244	1,138,035	441,000
Philippine Republic—							
Phosphate rock ..	1,049	2,812	10	98	1	513	400
Guano ..	1,450	1,172	4,106	526	1,295	646	350
Vietnam (North) (d) ..	910,000	a 980,000	a 980,000	a 980,000	a 980,000	a 980,000	790,000
French Polynesia (Makatea) ..	330,150	382,292	303,364	174,188	—	—	271,000
TOTAL ..	45,000,000	54,000,000	60,000,000	70,000,000	74,000,000	79,000,000	79,000,000
WORLD'S TOTAL ..	48,000,000	57,000,000	63,000,000	73,000,000	77,000,000	83,000,000	83,000,000

Phosphate rock is also known to have been produced in Venezuela, North Korea and North Vietnam. Guano is known to have been produced in Sarawak and the Somali Republic.

(g) United States Bureau of Mines' estimate. (b) Exports. (c) Estimated. (d) Apatite. (e) Marketable production. (f) Phosphatic guano. (g) Source: International Superphosphate Manufacturers' Association. (h) Including apatite and aluminium phosphate.

PRODUCTION OF SUPERPHOSPHATES

Long tons

Producing Country	Estimated P <sub>2</sub> O <sub>5</sub> Content						1968	1967	1966	1965	1964	1963
	1968	1967	1966	1965	1964	1963						
<b>COMMONWEALTH COUNTRIES</b>												
United Kingdom—												
Single .. .. .	334,835	344,194	379,829	437,989	505,687	516,477						
Concentrated* .. .. .	97,213	70,862	95,400	85,733	73,688	70,500						
Uganda—												
Single .. .. .	14,769	16,752	24,220	23,849	12,209	7,173						
Canada*—												
Single .. .. .	n.a.	360,000	c 350,000	298,900	266,300	297,400						
Concentrated (c) .. .. .	n.a.	c 180,000	157,000	160,000	160,000	150,000						
India—												
Single .. .. .	723,000	820,000	c 700,000	c 680,000	c 700,000	573,000						
Pakistan (a)—												
Single .. .. .	18,537	5,182	5,780	8,940	7,160	6,651						
Australia—												
Single .. .. .	(e)	(e)	(e)	(e)	(e)	3,055,988						
Concentrated (d) .. .. .	4,174,000	4,566,000	4,356,000	3,725,436	3,667,501	—						
New Zealand—												
Single (b) .. .. .	1,509,000	1,337,000	1,611,000	1,585,000	1,455,000	1,204,000						
TOTAL .. .. .	1,509,000	1,337,000	1,611,000	1,585,000	1,455,000	1,204,000						
Irish Republic*—												
Single .. .. .	256,900	281,500	279,000	326,400	318,000	258,900						
Concentrated .. .. .	117,300	76,800	48,600	34,338	29,700	28,000						
<b>OTHER COUNTRIES</b>												
Austria*—												
Single .. .. .	215,300	242,100	204,600	212,400	282,300	256,300						
Belgium*—												
Single .. .. .	185,900	162,400	171,900	259,900	250,500	219,000						
Concentrated (c) .. .. .	110,000	120,000	120,000	120,000	130,000	120,000						
Bulgaria—												
Single .. .. .	n.a.	n.a.	n.a.	c 510,000	c 490,000	c 390,000						
Czechoslovakia—												
Single .. .. .	n.a.	1,336,000	1,257,000	1,187,000	1,082,000	804,000						
TOTAL .. .. .	2,213,644	1,946,772	2,136,644	2,136,644	1,946,772	1,448,807						

\*Source: International Superphosphate Manufacturers' Association.

(a) West Pakistan. (b) Superphosphate content of all fertilizers made.

(c) Estimated. (d) Calculated as a single superphosphate. (e) Including ammonium phosphate calculated as single superphosphate.

PRODUCTION OF SUPERPHOSPHATES (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968	Estimated P <sub>2</sub> O <sub>5</sub> Content					
							1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>												
Denmark*—	449,300	461,000	475,200	450,300	352,300	312,300	80,900	83,000	85,500	81,100	63,400	56,200
Single (a)	28,300	34,000	37,600	24,600	24,600	23,800	9,100	10,900	12,000	7,900	7,900	7,600
Enriched	..	..	..	..	..	..	..	..	..	..	..	..
Finland*—	321,690	371,882	312,900	447,800	303,100	249,800	61,100	70,700	59,500	85,100	59,100	49,900
Single	122,590	138,515	119,000	84,123	85,600	61,200	28,200	26,300	27,400	16,000	19,700	14,100
Kotka-phosphate	..	..	..	..	..	..	..	..	..	..	..	..
France*—	1,417,400	1,478,052	1,579,400	1,456,700	1,402,500	1,495,200	260,200	277,300	301,700	279,700	277,100	290,000
Single	85,109	143,800	185,543	224,600	332,700	n.a.	35,200	61,100	83,900	101,100	149,800	n.a.
Concentrated	..	..	..	..	..	..	..	..	..	..	..	..
Germany (Federal)*—	283,300	360,072	419,900	369,600	320,900	214,500	52,600	67,200	80,000	66,500	57,800	40,800
Single	..	..	..	..	..	..	..	..	..	..	..	..
Germany (East)—	674,000	673,000	829,000	856,000	n.a.	n.a.	121,300	121,100	149,300	154,000	165,000	183,000
Single	197,800	220,634	184,100	147,300	173,200	206,500	37,500	41,900	35,000	28,000	31,500	43,400
Greece*—	504,722	530,693	605,711	700,000	811,000	830,000	85,800	97,000	114,000	128,000	150,000	160,000
Single	..	..	..	..	..	..	..	..	..	..	..	..
Italy—	1,433,000	1,236,000	1,367,603	1,645,066	1,532,897	1,584,419	281,000	245,000	264,000	310,000	290,000	300,000
Single	19,000	23,000	..	..	..	..	..	..	..	..	..	..
Concentrated	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands*—	373,000	451,013	325,500	259,900	303,100	282,400	67,700	83,500	59,800	48,600	55,400	53,700
Single	122,900	155,300	148,340	163,500	183,100	203,400	52,000	69,000	64,200	73,600	80,800	91,500
Concentrated	..	..	..	..	..	..	..	..	..	..	..	..
Norway—	41,200*	40,500*	37,966*	15,000*	18,700*	6,800*	7,500	7,200	6,800	2,700	3,400	1,200
Single (c)	30,475	29,674	24,000	22,400	16,700	10,400	9,900	8,900	7,000	6,900	5,400	3,800
Enriched*(d)	..	..	..	..	..	..	..	..	..	..	..	..
Poland (b)—	994,000	1,230,000	1,358,000	1,462,000	1,544,000	1,903,000	164,000	203,000	224,000	241,000	255,000	314,000
Single	..	..	..	..	..	..	..	..	..	..	..	..
Portugal—	435,384	424,524	423,031	401,458	483,000	481,000	78,000	76,000	76,000	72,000	81,000	80,000
Single	..	..	..	..	..	..	..	..	..	..	..	..
Concentrated (e)	..	..	..	..	..	..	..	..	..	..	..	..

\*Source: International Superphosphate Manufacturers' Association.

(a) The majority of this material was used to make potash superphosphate, production of which was as follows (long tons): 1963—725,865; 1964—703,092; 1965—743,637; 1966—566,197; 1967—489,865; 1968—426,565.

(b) The following amounts of "Supertomasyna" were produced (long tons): 1963—269,000; 1964—284,000; 1965—296,000; 1966—301,000; 1967—289,000; 1968—308,000.

(c) The majority of this material was used to make potash superphosphate, production of which was as follows (long tons): 1963—n.a.; 1964—39,616; 1965—31,562; 1966—33,674; 1967—26,575; 1968—n.a.

(d) Including concentrated superphosphate.

PRODUCTION OF SUPERPHOSPHATES (cont.)

Long tons

Producing Country	Estimated P <sub>2</sub> O <sub>5</sub> Content											
	1963	1964	1965	1966	1967	1968	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)												
Roumania—												
Single ..	610,000	690,000	780,000	960,000	1,010,000	n.a.	98,000	110,000	124,000	153,000	162,000	179,000
Spain (a)—												
Single ..	1,980,000	1,880,000	2,000,000	1,700,000	1,520,600	1,500,000	321,200	321,400	345,200	300,000	306,000	304,000
Sweden*—												
Single (b) ..	391,390	417,400	401,300	324,900	303,100	293,100	76,300	81,400	78,300	63,400	59,100	57,100
Enriched ..	35,750	39,024	47,100	34,900	23,600	60,600	10,400	11,300	13,700	10,100	6,800	17,600
Switzerland*—												
Single ..	12,000	13,000	9,500	9,200	7,900	n.a.	2,200	2,300	1,700	1,700	1,400	n.a.
U.S.S.R.												
Single ..	7,734,000	10,508,000	12,047,000	13,696,000	n.a.	n.a.	1,470,000	2,000,000	2,290,000	2,600,000	n.a.	n.a.
Concentrated ..												
Yugoslavia—												
Single ..	720,000	953,000	788,000	996,000	1,153,000	1,055,000	137,000	181,000	150,000	160,000	200,000	170,000
Concentrated ..												
Algeria—												
Single ..	53,300	87,000	94,000	n.a.	72,800	79,000	8,500	14,000	15,000	n.a.	11,600	13,000
Egypt—												
Single ..	160,978	206,114	247,643	272,547	261,622	301,215	24,100	33,000	40,000	44,000	n.a.	n.a.
Morocco*—												
Single ..	96,500	97,300	(c)110,000	88,300	116,100	63,900	16,900	17,000	19,000	15,500	19,800	11,200
South Africa*—												
Single ..	837,120	954,300	750,000	787,300	c)787,400	n.a.	159,000	181,300	143,000	149,000	149,600	n.a.
Tunisia—												
Single ..	47,400*	48,000*	78,500*	84,500*	c) 90,000*	n.a.	7,400	7,300	12,000	13,500	16,200	n.a.
Concentrated ..	136,000	150,000	155,000	n.a.	n.a.	n.a.	58,000	65,000	67,000	n.a.	n.a.	n.a.
Cuba*—												
Single ..	38,300	52,100	52,000	(c) 60,000	c) 59,100	n.a.	6,900	9,300	9,000	10,000	10,600	n.a.
Mexico—												
Single ..	n.a.	121,290	129,792	159,777	179,176	206,000	n.a.	21,800	23,400	28,800	32,300	n.a.
Concentrated ..	n.a.	41,259	32,663	47,053	43,868	n.a.	n.a.	16,500	13,100	18,800	17,500	n.a.
Salvador—												
Single ..	—	7,701	6,124	12,353	15,473	n.a.	—	1,500	1,200	2,500	3,000	n.a.
United States*—												
Single ..	6,084,800	5,980,100	5,533,900	5,637,600	5,860,000	n.a.	1,095,200	1,076,400	996,200	1,014,800	1,054,800	n.a.
Concentrated ..	2,207,960	2,680,200	3,205,324	3,334,500	2,938,800	n.a.	993,600	1,206,100	1,442,400	1,500,500	1,322,500	n.a.

\*Source: International Superphosphate Manufacturers' Association.

(a) Including Canary Islands.

(b) The majority of this material was used to make potash superphosphate, production of which was as follows (long tons): 1963—455,448; 1964—479,478; 1965—478,034; 1966—427,676; 1967—395,885; 1968—n.a.

(c) Estimated.

PRODUCTION OF SUPERPHOSPHATES (cont.)

Long tons

Producing Country	Estimated P <sub>2</sub> O <sub>5</sub> Content						
	1963	1964	1965	1966	1967	1968	1968
<b>OTHER COUNTRIES</b>							
<i>(cont.)</i>							
Brazil	330,841	345,833	300,459	311,485	445,971	n.a.	n.a.
Single	..	..	..	..	..	..	..
Colombia	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Peru	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Uruguay*	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Venezuela*	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Formosa	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Israel*	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Concentrated (b)	..	..	..	..	..	..	..
Japan*	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Concentrated (b)	..	..	..	..	..	..	..
Jordan	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Lebanon*	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Philippine Republic*	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
Turkey	..	..	..	..	..	..	..
Single	..	..	..	..	..	..	..
TOTAL	172,000	149,137	217,800	218,600	202,000	184,200	184,200
WORLD'S TOTAL	..	..	..	..	..	..	..

Single and concentrated superphosphates are also produced in Rhodesia but figures are not available for publication. Concentrated superphosphate is also produced in Australia, Germany (Federal) and Spain.

\*Source: International Superphosphate Manufacturers' Association.

(a) Estimated.

(b) May include enriched superphosphate.

PRODUCTION OF BASIC SLAG

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom ..	(a) 812,549	(b) 920,322	(b) 638,875	(b) 655,700	(b) 655,670	(b) 587,980
<b>OTHER COUNTRIES</b>						
Belgium (a) (c) ..	1,184,000	1,135,000	1,314,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Czechoslovakia (c) ..	147,000	149,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
France ..	2,314,115	2,533,159	2,505,966	2,519,475	2,477,369	2,634,429
Germany (Federal) ..	3,006,000	3,186,000	2,933,000	2,742,000	2,654,000	2,677,000
Germany (East) (c) ..	112,000	118,000	119,000	112,000	123,000	124,000
Italy ..	110,082	86,361	17,667	—	—	—
Luxemburg ..	755,297	805,427	823,502	764,561	774,623	804,170
Poland (c) ..	444,000	467,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sweden ..	29,363	49,729	41,089	51,120	65,734	<i>n.a.</i>
Egypt ..	19,723	29,014	31,309	27,527	<i>n.a.</i>	55,354
United States (a) (c) ..	30,000	—	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Colombia (a) (c) ..	<i>n.a.</i>	35,000	35,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

Basic slag has also been produced in the U.S.S.R., South Africa and Japan.

(a) Years ended June 30 of that stated.

(b) Years ended May 31 of year following that stated.

(c) Estimated.

## EXPORTS OF PHOSPHATES, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Phosphatic fertilizers ..	839	2,769	19,372	44,193	55,670	62,176
Seychelles—						
Phosphatic guano ..	6,965	3,787	5,904	3,805	3,480	5,929
Uganda—						
Phosphate rock ..	464	365	193	—	—	—
Canada—						
Nitrogen-phosphate fertilizers ..	(£4,329,440)	(£3,403,812)	(£6,453,415)	(£7,558,541)	(£8,978,193)	(£9,930,240)
Christmas Island—						
Phosphate rock ..	651,461	774,801	739,568	950,517	984,125	1,123,269
Phosphate dust ..	80,552	72,416	90,033	89,453	89,773	70,635
Malaysia (West)—						
Natural phosphates ..	<i>n.a.</i>	<i>n.a.</i>	56	39	32	27
New Zealand (a)—						
Superphosphates ..	172	250	196	428	405	488
Nauru Island—						
Phosphate rock ..	1,547,242	1,820,066	1,456,535	2,004,592	1,766,567	2,218,549
Ocean Island—						
Phosphate rock ..	356,128	322,848	359,322	374,030	445,150	519,407
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Phosphate rock ..	25,056	28,629	30,710	30,410	20,762	10,715
Superphosphates—						
Single ..	} 211,812	} 277,817	} 216,478	(b) 48,774	(b) 46,067	(b) 45,510
Concentrated ..						
Basic slag ..	1,717,465	1,768,548	1,843,036	(b) 268,653	(b) 276,623	(b) 277,316
France—						
Phosphate rock ..	2,549	2,329	14,293	1,638	2,910	788
Superphosphates ..	38,290	49,705	38,017	28,264	43,030	30,471
Basic slag ..	298,105	337,678	331,999	337,142	344,742	306,780
Di-calcium phosphates	465	267	277	9,440	14,551	17,641
Germany (Federal)—						
Phosphate rock ..	35,653	42,555	34,077	41,840	49,278	23,349
Superphosphates ..	14,489	18,411	21,656	31,800	8,203	34,402
Basic slag ..	401,772	348,782	281,959	220,510	199,990	211,914
Other phosphatic fertilizers ..	9,252	1,759	3,808	3,137	2,409	6,856
Greece—						
Phosphatic fertilizers ..	49	30	1,014	10,184	25,122	83,025
Hungary—						
Superphosphates ..	15,957	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Italy—						
Superphosphates ..	47,705	31,417	1,794	2,230	1,085	18,922
Netherlands—						
Phosphate rock ..	3,450	1,303	961	548	497	223
Superphosphates ..	370,075	457,518	371,682	106,020	138,518	115,379
Basic slag ..	39	187	7,671	757	220	256
Norway—						
Superphosphates ..	23,749	18,070	23,952	6,206	4,213	8,278
Portugal—						
Superphosphates ..	91,412	78,795	43,401	63,895	105,649	96,924
Spain—						
Superphosphates, etc. ..	32,342	123,814	56,683	62,980	70,714	31,023
Di-calcium phosphates	3,809	3,100	7,172	2,418	492	1,784
Sweden—						
Phosphate rock ..	628	—	—	—	21	1,787
Di-calcium phosphates	7,330	13,479	18,127	16,426	25,644	26,873
Basic slag ..	6,712	22,166	20,031	20,190	24,328	32,164

(a) Years ended June 30 of that stated.

 (b) P<sub>2</sub>O<sub>5</sub> content.



## EXPORTS OF PHOSPHATES, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>U.S.S.R.—</b>						
Apatite ore .. ..	80,100	63,900	80,300	77,600	88,977	59,500
do. concentrates ..	2,187,000	2,942,300	3,437,900	4,212,900	4,438,377	5,026,300
Superphosphates ..	290,400	223,300	192,100	280,300	372,226	438,500
<b>Yugoslavia—</b>						
Superphosphates ..	—	87,571	210,771	348,287	282,157	340,468
<b>Algeria—</b>						
Phosphate rock .. ..	320,556	—	56,115	12,578	7,188	<i>n.a.</i>
<b>Egypt—</b>						
Phosphate rock .. ..	413,556	322,561	367,597	365,000	<i>n.a.</i>	<i>n.a.</i>
<b>Morocco—</b>						
Phosphate rock .. ..	8,386,884	9,916,687	9,397,397	9,057,177	9,195,992	8,100,600
Hyperphosphates ..	5,040	4,309	1,237	3,573	7,559	13,656
Superphosphates ..	6,102	32,359	261	136,855	184,133	235,634
<b>Senegal—</b>						
Phosphate rock .. ..	340,788	623,199	755,021	704,132	697,518	} 1,091,543
Aluminium phosphates	48,604	86,845	98,322	94,135	74,436	
Phosphate fertilizers ..	13,364	22,687	3,977	21,468	17,287	
<b>South Africa—</b>						
Phosphate rock .. ..	<i>n.a.</i>	11,266	12,400	458	1,851	<i>n.a.</i>
Super-phosphates ..	3,731	} 5,274	5,523	2,116	2,157	6,915
Other phosphatic fertilizers .. ..	<i>n.a.</i>					
<b>South West Africa—</b>						
Phosphatic guano ..	<i>n.a.</i>	—	909	1,124	<i>n.a.</i>	<i>n.a.</i>
<b>Togo—</b>						
Phosphate rock .. ..	434,462	788,808	799,790	953,433	1,003,876	1,336,000
<b>Tunisia—</b>						
Phosphate rock .. ..	1,934,528	2,179,736	2,225,031	2,347,200	2,263,560	2,421,000
Hyperphosphates ..	72,448	109,052	113,924	69,000	13,739	<i>n.a.</i>
Superphosphates ..	144,891	122,850	253,044	166,660	376,264	<i>n.a.</i>
<b>Mexico—</b>						
Phosphate rock .. ..	23,590	27,455	30,824	36,468	33,874	28,339
<b>Netherlands Antilles—</b>						
Phosphate rock .. ..	126,254	117,666	113,075	145,140	101,679	91,667
<b>United States—</b>						
Phosphate rock .. ..	4,624,912	5,652,573	6,673,237	8,263,666	9,194,137	10,788,393
<b>Superphosphates—</b>						
Single .. ..	} 601,887	{ 172,215	528,161	{ 78,832	67,463	84,848
Concentrated .. ..						
Sodium phosphates ..	13,955	20,512	20,039	19,858	24,177	17,074
Ammonium .. ..	165,430	324,211	285,404	689,548	1,134,311	1,134,045
Other phosphatic fertilizers .. ..	4,792	19,381	35,179	31,921	31,875	32,346
<b>Venezuela—</b>						
Superphosphates ..	23,501	55,133	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>French Polynesia (Makatea)—</b>						
Phosphate rock .. ..	316,173	368,208	325,000	196,953	<i>n.a.</i>	<i>n.a.</i>
<b>Israel—</b>						
Phosphate rock .. ..	145,288	178,124	303,230	416,807	413,365	637,116
<b>Japan—</b>						
Phosphate rock .. ..	11,128	701	121	898	591	1,349
Superphosphates ..	33,716	159,789	164,375	15,899	13,147	22,851
Thermal phosphates ..	41,212	35,914	9,444	17,131	11,146	9,996
Ammonium phosphate	50	345	6,389	719	8,395	892
Ammonium sulphate phosphate .. ..	37,564	49,330	35,842	18,975	45,614	59,634
Other phosphatic fertilizers .. ..	8,892	7,954	17,126	3,602	3,403	1,555
<b>Jordan—</b>						
Phosphate rock .. ..	351,497	617,170	595,098	743,109	867,733	1,076,945
<b>Lebanon—</b>						
Superphosphates ..	13,362	12,874	10,173	14,159	16,808	<i>n.a.</i>

## IMPORTS OF PHOSPHATES, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Phosphate rock ..	1,413,829	1,485,010	1,667,262	1,638,486	1,586,966	1,843,057
Superphosphates ..	25,738	16,069	11,478	2,666	46,681	31,512
Basic slag ..	96,821	76,343	46,217	42,240	41,977	40,141
Ammonium phosphate	10,904	11,557	3,429	3,222	10,451	30,118
Ghana—						
Superphosphates ..	118	50	1,640	1	—	160
Other phosphatic fertilizers ..	1,039	192	2,477	1	6	227
Kenya—						
Superphosphates ..	12,079	12,125	11,400	18,976	14,509	15,710
Other phosphatic fertilizers ..	1,893	45	122	1,591	640	3,335
Mauritius—						
Phosphatic guano ..	8,928	7,295	11,460	5,780	9,545	10,501
Phosphatic fertilizers ..	7,910	7,093	5,689	1,378	2,941	3,851
Nigeria—						
Phosphatic fertilisers ..	8,269	13,022	10,492	16,023	28,389	23,963
Rhodesia (a)—						
Phosphate rock ..	84,816	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Superphosphates ..	27,491	5,735	2,379	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other phosphatic fertilizers ..	1,744	5,998	10,255	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sierra Leone—						
Superphosphates ..	374	6	50	556	418	<i>n.a.</i>
Other phosphatic fertilizers ..	566	200	675	1,449	10	<i>n.a.</i>
Tanzania—						
Superphosphates ..	630	845	1,129	906	1,168	2,552
Other phosphatic fertilizers ..	15	13	60	4	1	82
Uganda—						
Superphosphates ..	647	1,489	1,654	974	530	757
Other phosphatic fertilizers ..	2	2	15	2	401	44
Zambia—						
Phosphatic fertilizers ..	<i>n.a.</i>	922	1,822	1,767	3,265	919
Canada—						
Phosphate rock ..	1,158,417	1,255,736	1,513,657	1,947,626	2,035,506	2,098,196
Superphosphates, single	74,945	100,527	80,603	63,113	31,688	12,854
do. concentrated ..	37,452	56,480	47,249	40,570	41,804	26,969
Calcium phosphate ..	<i>n.a.</i>	17,106	17,499	19,297	18,726	18,129
Sodium phosphates ..	<i>n.a.</i>	<i>n.a.</i>	6,301	7,450	8,801	<i>n.a.</i>
Antigua—						
Phosphatic fertilizers ..	—	1,051	203	14	—	<i>n.a.</i>
Barbados—						
Phosphatic fertilizers ..	50	35	36	58	144	30
Grenada—						
Superphosphates ..	33	20	423	381	944	692
Other phosphatic fertilizers ..	368	46	705	910	766	550
Jamaica—						
Phosphatic fertilizers ..	2,075	3,546	3,313	2,327	13,724	2,756
St. Kitts—						
Phosphatic fertilizers ..	188	310	221	145	1,751	<i>n.a.</i>
St. Lucia—						
Phosphatic fertilizers ..	7	150	175	58	—	12
St. Vincent—						
Superphosphates ..	—	285	210	78	—	<i>n.a.</i>
Trinidad and Tobago—						
Superphosphates ..	299	130	<i>n.a.</i>	<i>n.a.</i>	490	1,778

(a) Figures for 1963 relate to Rhodesia and Nyasaland.

## IMPORTS OF PHOSPHATES, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
Guyana—						
Superphosphates ..	<i>n.a.</i>	1,229	160	315	385	444
Basic slag ..	<i>n.a.</i>	5	3	—	—	1
Other phosphatic fertilizers ..	<i>n.a.</i>	1,400	3,146	2,340	2,321	3,114
Ceylon—						
Phosphate rock ..	72,174	64,898	39,602	40,002	24,755	—
Superphosphates ..	1,193	2,128	1,115	582	2,291	7,009
Basic slag ..	25	20	56	—	—	10
Other phosphatic fertilizers ..	20	10	10,970	5,432	23,630	25,340
Cyprus—						
Superphosphates ..	33,305	31,261	31,853	25,738	19,913	27,152
Basic slag, etc. ..	27	—	975	10	—	—
Hong Kong—						
Phosphatic fertilizers ..	85	50	71	8	88	10
India (b)—						
Phosphate rock ..	331,458	419,577	556,760	845,528	594,496	831,855
Other natural phosphates ..	4	—	8	—	4,843	—
Superphosphates ..	534	136	6,917	50	1,517	161
Ammonium phosphate ..	23,581	35,632	46,636	128,902	459,136	353,524
Malaysia (West)—						
Natural phosphates ..	<i>n.a.</i>	<i>n.a.</i>	88,652	111,066	100,193	84,282
Phosphatic fertilizers ..	<i>n.a.</i>	<i>n.a.</i>	7,174	6,471	6,014	3,863
Sabah—						
Natural phosphates ..	904	238	1,203	579	555	491
Superphosphates ..	10	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other phosphatic fertilizers ..	<i>n.a.</i>	1,251	742	185	296	137
Sarawak—						
Natural phosphates ..	1,511	5,560	5,886	2,610	5,644	3,556
Phosphatic fertilizers ..	6,999	849	947	1,945	107	147
Australia (a)—						
Phosphate rock ..	1,694,916	1,989,413	2,517,313	2,795,056	3,271,814	3,295,780
Superphosphates ..	95	—	—	—	—	—
Calcium phosphate ..	606	666	1,073	1,311	1,444	872
Other phosphatic fertilizers ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	266	35	30
Fiji—						
Phosphatic fertilizers ..	3,870	5,210	4,157	3,448	2,716	4,651
New Zealand (a)—						
Phosphate rock ..	597,937	722,871	932,789	1,026,480	1,051,120	871,849
Phosphatic guano ..	<i>n.a.</i>	3,455	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Superphosphates ..	82	99	28	66	11,340	<i>n.a.</i>
Basic slag ..	21,341	23,876	20,050	11,848	9,929	7,972
Other phosphates ..	7,697	1,723	2,959	2,928	2,791	<i>n.a.</i>
Irish Republic—						
Phosphate rock ..	226,935	235,691	239,813	255,149	351,901	418,772
Superphosphates ..	4,744	8,090	15,026	5,952	10,590	5,311
Basic slag ..	121,527	155,579	150,237	88,677	116,205	144,640
Di-calcium phosphate ..	(c)	365	1,155	2,279	1,615	395
Other phosphatic fertilizers ..	24,328	24,548	16,298	2,839	12	25

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

(c) Included, if any, with "other phosphatic fertilizers".

## IMPORTS OF PHOSPHATES, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Phosphate rock.. ..	195,017	265,880	228,513	260,544	270,378	316,766
Superphosphates (b) ..	9,750	10,327	14,180	6,115	1,274	1,150
Basic slag .. ..	316,404	344,641	331,859	320,734	300,834	321,468
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Phosphate rock.. ..	993,935	1,160,803	1,265,999	1,180,569	1,446,254	1,776,641
Superphosphates .. ..	304	1,616	382	873	200	1,333
Basic slag .. ..	5	23	22	3	134	76
<b>Bulgaria—</b>						
Phosphate rock .. ..	299,700	505,300	497,800	691,011	<i>n.a.</i>	<i>n.a.</i>
<b>Czechoslovakia—</b>						
Phosphatic fertilizers (a)	208,000	256,000	286,000	266,000	292,000	<i>n.a.</i>
<b>Denmark—</b>						
Phosphate rock.. ..	307,792	279,362	337,285	301,167	276,423	270,039
Superphosphates .. ..	101,733	87,627	79,410	38,198	20,932	45,733
Di-calcium phosphates	26,214	33,785	33,199	34,346	34,562	33,013
Basic slag .. ..	8,370	9,118	9,324	4,087	2,857	2,681
<b>Finland—</b>						
Phosphate rock.. ..	230,067	319,901	360,961	381,034	346,277	448,469
Superphosphates .. ..	16,187	35,533	134,142	1,573	295	339
Basic slag .. ..	10,366	9,873	15,207	11,170	13,173	10,993
Di-calcium phosphates	1,426	394	9,450	<i>n.a.</i>	3	—
<b>France—</b>						
Phosphate rock.. ..	2,118,068	2,382,588	2,733,898	2,800,037	2,965,701	3,206,220
Aluminium phosphates	79,271	87,560	90,891	87,604	84,415	99,710
Other phosphates .. ..	2,000	12,620	—	5,195	10,553	37,418
Superphosphates .. ..	329,634	369,667	306,255	238,616	272,533	298,395
Calcined phosphates ..	16,957	20,009	24,251	25,004	35,737	34,451
Basic slag .. ..	873,203	775,525	725,218	671,942	732,778	827,485
Di-calcium phosphates	18,597	20,768	20,088	10,389	1,415	6,858
<b>Germany (Federal)—</b>						
Phosphate rock, etc. ..	1,615,589	2,254,392	2,481,278	2,466,740	2,629,268	2,552,303
Superphosphates .. ..	38,160	22,680	22,256	16,917	26,868	26,915
Basic slag .. ..	406,447	416,930	520,726	576,801	527,400	508,257
Other phosphatic fertilizers .. ..	631	729	1,433	1,176	1,319	1,159
<b>Germany (East) (a)—</b>						
Phosphate rock .. ..	246,400	320,000	315,300	305,800	347,400	449,000
Other phosphatic fertilizers .. ..	44,303	92,787	86,733	74,178	56,308	40,323
<b>Greece—</b>						
Phosphate rock.. ..	200,843	25,409	155,160	223,844	326,531	387,842
Basic slag .. ..	758	296	93	98	49	<i>n.a.</i>
Other phosphatic fertilizers .. ..	81,193	82,069	59,387	20,586	18,137	<i>n.a.</i>
<b>Hungary—</b>						
Phosphate rock.. ..	301,634	474,712	422,000	397,000	486,198	490,810
<b>Iceland—</b>						
Superphosphates .. ..	3,554	3,865	8,134	10,280	8,519	8,254
<b>Italy—</b>						
Phosphate rock.. ..	1,455,265	1,689,441	1,628,954	1,847,210	1,870,354	2,129,605
Superphosphates .. ..	1,162	1,988	8,805	39,862	17,335	25,700
Basic slag .. ..	17,762	1,685	67,596	105,660	111,686	99,492
<b>Netherlands—</b>						
Phosphate rock.. ..	664,484	797,667	771,066	695,094	835,448	1,223,197
Superphosphates .. ..	52,922	98,949	57,452	48,558	47,978	29,124
Basic slag .. ..	152,219	230,553	249,506	29,839	24,464	22,153
Di-calcium phosphates	9,490	2,863	2,965	336	99	171
<b>Norway—</b>						
Phosphate-rock.. ..	147,418	196,600	170,633	222,517	234,801	308,599
Basic slag .. ..	6,247	7,057	5,051	6,625	6,064	8,286

 (a)  $P_2O_5$  content.

(b) Including other phosphatic fertilisers.

## IMPORTS OF PHOSPHATES, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Poland—						
Apatite concentrates ..	312,200	425,200	548,200	620,000	428,000	524,000
Phosphate rock ..	475,800	549,400	635,000	588,000	602,000	940,000
Portugal—						
Phosphate rock ..	268,982	252,341	270,635	220,398	292,074	294,992
Basic slag ..	9,900	14,311	10,471	9,949	9,199	8,813
Roumania—						
Phosphate rock (a) ..	147,900	93,000	171,500	204,000	216,132	202,353
Spain—						
Phosphate rock ..	985,844	1,084,069	1,069,482	1,134,671	1,135,684	1,220,922
Superphosphates, etc. ..	539	98	50	1,921	1,083	2,953
Basic slag ..	41,199	20,214	31,306	32,241	25,050	26,033
Di-calcium phosphates	—	—	—	3,528	6,499	2,039
Sweden—						
Phosphate rock ..	378,970	420,019	480,742	418,128	503,748	519,637
Superphosphates ..	281	2,724	652	18,157	226	18,349
Di-calcium phosphates	3,941	3,638	2,771	2,448	3,002	2,522
Switzerland—						
Phosphate rock ..	34,021	35,993	36,717	28,895	27,063	21,610
Superphosphates, etc. ..	12,304	14,471	12,503	14,593	16,172	17,602
Basic slag ..	180,799	189,590	191,258	191,253	197,363	195,645
Di-calcium phosphates	3,677	5,442	8,852	10,975	12,099	9,851
Yugoslavia—						
Phosphate rock ..	532,056	634,749	464,391	677,410	683,283	784,387
Superphosphates ..	215,240	16,339	n.a.	3	5,999	4,921
Basic slag ..	76,279	116,044	6,939	11,122	61,931	18,798
Angola—						
Superphosphates ..	982	2,689	2,540	3,262	3,937	3,732
Cameroun—						
Phosphatic fertilizers ..	265	734	563	n.a.	n.a.	n.a.
Canary Islands—						
Phosphate rock ..	16,500	14,587	19,025	17,782	18,665	18,759
Equatorial African Community—						
Phosphatic fertilizers ..	n.a.	106	496	1,286	770	3,079
Malagasy Republic—						
Phosphatic fertilizers ..	262	613	1,017	503	656	n.a.
Morocco—						
Superphosphates ..	541	166	974	n.a.	n.a.	n.a.
Di-calcium phosphates	487	10	13	9	18	15
Reunion—						
Phosphate fertilizers ..	873	882	642	282	279	n.a.
South Africa—						
Phosphate rock ..	313,926	297,976	172,356	154,797	86,188	75,957
Superphosphates ..	13,069	(b)	(b)	(b)	(b)	(b)
Basic slag ..	39,446	26,488	27,661	20,625	17,553	15,755
Other phosphatic fertilizers ..	n.a.	51,235	4,772	63,665	77,851	1,083
Sudan—						
Superphosphates ..	62	69	48	153	325	44
Tunisia—						
Phosphatic fertilizers ..	346	70	—	—	—	—
Costa Rica—						
Phosphatic fertilizers ..	387	2,555	57,146	15,267	14,905	n.a.
Cuba—						
Superphosphates ..	71,751	167,067	n.a.	n.a.	n.a.	n.a.
French West Indies—						
Guadeloupe—						
Phosphatic fertilizers ..	345	98	1,198	469	670	n.a.
Martinique—						
Phosphatic fertilizers ..	1,071	1,616	679	1,020	1,441	n.a.

 (a)  $P_2O_5$  content.

(b) Included with "other phosphatic fertilizers".

## IMPORTS OF PHOSPHATES, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Guatemala—						
Phosphatic fertilizers ..	3,123	5,431	2,843	82	799	6,209
Honduras—						
Phosphatic fertilizers ..	32	3,042	2,864	2,045	892	469
Mexico—						
Phosphate rock ..	196,109	200,445	224,586	285,195	323,155	321,580
Superphosphates ..	5,961	744	—	3	13,960	19,329
Ammonium phosphates	3,527	7,339	3,404	—	5	—
Nicaragua—						
Phosphatic fertilizers ..	1,937	4,547	13,900	14,670	23,652	14,438
Panama Republic—						
Phosphatic fertilizers ..	1,209	1,000	1,652	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Salvador—						
Phosphatic fertilizers ..	1,338	3,449	15,472	23,705	16,615	16,110
United States—						
Phosphate rock ..	160,708	155,819	132,263	158,721	123,796	103,142
Superphosphates—						
Single ..	} 64,144	70,512	51,698	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Concentrated ..						
Ammoniated ..	1,552	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Basic slag ..	527	—	146	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Di-calcium phosphates	4,326	6,291	2,683	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ammonium phosphates	115,812	85,845	155,795	159,634	189,081	220,554
Brazil—						
Phosphate rock ..	218,387	178,892	152,274	110,427	221,882	324,599
Superphosphates—						
Single ..	9,626	5,420	5,685	6,360	18,221	14,497
Concentrated ..	70,282	48,488	48,945	51,511	81,792	99,888
Calcined phosphates ..	4,399	4,353	2,092	1,985	1,158	98
Di-calcium phosphate ..	2,398	1,673	591	1,417	789	5,926
Basic slag ..	4,650	5,788	5,546	6,056	6,881	11,996
Chile—						
Superphosphates ..	77,864	68,781	93,439	<i>n.a.</i>	84,142	<i>n.a.</i>
Basic slag ..	33,695	5,845	8,813	<i>n.a.</i>	7,935	<i>n.a.</i>
Di-calcium phosphates	40,504	24,855	37,698	<i>n.a.</i>	19,465	<i>n.a.</i>
Other phosphatic fertilizers ..	32,769	33,496	37,747	<i>n.a.</i>	27,737	<i>n.a.</i>
Colombia—						
Phosphate rock ..	16,829	26,370	6,449	17,083	19,472	20,473
Superphosphates ..	28,963	27,464	26,635	24,231	16,282	36,973
Di-calcium phosphates	7,364	2,477	451	12	20	10
Peru—						
Phosphate rock ..	11,606	14,114	2,746	—	6,045	<i>n.a.</i>
Phosphatic fertilizers ..	206	1,242	20,237	221	9,359	<i>n.a.</i>
Uruguay—						
Phosphate rock ..	5,905	41,692	44,703	82,563	73,098	<i>n.a.</i>
Venezuela—						
Calcium phosphates and superphosphates ..	6,847	1,512	1,677	6,498	12,676	2,168
Burma—						
Phosphatic fertilizers ..	—	16,500	24,540	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Formosa—						
Calcium phosphate ..	539	786	1,108	} 45,290	{ 1,441	<i>n.a.</i>
Other phosphatic fertilizers ..	17,553	9,940	<i>n.a.</i>			
Iran (a)—						
Phosphatic fertilizers ..	17,038	13,878	18,897	37,302	50,480	28,262
Iraq—						
Phosphatic fertilizers ..	1,608	2,975	<i>n.a.</i>	5,136	4,096	<i>n.a.</i>

(a) Years ended March 20 following that stated.

## IMPORTS OF PHOSPHATES, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Japan—</b>						
Phosphate rock.. ..	2,030,526	2,279,150	2,380,063	2,518,555	2,589,960	3,363,099
Other phosphatic fertilizers .. ..	50	10	3,254	4,378	9,562	18,967
Calcium phosphates .. ..	2,825	4,445	5,377	6,851	2,765	4,785
Ammonium phosphate .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	1,852	99	571
<b>Jordan—</b>						
Phosphatic fertilizers .. ..	1,709	2,523	2,362	5,025	4,192	6,035
<b>Korea (South)—</b>						
Superphosphates .. ..	27	1,981	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Calcium phosphates .. ..	27	10,122	78,445	18,414	90,211	<i>n.a.</i>
Other phosphatic fertilizers .. ..	246,755	239,920	200,994	315,277	217,330	<i>n.a.</i>
<b>Lebanon—</b>						
Phosphatic fertilizers .. ..	20,296	21,714	43,862	1,942	2,420	<i>n.a.</i>
<b>Philippine Republic—</b>						
Phosphate rock.. ..	11,985	18,457	56,884	<i>n.a.</i>	104,443	<i>n.a.</i>
Superphosphates .. ..	886	1,194	1,237	<i>n.a.</i>	979	<i>n.a.</i>
Ammonium phosphate .. ..	6,882	15,966	27,111	<i>n.a.</i>	4,432	<i>n.a.</i>
Other phosphatic fertilizers .. ..	4,682	24,087	18,777	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Syria—</b>						
Phosphatic fertilizers .. ..	23,988	14,534	12,240	19,179	13,211	25,830
<b>Thailand—</b>						
Superphosphates .. ..	3,030	2,013	1,987	2,751	2,638	1,612
Phosphatic fertilizers .. ..	26,996	36,755	21,732	45,810	84,565	128,938
<b>Turkey—</b>						
Phosphate rock.. ..	114,412	91,056	98,941	145,750	93,602	103,529
Superphosphates .. ..	19,202	29,010	111,647	130,553	155,477	268,275
Ammonium phosphate .. ..	31	26	53	3,045	33	32
Other phosphatic fertilizers .. ..	<i>n.a.</i>	<i>n.a.</i>	6,348	5,517	51,872	29,277
<b>Vietnam (South)—</b>						
Calcium phosphates .. ..	77,900	45,925	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other phosphatic fertilizers .. ..	23,629	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

**PLATINUM**  
**PRODUCTION OF PLATINUM METALS**

Troy ounces

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada—						
Recovered from Ontario nickel-copper ores (c)—						
Platinum .. .. .	357,653	376,238	463,127	396,059	401,263	464,400
Other platinum metals						
Australia—						
New South Wales—						
Concentrates (Pt content) .. .. .	4	—	—	13	—	—
New Guinea—						
Platinum .. .. .	4	1	4	—	—	—
<b>OTHER COUNTRIES</b>						
U.S.S.R.—						
Crude platinum (d) .. .. .	1,300,000	1,500,000	1,700,000	1,800,000	1,900,000	2,000,000
Ethiopia—						
Crude platinum .. .. .	(d) 180	(d) 180	353	(d) 318	282	(d) 250
South Africa—						
Crude and matte (Pt metals content) (d)	300,000	600,000	750,000	780,000	825,000	900,000
Osmiridium (crude) (b)	5,185	4,135	3,820	3,400	(d) 8,000	(d) 14,000
United States (a)—						
New platinum metals recovered by refineries from crude platinum and gold and copper ores of domestic origin						
Platinum .. .. .	20,818	15,608	11,376	18,103	6,736	4,816
Palladium .. .. .	28,099	22,863	22,500	29,907	8,142	5,275
Iridium .. .. .	1,381	2,423	1,414	1,513	754	454
Osmium .. .. .	189	366	315	219	151	95
Rhodium .. .. .	1,073	2,757	2,156	2,361	57	36
Ruthenium .. .. .	398	286	400	558	11	6
Colombia (e)—						
Crude platinum .. .. .	22,983	20,647	11,141	15,671	12,411	15,076
Japan—						
Platinum .. .. .	1,714	2,199	2,466	2,733	3,072	2,772
Palladium .. .. .	1,326	1,875	2,952	5,495	3,327	4,034
<b>WORLD'S TOTAL (f)</b>	<b>2,000,000</b>	<b>2,500,000</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>3,400,000</b>

(a) Secondary platinum metals recovered in the United States were as follows (troy ounces):

	1963	1964	1965	1966	1967	1968
Platinum .. .. .	54,084	66,043	53,562	49,563	126,377	115,587
Palladium .. .. .	59,993	49,879	50,025	50,009	215,162	195,620
Iridium .. .. .	440	764	960	402	7,748	2,127
Osmium .. .. .	273	928	763	728	2,377	672
Rhodium .. .. .	1,990	2,338	2,590	2,434	11,505	12,176
Ruthenium .. .. .	319	195	625	185	2,630	3,273

(b) Sales.

(c) Metal content of concentrates produced from nickel-copper ores.

(d) United States Bureau of Mines' estimate.

(e) Exports. Total production may be very much greater.

(f) Estimated.



## EXPORTS OF PLATINUM\*

Troy ounces

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Platinum—						
Ingots, grain and powder .. ..	509,580	429,125	489,054	472,592	564,448	579,994
Other kinds (a) .. ..	76,307	79,084	88,777	111,286	115,304	199,269
Other platinum metals and alloys .. ..	279,899	273,418	323,918	378,853	422,785	454,235
Canada—						
Concentrates, etc. (b) .. ..	506,782	404,891	497,572	434,021	457,098	569,416
Platinum metals (b) .. ..	42,845	3,901	53,450	7,604	18,757	15,526
Scrap .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	32,406	26,397	32,041
Australia (c)—						
Platinum and platinum group metals .. ..	417	548	423	1,538	(a) 56,181	(a) 3,655
<b>OTHER COUNTRIES</b>						
Austria—						
Unwrought platinum and platinum metals	354	514	804	1,382	4,051	1,479
Denmark—						
Rods, sheets, wire, scrap, etc. .. ..	—	—	482	32	836	418
France—						
Unwrought platinum and scrap (a) .. ..	28,270	15,846	17,306	26,492	36,041	47,324
Palladium (incl. scrap)(a)	17,972	24,081	30,157	37,745	7,073	38,534
Drawn or rolled platinum .. ..	9,646	15,378	20,596	20,930	18,680	20,803
Germany (Federal)—						
Platinum metals (a) .. ..	121,147	174,061	332,242	364,686	270,291	357,868
Italy—						
Unwrought platinum .. ..	22,216	24,242	19,869	37,102	32,054	38,581
Netherlands—						
Unwrought platinum and platinum metals .. ..	22,120	8,552	20,706	7,877	17,811	11,124
Drawn or rolled .. ..	25,367	25,335	22,892	19,323	6,623	8,841
Norway—						
Platinum (incl. scrap) .. ..	10,610	18,551	18,004	14,564	19,901	21,670
Switzerland—						
Unwrought platinum .. ..	6,720	40,285	35,752	38,195	42,182	73,239

\*Official figures which, in many cases, do not include platinum sent by post.

(a) Including alloys.

(b) Platinum and platinum metals contained in concentrates and residues, exported for treatment. Of the refined and semi-processed platinum metals subsequently imported (see page 309), the following quantities were re-exported from Canada without change or alteration (troy ounces):  
1966—199,152; 1967—164,033; 1968—83,228.

(c) Years ended June 30 of that stated.

EXPORTS OF PLATINUM (cont.)

Troy ounces

Exporting Country and Description	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES (cont.)						
U.S.S.R. . . . .	(a)	(a)	(a)	(a)	(a)	(a)
Yugoslavia—						
Palladium . . . .	n.a.	n.a.	4,887	15,465	7,620	23,309
South Africa—						
Crude platinum metals	} (£4,885,269)	n.a.	n.a.	n.a.	n.a.	n.a.
Osmiridium . . . .						
United States—						
Ores, etc. (Pt content) . . . .	} 51,236	125,139	72,925	102,031	161,585	222,998
Ingots, sheets, wire, etc.						
Palladium, rhodium, etc. and alloys . . . .	11,776	21,167	30,172	103,425	118,017	172,159
Colombia—						
Platinum . . . .	22,983	20,647	11,141	—	—	—

(a) Exports of platinum metals from U.S.S.R. are not published, but imports into the under-mentioned countries from U.S.S.R. were as follows (troy ounces):

	1963	1964	1965	1966	1967	1968
United Kingdom . . . .	39,402	28,332	68,658	52,777	52,437	27,528
France . . . . .	56,824	67,034	17,755	20,364	15,462	63,763
Germany (Federal) . . . .	163,916	152,471	288,300	291,736	196,859	205,057
Netherlands . . . . .	35,655	26,267	13,214	11,478	6,237	15,882
United States . . . . .	230,855	145,519	504,812	389,482	129,915	429,730
Japan . . . . .	92,933	167,339	299,323	382,003	417,311	638,953

## IMPORTS OF PLATINUM\*

Troy ounces

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ores and concentrates	(£12,506,237)	(£17,176,633)	(£22,280,604)	(£24,146,847)	(£38,283,000)	(£44,563,018)
Platinum and platinum group metals .. ..	78,474	100,739	134,697	123,789	127,795	152,762
Canada—						
Platinum and platinum group metals (c) ..	n.a.	221,557	233,603	197,853	212,889	207,961
Nigeria—						
Platinum and platinum group metals ..	7,712	2,356	9,976	37,209	22,348	2,117
Sierra Leone—						
Platinum and platinum group metals .. ..	908	n.a.	58	n.a.	n.a.	n.a.
Hong Kong—						
Platinum and platinum group metals .. ..	15,427	18,007	19,140	25,866	48,318	80,469
India (a)—						
Platinum .. ..	2,336	2,929	2,393	1,146	1,589	332
Malaysia (West)—						
Unwrought platinum ..	n.a.	n.a.	102	62	233	15
Sarawak—						
Platinum .. ..	n.a.	1,197	584	—	1	29
Singapore—						
Unwrought platinum ..	6,204	145	2,540	7,673	4,625	158
Australia (b)—						
Platinum bars, rods, sheets, etc. .. ..	138	410	802	} (d)(e) 6,015	(d)(e) 7,040	(d)(e) 3,357
Bars, rods, sheets, etc. of other platinum metals .. ..	5	83	405			
Platinum metal powder	2,914	3,850	2,585	(d)(e) 701	(d)(e) 1,021	(d)(e) 8,332
Wire .. ..	720	1,636	1,592	(d)(e) 11,123	(d)(e) 1,307	(d)(e) 1,586
New Zealand (b)—						
Platinum and platinum group metals .. ..	2,557	1,980	1,894	8,737	1,353	n.a.
<b>OTHER COUNTRIES</b>						
Austria—						
Unwrought platinum and platinum metals	5,626	1,447	1,093	2,476	4,083	3,987
Denmark—						
Rods, sheets, wire and scrap .. ..	1,865	2,379	6,400	7,073	7,871	9,067
Finland—						
Unwrought platinum etc.	4,003	n.a.	4,662	5,276	—	1,993
France—						
Unwrought platinum, alloys and scrap ..	107,607	83,076	90,725	78,176	81,856	75,505
Unwrought palladium, alloys and scrap ..	61,729	66,648	64,129	66,884	55,589	91,221
Drawn or rolled platinum	2,266	4,921	9,679	15,938	16,879	26,505
Germany (Federal)—						
Platinum metals and alloys .. ..	325,349	358,687	507,093	540,872	491,135	584,050
Italy—						
Unwrought platinum ..	33,019	43,082	63,819	37,134	46,040	51,440
Drawn or rolled ..	7,652	5,916	4,630	9,484	9,806	3,215
Other platinum metals	22,698	21,284	5,048	23,663	25,624	25,721

\*Official figures, which in many cases do not include platinum sent by post.

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

(c) Imports of refined and semi-processed platinum metals derived from Canadian concentrates and residues; mostly re-exported (see page 307).

(d) Including alloys.

(e) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF PLATINUM (cont.)

Troy ounces

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Netherlands—						
Unwrought platinum and platinum metals ..	65,427	42,953	49,172	33,694	32,794	32,697
Drawn or rolled ..	12,539	22,827	32,548	31,186	27,489	37,327
Norway—						
Unwrought platinum ..	1,350	547	739	1,222	1,125	354
Drawn or rolled ..	1,377	932	2,508	1,800	1,543	1,222
Portugal—						
Sheets, wire, etc. ..	22	100	4,611	1,022	16,306	3,589
Spain—						
Bars, sheets, wire, etc. . .	32	1,134	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Switzerland—						
Unwrought platinum ..	42,117	49,866	28,003	37,809	65,293	87,256
Yugoslavia—						
Unwrought platinum ..	19,162	13,343	13,310	21,863	19,355	52,780
South Africa—						
Platinum .. ..	1,687	1,533	4,118	3,663	3,651	6,653
Mexico—						
Platinum .. ..	17	133	<i>n.a.</i>	64	249	14
Palladium .. ..	3,428	4,968	<i>n.a.</i>	5,222	5,621	3,980
United States—						
Ore (a) .. ..	—	<i>n.a.</i>	<i>n.a.</i>	63,622	102,121	54,943
Grains and nuggets (a) ..	50,691	35,916	58,297	86,700	41,798	64,777
Sponge and scrap (a) (b)	<i>n.a.</i>	<i>n.a.</i>	(c) 210,560	192,486	257,703	304,624
Ingots, bars, sheets (a) (b)	<i>n.a.</i>	114,174	132,139	78,862	64,344	68,718
Iridium .. ..	13,059	6,571	8,060	12,319	11,401	17,461
Osmium and osmiridium	2,091	3,947	4,257			
Palladium .. ..	503,843	445,913	507,745	855,522	613,669	1,067,595
Rhodium and ruthenium	40,417	66,089	47,693	72,507	100,433	61,987
Brazil—						
Unwrought platinum ..	—	—	1,061	3	—	579
Colombia—						
Unwrought platinum ..	64	129	64	64	<i>n.a.</i>	<i>n.a.</i>
Uruguay—						
Platinum metals ..	<i>n.a.</i>	<i>n.a.</i>	192	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Venezuela—						
Unwrought platinum ..	36,523	12,603	3,697	3,054	86,839	52,020
Japan—						
Platinum .. ..	221,844	165,718	180,636	185,018	234,324	210,492
Palladium .. ..	147,070	168,287	260,524	379,787	354,701	600,098
Rhodium .. ..	2,950	4,127	4,325	6,123	9,177	9,103
Iridium, etc. .. ..	2,267	1,816	1,852	2,359	2,226	2,043
Lebanon—						
Unwrought platinum ..	2,875	2,780	5,153	3,311	4,060	<i>n.a.</i>
Turkey—						
Sheets .. ..	3,440	96	32	772	8,713	64

(a) Platinum content.

(b) As recorded in official trade returns. According to the U.S. Bureau of Mines, however, these items have been re-classified as follows:

	1963	1964	1965	1966	1967	1968
Sponge and scrap ..	7,647	(d) 5,127	(d) 4	(d) 851	(c) 257,703	(c) 303,561
Platinum metal ..	382,596	281,922	317,000	272,482	322,764	<i>n.a.</i>

(c) Sponge only.

(d) Scrap only.

**POTASH MINERALS**  
**PRODUCTION OF POTASH**

Long tons

Producing Country and Description	K <sub>2</sub> O Content or Equivalent						1968	1967	1966	1965	1964	1963	
	1963	1964	1965	1966	1967	1968							
<b>COMMONWEALTH COUNTRIES</b>													
Canada—													
Potash salts .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	559,696	766,385	1,331,519	1,776,833	2,127,904	2,581,011
<b>OTHER COUNTRIES</b>													
France (b)—													
Sylvinite, 12-22% K <sub>2</sub> O													
Fertilizer salts													
30-40% K <sub>2</sub> O..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.						
Chloride													
50% K <sub>2</sub> O and over													
Germany—													
Federal Republic—													
Kainite, sylvinite, etc.	18,244,498	20,263,188	21,851,925	21,143,258	19,536,819	19,868,384	2,247,152	2,512,801	2,695,101	2,603,213	2,421,328	2,520,189	
Eastern—													
Potash salts .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,816,000	1,828,000	1,896,000	1,974,000	2,171,000	2,200,000
Italy—													
Crude potash salts ..	1,243,718	1,446,846	1,695,806	1,833,000	1,784,643	1,800,000	169,000	190,000	220,000	240,000	246,000	246,000	

(a) United States Bureau of Mines' estimate.

(b) Crude salts as mined. The K<sub>2</sub>O content by salts relates to the marketable product only.

PRODUCTION OF POTASH (cont.)

Long tons

Producing Country and Description	K <sub>2</sub> O Content or Equivalent											
	1963	1964	1965	1966	1967	1968	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES (cont.)												
Spain— Carnallite, sylvinite, etc.	1,819,025	2,117,145	2,601,140	3,045,422	3,486,000	3,701,157	295,683	339,209	423,788	490,000	475,000	c 500,000
U.S.R. (a)— Potash salts	..	n.a.	n.a.	n.a.	n.a.	n.a.	2,020,000	2,165,000	2,330,000	2,585,000	2,822,000	3,100,000
United States— Potash salts (b)	..	4,349,000	4,822,000	5,090,000	5,044,000	4,258,000	2,557,176	2,586,600	2,804,000	2,964,000	2,946,000	2,430,000
Chile— Nitrate	..	n.a.	n.a.	n.a.	n.a.	n.a.	(a)18,300	13,300	(a)14,000	(a)14,500	(a)14,300	n.a.
Israel— Chloride	..	d 185,000	d 314,700	473,000	484,000	590,000	110,000	190,000	288,000	c 305,000	295,000	350,000
World's TOTAL (c)	..	..	..	..	..	..	11,500,000	12,400,000	13,800,000	14,600,000	15,400,000	15,700,000

(a) United States Bureau of Mines' estimate.

(b) Marketable production.

(c) Estimated.

(d) Years ended March 31 of year following that stated.

## EXPORTS OF POTASH SALTS

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Fertilizer Salts .. .. .	12	104	143	156	449	535
Canada—						
Fertilizer salts (K <sub>2</sub> O content) .. .. .	277,351	570,312	878,175	1,496,584	1,789,736	2,431,671
India (a)—						
Nitrate .. .. .	5	3	3	6	—	9
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Fertilizer salts .. .. .	344	25	317	2,337	12	8
Carbonate .. .. .	2,352	2,560	2,284	1,624	1,872	1,792
Chloride .. .. .	768,648	701,649	594,241	(b) 326,962	(b) 391,076	(b) 356,741
Chlorates .. .. .	6	10	—	n.a.	n.a.	n.a.
Nitrate .. .. .	1	1	1	—	—	—
Sulphate .. .. .	286,197	262,756	314,030	(b) 142,018	(b) 155,992	(b) 151,276
France—						
Sylvinite, etc. .. .. .	72,043	90,037	90,698	69,509	68,652	55,848
Carbonate .. .. .	16,165	20,638	19,461	21,775	28,620	30,290
Caustic potash .. .. .	10,459	11,774	9,926	91,161	10,244	9,412
Chlorate .. .. .	13,109	1,268	1,351	1,442	1,385	1,500
Chloride .. .. .	1,082,522	1,187,890	1,008,291	973,842	1,147,427	1,051,055
Sulphate .. .. .	11,327	5,795	1,362	898	1,138	733
Nitrate .. .. .	2,762	2,076	1,935	1,939	2,773	2,423
Germany (Federal)—						
Fertilizer salts .. .. .	1,507,028	1,542,227	1,970,886	1,572,209	1,326,785	993,066
Carbonate .. .. .	7,967	10,039	10,184	13,026	12,570	14,611
Caustic potash .. .. .	11,690	12,108	12,173	11,304	10,585	10,322
Chlorate .. .. .	542	545	497	439	364	45
Nitrate .. .. .	12,746	14,305	13,949	14,033	16,688	14,949
Germany (East)—						
Fertilizer salts (K <sub>2</sub> O content) .. .. .	1,143,000	1,199,000	1,271,000	1,352,000	1,516,000	1,476,000
Carbonate .. .. .	9,910	9,508	10,095	9,245	8,511	9,236
Caustic potash .. .. .	6,422	7,156	8,326	7,108	7,505	7,316
Italy—						
Nitrate .. .. .	910	80	999	2,476	1,504	1,690
Caustic potash .. .. .	4,162	2,631	1,969	2,390	41	—
Sulphate .. .. .	75,391	85,029	111,622	117,966	123,678	25,440
Netherlands—						
Carbonate .. .. .	1,248	844	401	1,172	1,642	1,720
Caustic potash .. .. .	32	37	44	32	—	—
Chloride .. .. .	786	461	766	428	833	451
Nitrate .. .. .	70	104	421	639	302	83
Sulphate .. .. .	518	497	767	411	231	211
Poland—						
Caustic potash .. .. .	1,388	899	820	961	705	495
Chlorate .. .. .	645	900	785	1,080	680	473
Portugal—						
Caustic potash .. .. .	7	336	5	46	91	335
Chloride .. .. .	60	253	249	272	422	306
Sulphate .. .. .	89	255	1,192	643	641	127
Spain—						
Chloride .. .. .	253,374	305,150	388,981	438,121	502,491	634,711
Nitrate .. .. .	1,371	990	951	709	883	1,268
Sulphate .. .. .	11,962	12,012	7,352	7,332	15,856	23,380

(a) Years ended March 31 following that stated.

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

## EXPORTS OF POTASH SALTS (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Sweden—						
Carbonate .. ..	—	—	—	—	—	24
Caustic potash .. ..	2,462	2,770	2,794	2,651	3,068	2,528
U.S.S.R.—						
Fertilizer salts .. ..	976,500	742,300	812,500	1,072,000	1,343,737	1,694,300
United States—						
Chloride .. ..	593,113	821,407	815,661	761,692	899,044	956,412
Other fertilizer salts .. ..	38,171	95,062	123,897	129,129	100,199	206,637
Caustic potash .. ..	3,627	5,233	5,040	3,442	5,289	4,132
Other compounds .. ..	<i>n.a.</i>	14,017	36,289	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Chile—						
Nitrate .. ..	<i>n.a.</i>	<i>n.a.</i>	96,221	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Israel—						
Fertilizer salts .. ..	<i>n.a.</i>	<i>n.a.</i>	(a) 6,542	(b) 654	2,041	(b) 1,404
Japan—						
Chlorate .. ..	1,365	971	1,070	939	739	704
Chloride .. ..	5,665	10,005	11,276	3,121	3,945	8,048
Sulphate .. ..	267	297	5,973	2,101	7,196	6,231
Caustic potash .. ..	23	52	397	297	1,141	5,853
Other fertilizer salts .. ..	15	10	63	—	868	677

(a) Potassium sulphate only.

(b) Potassium carbonate only.



## IMPORTS OF POTASH SALTS

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Fertilizer salts .. ..	28,855	37,025	37,645	35,584	42,438	36,020
Carbonate .. ..	5,836	8,374	7,921	8,951	10,392	10,483
Caustic potash and lyes	<i>n.a.</i>	2,327	2,027	2,482	2,122	2,300
Chloride .. ..	680,098	660,597	677,779	630,370	716,653	751,267
Nitrate .. ..	2,793	3,029	3,026	4,004	3,965	<i>n.a.</i>
Sulphate .. ..	27,742	33,636	32,952	37,704	35,658	40,047
Other compounds .. ..	13,975	6,983	2,912	6,640	2,523	3,742
Ghana—						
Fertilizer salts .. ..	1,075	1,301	263	279	4	208
Kenya—						
Fertilizer salts .. ..	376	155	276	828	759	2,131
Mauritius—						
Fertilizer salts .. ..	13,304	12,988	7,912	8,490	9,468	4,499
Nigeria—						
Fertilizer salts .. ..	655	835	3,222	1,728	2,185	195
Rhodesia (a)—						
Fertilizer salts .. ..	31,005	37,342	29,013	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Compounds .. ..	430	220	177	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sierra Leone—						
Fertilizer compounds ..	374	5	—	25	50	<i>n.a.</i>
Tanzania—						
Fertilizer salts .. ..	1,659	898	1,344	1,336	1,441	1,426
Uganda—						
Fertilizer salts .. ..	1,981	1,685	367	623	1,455	3,600
Canada—						
Caustic potash .. ..	1,936	1,629	1,620	1,472	1,504	1,713
Carbonate .. ..	475	588	504	704	619	674
Crude chloride .. ..	66,137	59,855	48,047	25,130	24,482	21,382
Nitrate .. ..	760	789	1,308	1,443	1,517	2,384
Crude sulphate .. ..	16,888	17,463	16,601	22,639	27,030	22,271
Other potassic fertilizers	4,698	5,538	8,081	10,545	19,145	17,977
Barbados—						
Fertilizer salts .. ..	4,204	7,763	3,122	4,475	4,164	4,011
Grenada—						
Fertilizer salts .. ..	150	81	30	370	43	25
Jamaica—						
Fertilizer salts .. ..	6,430	10,151	6,639	8,032	10,243	11,580
St. Kitts—						
Potassic fertilizers ..	1,116	985	1,001	1,010	2,546	<i>n.a.</i>
St. Lucia—						
Potassic fertilizers ..	586	745	455	120	2,995	805
St. Vincent—						
Chloride .. ..	83	15	912	1,881	1,295	<i>n.a.</i>
Trinidad and Tobago—						
Chloride and sulphate ..	2,966	2,668	3,175	1,491	1,560	2,670
Guyana—						
Fertilizer salts .. ..	<i>n.a.</i>	2,005	1,235	2,022	2,771	2,977
Ceylon—						
Kainite and sylvinite ..	120	382	—	—	—	—
Chloride .. ..	60,569	47,879	57,050	53,896	50,550	55,096
Nitrate of potash refuse	100	22	—	20	—	—
Sulphate .. ..	195	2,135	428	2,270	295	263
Cyprus—						
Fertilizer salts .. ..	385	273	494	370	292	583
Hong Kong—						
Nitrate .. ..	626	423	404	341	634	742
Chlorate .. ..	72	66	88	170	(b) 80	65
Other fertilizer salts ..	27	18	16	57	27	13

(a) Figures for 1963 relate to Rhodesia and Nyasaland.

(b) Excess of re-exports.

## IMPORTS OF POTASH SALTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
India (a)—						
Carbonate .. ..	1,172	1,224	1,086	1,270	1,912	893
Caustic potash .. ..	3,304	3,649	2,910	2,557	2,869	951
Nitrate .. ..	2	2	—	5	—	—
Sulphate .. ..	4,242	10,538	6,379	23,629	13,277	49,824
Chlorate .. ..	74	—	11	172	—	—
Chloride .. ..	69,684	75,315	123,224	147,481	314,851	235,234
Malaysia (West)—						
Fertilizer salts .. ..	n.a.	n.a.	32,651	45,796	55,434	53,215
Pakistan—						
Chlorate .. ..	145	1,157	n.a.	n.a.	n.a.	n.a.
Other compounds .. ..	87	176	n.a.	n.a.	n.a.	n.a.
Sabah—						
Fertilizer salts .. ..	9	657	353	567	1,172	2,252
Sarawak—						
Fertilizer salts .. ..	443	898	1,434	1,065	1,450	770
Australia (c)—						
Carbonate .. ..	969	993	1,223	1,153	1,217	1,011
Caustic potash .. ..	969	1,099	1,426	1,148	1,340	1,503
Chloride .. ..	47,472	84,864	101,098	82,411	110,970	114,438
Nitrate .. ..	424	403	470	421	1,602	603
Sulphate .. ..	10,343	11,361	7,926	11,152	8,168	15,467
Other fertilizer salts .. ..	n.a.	n.a.	n.a.	14,570	760	220
Other compounds .. ..	353	319	480	312	389	392
New Zealand (c)—						
Chloride .. .. r	82,433	96,862	143,223	172,249	152,637	115,340
Nitrate .. ..	128	166	184	185	517	n.a.
Sulphate .. .. r	2,715	3,673	4,503	4,046	2,996	2,997
Other fertilizer salts .. .. r	1,092	27,091	3,060	1,063	336	247
Compounds other than fertilizer .. ..	165	178	144	227	147	n.a.
Irish Republic—						
Fertilizer salts .. ..	4,986	4,548 r	10,022 r	9,592	7,303	10,897
Chloride .. ..	158,217	154,772	147,820	148,190	190,283	218,887
Other compounds .. ..	235	192 r	244 r	241	250	329
<b>OTHER COUNTRIES</b>						
Austria—						
Fertilizer salts .. ..	240,502	231,337	208,586	156,568	121,427	83,176
Caustic potash .. ..	435	418	378	415	444	443
Carbonate .. ..	966	1,050	816	962	895	809
Chloride .. ..	39,313	59,607	65,093	134,137	165,844	201,802
Nitrate .. ..	399	385	507	547	487	499
Sulphate .. ..	14,471	11,808	25,750	17,486	25,863	24,379
Belgium-Luxemburg						
E.U.—						
Fertilizer salts .. ..	65,290	78,293	85,284 (d)	13,506 (d)	13,302 (d)	13,359 (d)
Carbonate .. ..	899	974	1,263	1,521	1,179	4,179
Chlorates .. ..	482	522	470	409	401	584
Chloride .. ..	1,108,101	1,257,902	1,297,205 (d)	679,322 (d)	686,065	709,388
Nitrate .. ..	2,631	2,809	2,607	2,519	2,614	2,433
Sulphate (b) .. ..	22,944	18,545	26,725 (d)	7,259 (d)	8,368 (d)	13,483 (d)
Czechoslovakia—						
Fertilizer salts (K <sub>2</sub> O content) .. ..	249,000	343,000	353,000	397,000	381,000	n.a.

(a) Years ended March 31 following that stated.

(c) Years ended June 30 of that stated.

(b) Including patent potash.

 (d) K<sub>2</sub>O content.

## IMPORTS OF POTASH SALTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Denmark—</b>						
Carbonate .. ..	354	393	369	399	423	356
Caustic potash .. ..	960	1,106	997	1,064	1,094	1,381
Chlorate .. ..	106	110	108	117	106	145
Chloride .. ..	279,700	278,982	275,469	217,250	236,188	191,242
Nitrate .. ..	1,206	1,335	1,295	1,314	1,477	1,410
Sulphate .. ..	1,963	2,696	1,363	1,134	5,226	11,231
<b>Finland—</b>						
Fertilizer salts .. ..	128,797	133,249	204,223	171,881	161,835	189,827
Carbonate .. ..	522	427	474	780	447	1,056
Caustic potash .. ..	203	266	274	275	298	264
Nitrate .. ..	168	528	552	461	278	926
Sulphate .. ..	8,785	9,725	16,139	13,968	16,328	9,303
<b>France—</b>						
Chloride .. ..	—	69	4,658	18,866	35,214	201,762
Sulphate .. ..	47,942	55,622	60,392	34,315	51,167	53,022
Caustic potash .. ..	88	141	122	105	107	176
Patent potash .. ..	5,356	7,509	6,590	7,852	7,814	9,241
<b>Germany (Federal)—</b>						
Fertilizer salts .. ..	47,807	47,437	48,408	37,160	87,580	47,636
Carbonate .. ..	5,647	5,273	5,594	4,681	3,249	3,417
Caustic potash .. ..	813	2,526	3,959	9,192	5,708	6,497
Chlorate .. ..	959	589	596	535	491	626
Nitrate .. ..	1,188	2,202	3,019	4,577	4,235	4,387
<b>Greece—</b>						
Carbonate .. ..	1,497	1,071	1,052	3,102	1,800	2,070
Caustic potash .. ..	47	32	64	103	185	68
Nitrate .. ..	79	104	167	79	91	124
Sulphate .. ..	22,195	19,230	36,372	27,917	12,991	19,137
<b>Hungary—</b>						
Fertilizer salts .. ..	214,385	200,103	196,000	281,000	330,693	380,888
<b>Iceland—</b>						
Fertilizer salts .. ..	4,676	8,030	11,081	9,031	7,240	7,709
Carbonate .. ..	59	88	83	80	59	72
Caustic potash .. ..	66	71	59	26	30	6
<b>Italy—</b>						
Fertilizer salts .. ..	37,389	39,822	35,765	40,986	44,052	50,497
Carbonate .. ..	3,653	3,202	4,199	5,652	5,380	6,529
Caustic potash .. ..	1,059	707	577	322	329	264
Chloride .. ..	130,094	167,962	157,903	215,912	197,718	204,006
Nitrate .. ..	1,027	2,081	1,501	1,523	1,744	1,846
Sulphate .. ..	8,531	9,878	5,802	3,965	4,602	3,862
<b>Netherlands—</b>						
Kainite .. ..	25,236	40,753	40,058	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Fertilizer salts						
(20% K <sub>2</sub> O)	26,833	37,948	45,570	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
do. (40% K <sub>2</sub> O)	132,461	159,654	161,684	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Carbonate .. ..	7,081	6,576	7,019	8,205	8,927	9,324
Caustic potash .. ..	17,834	55,689	60,622	75,575	<i>n.a.</i>	<i>n.a.</i>
Chloride .. ..	112,758	123,585	128,540	126,542	98,641	123,460
Nitrate .. ..	2,807	2,914	3,146	3,282	3,680	3,339
Sulphate .. ..	53,672	66,567	72,007	47,896	39,809	36,219
Patent potash .. ..	47,365	45,857	42,257	10,452	12,725	10,652
<b>Corway—</b>						
Fertilizer salts .. ..	516	295	352	226	258	1,975
Carbonate .. ..	308	336	332	300	308	325
Caustic potash .. ..	1,350	1,325	1,301	1,211	1,196	966
Chlorate .. ..	126	126	142	145	168	104
Chloride .. ..	100,407	111,246	116,061	144,809	174,593	131,049
Nitrate .. ..	178	164	240	234	343	136
Sulphate .. ..	9,178	10,068	6,240	10,177	448	57,723

(a) Owing to reclassification not strictly comparable with earlier years.

## IMPORTS OF POTASH SALTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
OTHER COUNTRIES						
(cont.)						
Poland—						
Fertilizer salts .. ..	735,694	(b) 970,500	(b)1,253,000	(b)1,519,000	b) 1,673,000	(b)1,768,000
Carbonate .. ..	1,713	2,030	5,342	3,199	2,945	3,246
Chloride .. ..	14,271	(a)	(a)	(a)	(a)	(a)
Sulphate .. ..	3,364	(a)	(a)	(a)	(a)	(a)
Portugal—						
Carbonate .. ..	109	170	84	104	264	486
Caustic potash .. ..	257	320	295	280	166	204
Chlorate .. ..	178	195	220	250	221	268
Chloride .. ..	21,398	21,975	30,767	22,723	27,460	23,825
Nitrate .. ..	296	286	430	457	394	427
Sulphate .. ..	1,329	2,177	2,581	15	2,335	2,787
Roumania—						
Fertilizer salts (c) ..	5,700	8,700	13,100	21,700	14,566	10,925
Sweden—						
Fertilizer salts						
do. (40% K <sub>2</sub> O)	} 826	838	503	449	467	786
do. (other) .. ..						
Carbonate .. ..	966	1,012	962	1,165	1,026	1,036
Caustic potash .. ..	246	299	758	245	238	85
Chloride .. ..	134,849	144,780	171,941	142,348	178,541	179,820
Nitrate .. ..	1,005	1,122	1,206	1,636	1,213	1,441
Sulphate .. ..	20,602	29,660	19,095	24,714	33,029	37,288
Switzerland—						
Fertilizer salts .. ..	104,111	108,571	116,106	101,781	96,671	103,598
Carbonate .. ..	1,933	2,520	2,505	2,053	2,319	1,771
Caustic potash .. ..	1,483	1,705	1,494	1,098	1,382	1,145
Nitrate .. ..	839	880	743	788	747	574
Sulphate .. ..	540	921	866	691	695	694
U.S.S.R.—						
Caustic potash .. ..	6,600	7,200	9,400	5,800	7,000	6,100
Yugoslavia—						
Fertilizer salts .. ..	289,531	370,326	152,888	299,705	165,745	72,917
Caustic potash .. ..	738	746	635	712	604	995
Chlorate .. ..	n.a.	n.a.	310	522	399	337
Chloride .. ..	19,080	17,000	16,922	n.a.	n.a.	108,598
Sulphate .. ..	2,928	2,011	4,408	5,034	6,940	6,731
Angola—						
Chloride .. ..	576	865	343	462	394	235
Sulphate .. ..	183	103	1,113	657	1,168	631
Cameroun—						
Fertilizer salts .. ..	782	4,049	7,013	n.a.	n.a.	n.a.
Canary Islands—						
Fertilizer salts .. ..	—	—	1,154	1,229	1,259	1,117
Congo, Republic of—						
Fertilizer salts .. ..	n.a.	2,395	705	6,685	146	n.a.
Malagasy Republic—						
Fertilizer salts .. ..	694	518	2,255	2,173	3,040	4,759
Morocco—						
Chloride .. ..	4,672	4,264	4,193	6,284	13,448	18,750
Sulphate .. ..	8,001	6,639	10,127	8,230	14,408	17,078
Reunion—						
Fertilizer salts .. ..	1,092	2,416	1,622	875	692	n.a.
South Africa—						
Fertilizer salts .. ..	116,573	121,361	77,627	68,089	159,504	135,292
Nitrate .. ..	1,273	n.a.	n.a.	n.a.	n.a.	n.a.
Caustic potash .. ..	307	421	452	592	506	624
Other compounds .. ..	1,163	n.a.	609	65,577	52,363	33,804
Sudan—						
Caustic potash .. ..	67	75	1	21	1	177

(a) Included with fertilizer salts.

 (c) K<sub>2</sub>O content.

(b) Including chloride and sulphates.

## IMPORTS OF POTASH SALTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Tunisia—						
Fertilizer salts .. ..	5,063	6,411	1,722	3,491	3,424	3,307
Caustic potash .. ..	2,836	3,841	113	36	20	n.a.
Costa Rica—						
Fertilizer salts .. ..	671	2,732	11,140	13,293	18,731	n.a.
Cuba—						
Caustic potash .. ..	42	2,156	n.a.	n.a.	n.a.	n.a.
Potassium chloride .. ..	38,299	55,816	n.a.	n.a.	n.a.	n.a.
Potassium sulphate .. ..	11,712	8,273	n.a.	n.a.	n.a.	n.a.
French West Indies—						
Guadeloupe—						
Fertilizer salts .. ..	3,079	3,409	373	122	84	n.a.
Martinique—						
Fertilizer salts .. ..	4,161	4,624	3,708	3,296	3,773	n.a.
Guatemala—						
Fertilizer salts .. ..	73	824	25,945	860	901	238
Honduras—						
Fertilizer salts .. ..	1,711	5,896	6,166	7,726	9,710	6,055
Mexico—						
Carbonate .. ..	578	429	608	760	753	1,226
Chloride .. ..	19,986	26,961	30,977	40,131	37,408	49,051
Caustic potash .. ..	497	710	531	945	1,047	2,127
Sulphate .. ..	8	12	6,485	7,173	99	10,498
Nicaragua—						
Fertilizer salts .. ..	361	759	4,369	2,591	1,456	2,381
Panama Republic—						
Fertilizer salts .. ..	569	501	1,023	n.a.	n.a.	n.a.
Salvador—						
Fertilizer salts .. ..	1,129	431	3,832	3,943	3,131	1,795
United States—						
Carbonate .. ..	228	425	55	1,279	4,490	393
Caustic potash .. ..	932	824	868	1,945	1,109	1,133
Chlorates .. ..	704	681	511	394	838	816
Chloride .. ..	788,153	1,067,604	1,589,537	2,131,447	2,420,179	3,175,555
Cyanide .. ..	774	942	988	1,040	915	803
Nitrate .. ..	7,110	5,294	4,377	24,617	13,799	14,287
Potassium-sodium nitrate mixtures .. ..	34,000	12,052	6,615	35,804	40,022	25,403
Sulphate .. ..	92,593	60,029	47,619	51,631	54,424	38,900
Argentina—						
Carbonate .. ..	388	649	419	493	589	643
Caustic potash .. ..	794	3,330	1,059	855	1,268	743
Chlorate .. ..	461	404	92	386	573	493
Nitrate .. ..	—	15	—	—	57	6
Sulphate .. ..	20	493	49	344	1,407	2,751
Brazil—						
Caustic potash .. ..	1,541	733	577	1,388	976	846
Nitrate .. ..	777	750	894	739	442	353
Nitrate of potash and soda .. ..	16,429	7,171	21,296	18,411	9,562	6,240
Chloride .. ..	144,184	108,759	152,903	141,816	218,005	291,753
Sulphate .. ..	4,232	4,218	5,996	8,238	5,006	10,012
Carbonate .. ..	891	455	446	1,532	1,417	1,857
Chlorate .. ..	10	—	—	—	9	—
Chile—						
Caustic potash .. ..	319	217	179	n.a.	128	n.a.
Chlorate .. ..	2,163	105	14,394	n.a.	85	n.a.
Chloride .. ..	1,890	978	1,153	n.a.	n.a.	n.a.
Sulphate .. ..	5,064	9,077	1,829	n.a.	5,660	n.a.
Other fertilizer salts .. ..	2,920	779	1,675	n.a.	n.a.	n.a.

## IMPORTS OF POTASH SALTS (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Colombia—						
Chlorate .. ..	362	280	194	265	376	289
Chloride .. ..	29,593	38,432	30,968	30,307	41,816	51,891
Nitrate .. ..	401	196	87	498	208	192
Sulphate .. ..	4,444	4,361	5,076	17,465	4,332	6,439
Other fertilizer salts ..	—	—	4,515	196	93	144
Peru—						
Fertilizer salts .. ..	2,332	1,780	9,830	2,379	7,554	<i>n.a.</i>
Nitrate .. ..	9	95	156	141	200	<i>n.a.</i>
Carbonate .. ..	38	20	32	45	55	<i>n.a.</i>
Chloride .. ..	35	96	60	2,036	70	<i>n.a.</i>
Caustic potash .. ..	18	28	21	31	20	<i>n.a.</i>
Uruguay—						
Nitrate .. ..	<i>n.a.</i>	<i>n.a.</i>	7	11	31	<i>n.a.</i>
Caustic potash .. ..	<i>n.a.</i>	<i>n.a.</i>	49	153	114	<i>n.a.</i>
Venezuela—						
Carbonate .. ..	23	47	46	65	50	61
Chlorate .. ..	116	239	247	260	258	157
Chloride .. ..	2,288	4,905	5,020	10,629	12,303	17,920
Nitrate .. ..	210	177	140	414	3,562	1,961
Sulphate .. ..	4,145	7,698	19,438	4,948	9,159	3,941
Burma—						
Fertilizer salts .. ..	257	351	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Formosa—						
Fertilizer salts .. ..	46,730	92,990	88,844	31,259	93,561	<i>n.a.</i>
Iran (a)—						
Fertilizer salts .. ..	1,477	689	—	—	—	295
Iraq—						
Fertilizer salts .. ..	200	311	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Japan—						
Fertilizer salts .. ..	5,445	16,513	19,203	15,000	23,559	22,307
Chloride .. ..	952,460	976,434	961,080	1,068,942	1,116,138	1,213,355
Sulphate .. ..	99,268	65,531	86,093	82,021	57,328	65,586
Jordan—						
Fertilizer salts .. ..	1,488	4,016	6,149	6,926	1,814	862
Korea (South)—						
Chloride .. ..	41,993	44,883	55,516	20,612	<i>n.a.</i>	<i>n.a.</i>
Other fertilizer salts ..	53,261	9,879	39,856	310,379	28,448	<i>n.a.</i>
Lebanon—						
Fertilizer salts .. ..	3,489	4,596	2,097	5,554	7,461	<i>n.a.</i>
Philippine Republic—						
Nitrate .. ..	28	218	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sulphate .. ..	4,592	1,105	2,982	<i>n.a.</i>	8,641	<i>n.a.</i>
Other fertilizer salts ..	9,021	37,656	48,226	<i>n.a.</i>	58,488	<i>n.a.</i>
Thailand—						
Chlorate .. ..	143	187	254	455	63	245
Chloride .. ..	53	984	127	40	498	485
Nitrate .. ..	933	855	866	1,198	976	1,334
Sulphate .. ..	937	787	2,037	250	984	837
Turkey—						
Carbonate .. ..	648	706	1,108	1,583	1,903	2,148
Caustic potash .. ..	246	355	467	429	1,742	708
Chlorates .. ..	170	156	434	442	150	346
Nitrate .. ..	296	211	267	587	322	316
Sulphate .. ..	570	541	6,112	3,122	2,155	540
Vietnam (South)—						
Fertilizer salts .. ..	11,600	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Years ended March 20 of year following that stated.

**PYRITES**  
**PRODUCTION OF PYRITES**  
*(see also Sulphur)*  
*(including Cupreous Pyrites)*

Producing Country	Estimated Sulphur Content							Long tons
	1963	1964	1965	1966	1967	1968	1968	
<b>COMMONWEALTH COUNTRIES</b>								
Rhodesia ..	65,055	81,129	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	24,700	<i>n.a.</i>	<i>n.a.</i>
Canada (c) ..	425,391	314,152	341,229	291,923	<i>n.a.</i>	210,187	162,837	141,996
Cyprus (d) ..	907,940	673,786	977,829	1,006,740	1,039,277	442,000	474,000	483,000
Australia (b) ..	194,059	220,078	204,011	245,998	252,748	84,600	107,157	71,835
TOTAL ..	1,600,000	1,300,000	1,600,000	1,600,000	1,700,000	1,500,000		
<b>OTHER COUNTRIES</b>								
Bulgaria (b) ..	127,880	144,530	150,501	144,170	167,300	150,000	61,000	62,000
Czechoslovakia (b) ..	342,000	355,000	369,000	346,000	370,000	374,000	140,000	146,000
Finland (b) ..	532,556	542,517	576,184	500,000	700,000	760,000	260,000	370,000
France (d) ..	248,325	188,319	132,239	86,685	84,032	80,505	106,785	33,500
Germany (Federal) ..	351,813	419,081	438,984	444,015	548,309	607,580	176,843	283,010
Germany (East) ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	41,000	57,000
Greece ..	110,866	113,141	102,171	157,624	216,506	207,898	53,000	70,000
Italy ..	1,379,422	1,373,815	1,378,652	1,283,846	1,388,759	1,384,239	640,000	100,000
Norway ..	710,052	708,040	697,675	666,798	626,805	681,647	317,000	613,000
Poland ..	213,000	230,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	85,000	87,000	309,373
Portugal ..	592,559	597,808	606,657	549,043	519,683	552,421	274,991	<i>n.a.</i>
Roumania ..	328,000	403,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	131,000	252,560	249,694

(a) Saleable.

(b) Pyrite concentrate.

(c) Producers shipments of pyrites produced as a by-product in the treatment of copper and copper-zinc ores.

(d) In addition the sulphur content of mispickel and auriferous pyrites was as follows (long tons): 1963—9,314; 1964—8,033; 1965—9,664; 1966—9,182; 1967—8,635; 1968—*n.a.*

PRODUCTION OF PYRITES (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968	Estimated Sulphur Content					
							1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)												
Spain .. .. .	1,995,226	2,355,423	2,386,100	2,195,979	2,254,915	2,365,343	950,000	1,117,000	1,131,000	1,035,000	1,070,000	1,132,000
Sweden .. .. .	396,260	445,239	434,363	426,747	474,900	467,000	202,161	227,524	221,475	218,106	242,210	238,000
U.S.R. (c) .. .	3,149,000	3,149,000	3,250,000	3,250,000	3,450,000	3,450,000	1,673,000	1,673,000	1,720,000	1,720,000	1,820,000	1,821,000
Yugoslavia (a) .. .	350,000	421,000	401,000	372,000	418,000	243,000	140,000	168,000	160,000	149,000	175,000	113,000
Algeria .. .. .	37,154	59,994	55,978	40,729	33,836	45,446	17,000	28,000	26,000	19,000	15,000	21,000
Morocco .. .. .	22,777	20,885	18,029	14,661	—	—	7,000	6,000	5,000	4,000	—	—
South Africa .. .	411,943	425,647	421,532	473,587	e 854,943	693,231	152,000	164,000	158,000	179,000	400,000	300,000
United States (b) .. .	824,800	847,493	874,957	872,414	860,909	872,000	343,566	353,831	353,645	355,512	355,033	362,000
China (c) .. .. .	1,181,000	1,279,000	1,480,000	1,480,000	1,480,000	1,480,000	531,000	575,000	665,000	665,000	665,000	669,000
Formosa .. .. .	46,021	45,592	38,640	41,342	38,085	38,365	17,300	17,100	14,500	15,500	14,300	14,400
Japan (d) .. .. .	2,514,762	2,728,646	2,925,000	3,062,000	2,968,129	2,950,000	1,163,690	1,261,439	1,350,000	1,409,000	1,363,527	1,357,000
Korea (South) .. .	37	59	168	21,834	3,571	n.a.	17	27	n.a.	n.a.	n.a.	n.a.
Korea (North) (c) .. .	394,000	415,000	445,000	445,000	492,000	492,000	157,000	167,000	177,000	177,000	190,000	197,000
Philippine Republic .. .	57,138	43,218	103,650	113,000	143,910	179,281	27,000	20,000	48,000	51,000	65,000	85,000
Turkey .. .. .	95,549	111,307	130,072	170,789	177,167	n.a.	46,000	51,000	60,000	79,000	82,000	n.a.
TOTAL* .. .. .	16,600,000	17,600,000	18,200,000	18,000,000	18,600,000	18,900,000	8,400,000	8,700,000	9,200,000	9,000,000	9,500,000	9,600,000
WORLD'S TOTAL* .. .	18,200,000	18,900,000	19,800,000	20,000,000	20,300,000	20,400,000	8,400,000	8,700,000	9,200,000	9,000,000	9,500,000	9,600,000

\*Including an estimate for pyrites produced in Cuba but excluding pyrites known to have been produced in Brazil.

(a) Concentrates.

(b) Including by-product pyrites.

(c) United States Bureau of Mines' estimate.

(d) Including pyrrhotite.

(e) Copper pyrites included.



EXPORTS OF PYRITES

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada (a) .. ..	(£310,557)	(£291,585)	(£324,653)	(£325,373)	(£360,181)	(£407,000)
Cyprus—						
Iron pyrites .. ..	748,786	724,138	701,162	735,022	710,260	802,368
Cupreous pyrites .. ..	103,848	86,128	173,513	161,653	183,673	148,021
<b>OTHER COUNTRIES</b>						
Austria .. ..	—	131	—	—	—	—
Belgium-Luxemburg						
E.U. .. ..	—	—	929	3	—	—
Finland—						
Concentrate .. ..	53,761	77,458	61,653	50,421	30,816	44,916
Germany (Federal) .. ..	12	32	81	262	173	144
Greece .. ..	43,300	56,577	7,736	5,935	4,260	3,973
Italy—						
Iron pyrites .. ..	100,245	46,804	51,739	51,475	51,262	47,710
Cupreous pyrites .. ..						
Norway .. ..	636,594	622,815	576,702	546,023	476,711	513,954
Poland .. ..	n.a.	30,960	8,632	38,926	53,703	36,470
Portugal—						
Iron pyrites .. ..	269,668	289,552	313,599	268,218	240,320	265,358
Cupreous pyrites .. ..	2,153	172	—	—	—	—
Spain—						
Iron pyrites .. ..	1,015,116	1,198,642	1,149,427	813,913	690,023	819,870
Cupreous pyrites .. ..						
Sweden .. ..	13,833	20,907	13,009	40,674	38,882	40,965
U.S.S.R. .. ..	1,000,000	927,100	1,213,000	1,478,000	1,586,000	1,507,000
Yugoslavia .. ..	276,646	107,723	159,041	187,147	94,883	105,040
Algeria .. ..	32,381	31,642	35,313	n.a.	12,598	n.a.
Morocco .. ..	5,948	n.a.	3,889	n.a.	n.a.	n.a.
Turkey .. ..	84,145	94,139	121,213	89,740	17,962	9,596

(a) Sulphur in ores (pyrite).

## IMPORTS OF PYRITES

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom ..	200,323	284,306	224,340	259,233	241,750	216,333
Irish Republic .. ..	1,381	3,060	2,171	1,950	1,900	1,085
<b>OTHER COUNTRIES</b>						
Austria .. ..	24,409	29,616	27,243	26,047	24,518	25,542
Belgium-Luxemburg ..						
E.U. .. ..	297,329	277,572	263,844	259,844	271,778	347,142
Czechoslovakia (a) ..	108,000	129,000	118,000	48,000	36,000	n.a.
Denmark .. ..	130,380	132,535	140,465	182,105	111,573	116,536
France .. ..	389,375	363,157	345,434	333,629	310,827	310,671
Germany (Federal) ..	1,476,010	1,576,463	1,523,811	1,417,052	1,414,242	1,861,694
Germany (East) (a) ..	88,653	138,223	109,877	106,102	107,170	107,704
Hungary .. ..	122,248	204,246	143,000	152,000	173,220	146,047
Italy .. ..	754,010	840,611	916,883	943,346	1,186,342	1,087,194
Netherlands .. ..	237,071	252,535	207,479	265,572	88,820	120,663
Poland .. ..	23,900	n.a.	n.a.	n.a.	n.a.	n.a.
Sweden .. ..	62,922	29,464	81,403	122,769	122,489	62,905
Switzerland .. ..	36,735	31,414	47,354	45,583	45,260	41,550
Egypt .. ..	159,049	58,273	44,746	91,874	73,897	45,921
South Africa .. ..	n.a.	7,391	—	7,487	7,674	8,441
Tunisia .. ..	12,750	16,890	3,727	7,857	7,643	n.a.
United States .. ..	194,171	n.a.	n.a.	n.a.	n.a.	n.a.
Japan .. ..	n.a.	n.a.	28,975	261,370	77,305	n.a.

(a) S content.

## RARE EARTH AND THORIUM MINERALS

### PRODUCTION OF RARE EARTH AND THORIUM MINERALS

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Nigeria—						
Monazite .. ..	11	12	126	35	109	7
Thorite (c) .. ..	—	—	1	—	—	<i>n.a.</i>
Canada—						
Thorium oxide (e) ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	39	52	62
Ceylon—						
Monazite .. ..	—	23	(a) 125	35	20	41
India—						
Monazite (d) .. ..	2,368	2,060	(e) 2,500	2,300	(e) 2,500	(e) 2,500
Malaysia (West) (a)—						
Monazite .. ..	885	303	695	1,022	1,203	2,172
Australia (b)—						
High-grade concentrates	1,875	1,848	2,165	1,836	2,163	2,793
<b>OTHER COUNTRIES</b>						
Malagasy Republic—						
Monazite .. ..	605	949	1,068	837	366	—
Uranothorianite (f) ..	473	551	505	413	—	—
South Africa—						
Monazite .. ..	(g) 2,054	—	—	—	—	—
Gadolinite .. ..	1	—	—	—	—	—
Brazil—						
Monazite .. ..	513	654	588	734	1,062	1,664
Indonesia—						
Monazite .. ..	151	138	25	<i>n.a.</i>	5	<i>n.a.</i>
Korea (South)—						
Monazite .. ..	—	—	—	—	12	—

Rare earth and thorium minerals are also produced in the United States.

(a) Exports.

(b) Monazite content. Estimated.

(c) Between 5% and 6% ThO<sub>2</sub>.

(d) Years ended March 31 of year following that stated. Source United States Bureau of Mines.

(e) Estimated.

(f) Containing an average of 60% Th.

(g) ThO<sub>2</sub> content as follows: 1963—5.76%.

## EXPORTS OF RARE EARTH MINERALS, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Ceylon—						
Monazite .. ..	300	—	125	74	74	<i>n.a.</i>
India—						
Monazite .. ..	—	475	1,706	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Malaysia (West)—						
Monazite .. ..	885	303	695	1,022	1,203	2,172
Australia—						
Monazite .. ..	2,313	2,041	2,240	2,092	1,858	2,575
<b>OTHER COUNTRIES</b>						
Austria—						
Salts of rare earth minerals (a) .. ..	201	—	32	—	—	—
France—						
Salts of rare earth minerals .. ..	275	249	302	450	426	554
Germany (Federal)—						
Compounds of rare earth minerals .. ..	13	59	26	378	395	387
Malagasy Republic—						
Monazite .. ..	683	845	1,021	898	—	—
Uranothorianite .. ..	474	610	414	353	302	553
United States—						
Cerium ores, metals, etc.	57	731	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Thorium ore, concentrates and compounds	21	32	18	—	—	1
Brazil—						
Cerium chloride ..	851	875	4,244	1,573	1,376	1,779

(a) Including uranium salts.

## IMPORTS OF RARE EARTH MINERALS, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada—						
Thorium and cerium salts .. .. .	(£2,570)	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Austria—						
Salts of rare earth minerals (a) .. .. .	1,042	934	—	—	—	—
France—						
Rare earth minerals ..	1,040	1,465	1,382	1,376	1,115	<i>n.a.</i>
Salts of rare earth minerals .. .. .	45	32	96	104	359	304
Germany (Federal)—						
Rare earth minerals ..	20	5	—	—	—	—
Salts of rare earth minerals (a) .. .. .	723	529	774	422	476	402
United States—						
Monazite sand and other thorium ore .. .. .	5,741	1,879	1,811	<i>n.a.</i>	<i>n.a.</i>	3,899

Rare earth minerals are also imported into the United Kingdom and Canada but statistics of imports are not recorded in the trade returns of these countries.

(a) Including uranium salts.

**SALT**  
**PRODUCTION OF SALT**

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Rock-salt .. ..	752,000	693,000	723,000	1,030,000	692,000	1,047,000
Brine-salt .. ..	1,388,788	1,347,000	1,428,000	1,455,000	1,391,000	1,477,000
Salt in brine (a) ..	4,251,621	4,598,000	4,738,000	4,732,000	4,918,000	5,050,000
Malta—						
Sea-salt .. ..	1,605	2,077	1,976	2,044	2,617	<i>n.a.</i>
Ghana .. ..	20,000	30,000	27,000	35,000	30,000	29,000
Kenya .. ..	32,683	40,056	50,741	53,333	48,032	61,000
Mauritius—						
Sea-salt .. ..	4,100	4,300	4,100	4,100	4,100	4,100
Nigeria .. ..	276	548	890	834	802	818
Tanzania .. ..	31,908	35,251	39,834	41,340	35,534	29,805
Uganda .. ..	3,072	2,849	5,429	5,461	<i>n.a.</i>	<i>n.a.</i>
Canada—						
Rock-salt .. ..	1,563,782	1,675,157	2,298,236	2,034,304	2,698,317	} 4,363,959
Other salt (c) .. ..	1,738,813	1,886,311	1,948,526	2,059,166	2,035,573	
West Indies—						
Sea-salt—						
Bahamas (d) .. ..	105,857	220,786	413,714	520,000	711,250	629,536
St. Kitts (d) .. ..	783	2,777	4,009	5,505	<i>n.a.</i>	<i>n.a.</i>
Virgin Islands (d) ..	<i>n.a.</i>	3	4	2	—	—
Turks and Caicos Islands ..	(b) 25,000	8,300	3,000	5,500	4,193	2,200
Southern Yemen .. ..	85,000	79,000	71,000	71,000	59,000	<i>n.a.</i>
Ceylon .. ..	22,531	50,698	77,203	63,467	74,610	96,842
Cyprus .. ..	6,848	—	5,003	3,949	6,581	4,740
India—						
Rock-salt .. ..	3,300	2,800	2,800	} 4,437,000	4,399,000	4,960,000
Other salt .. ..	4,469,000	4,573,400	4,625,400			
Goa .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	13,089	18,010	<i>n.a.</i>
Pakistan—						
Rock-salt .. ..	244,645	219,277	268,815	259,767	248,348	329,023
Sea-salt .. ..	213,733	183,990	215,525	207,993	436,570	551,639
Australia .. ..	581,537	545,491	654,533	644,817	703,157	936,748
New Zealand .. ..	11,000	21,332	34,170	35,450	55,200	55,000
<b>TOTAL .. ..</b>	<b>15,600,000</b>	<b>16,200,000</b>	<b>17,600,000</b>	<b>17,700,000</b>	<b>18,600,000</b>	<b>19,700,000</b>
<b>OTHER COUNTRIES</b>						
Austria—						
Rock-salt .. ..	5,005	1,359	969	802	884	948
Evaporated salt .. ..	163,444	164,168	182,668	182,525	187,957	197,637
Bulgaria .. ..	104,000	81,000	123,000	111,000	123,000	113,000
Czechoslovakia .. ..	184,000	181,000	188,000	194,000	199,000	200,000
France—						
Rock-salt (incl. refined)	749,183	833,598	1,052,947	927,111	895,312	944,000
Salt in brine .. ..	2,291,092	2,356,783	2,217,926	2,420,849	2,518,392	2,078,000
Sea-salt .. ..	595,167	778,021	1,108,290	1,044,300	1,516,110	1,033,000
Germany (Federal)—						
Rock-salt .. ..	5,150,981	5,318,420	5,024,379	5,041,156	5,084,048	6,028,681
Brine-salt .. ..	357,515	392,518	431,110	564,097	580,818	643,909
Salt in brine .. ..	<i>n.a.</i>	542,889	1,140,449	1,189,355	1,133,795	1,254,267

(a) Used for purposes other than salt-making.

(b) Estimated.

(c) Including salt in brine.

(d) Exports.

## PRODUCTION OF SALT (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Germany (East) .. .. .	2,046,000	2,046,000	1,860,000	(a)2,000,000	(a)2,000,000	(a)2,000,000
Greece—						
Sea-salt .. .. .	81,658	93,943	85,786	89,944	96,383	97,000
Italy—						
Rock-salt and brine-salt	1,862,343	1,999,792	2,095,174	2,083,350	2,536,348	b 2,600,000
Sea-salt .. .. .	888,772	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Netherlands (brine-salt)	1,456,000	1,571,000	1,680,600	1,828,000	1,894,600	2,376,000
Poland—						
Rock-salt .. .. .	635,000	650,000	663,000	750,000	817,000	954,000
Brine-salt .. .. .	242,000	265,000	281,000	287,000	289,000	286,000
Other salt .. .. .	1,221,000	1,291,000	1,316,000	1,334,000	1,342,000	1,352,000
Portugal—						
Rock-salt .. .. .	77,723	87,632	88,162	95,991	110,929	148,919
Sea-salt .. .. .	263,527	228,325	402,989	252,768	315,566	259,157
Roumania .. .. .	1,611,000	1,780,000	1,984,000	2,014,000	2,026,000	2,331,000
Spain—						
Rock-salt .. .. .	688,344	721,812	782,483	} 1,800,000	1,600,000	b 1,800,000
Sea-salt .. .. .	951,300	1,133,273	1,008,953			
Other salt .. .. .	13,976	18,497	20,154			
Switzerland .. .. .	187,704	178,703	226,730	187,057	212,954	251,033
U.S.S.R. .. .. .	9,409,000	9,940,000	9,350,000	9,153,000	10,432,000	a10,826,000
Yugoslavia—						
Sea-salt .. .. .	32,000	52,000	39,000	34,000	40,000	} 176,000
Evaporated salt .. .	132,000	129,000	131,000	128,000	126,000	
Algeria—						
Brine-salt and sea-salt ..	122,000	114,000	<i>n.a.</i>	<i>n.a.</i>	(a) 115,000	(a) 118,000
Angola .. .. .	67,520	79,813	58,679	60,298	76,460	71,351
Canary Islands (sea-salt)	17,673	20,130	15,675	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cape Verde Islands .. .	28,666	31,072	39,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Egypt .. .. .	385,860	663,901	486,317	617,064	574,363	611,930
Ethiopia (d) .. .. .	195,000	107,000	185,000	(a) 185,000	202,000	229,000
Libya (sea-salt) .. .. .	19,000	12,000	12,000	49,000	<i>n.a.</i>	<i>n.a.</i>
Morocco .. .. .	36,752	59,750	33,746	38,186	20,029	39,900
Mozambique—						
Rock-salt .. .. .	40	<i>n.a.</i>	} 29,526	25,589	37,340	18,241
Other salt .. .. .	25,859	<i>n.a.</i>				
Senegal .. .. .	59,033	55,220	50,091	59,788	69,888	<i>n.a.</i>
South Africa .. .. .	194,656	295,378	325,496	309,938	311,671	336,262
South West Africa—						
Rock-salt .. .. .	5,010	5,000	4,445	4,853	<i>n.a.</i>	<i>n.a.</i>
Other salt .. .. .	59,000	92,000	91,100	57,573	<i>n.a.</i>	<i>n.a.</i>
Sudan .. .. .	36,418	59,000	51,000	42,000	(a) 39,000	50,000
Tunisia (sea-salt) .. .	303,254	210,618	348,215	322,838	315,000	349,000
Costa Rica (b) .. .. .	10,000	10,000	10,000	10,000	12,000	11,000
Dominican Republic—						
Rock-salt .. .. .	28,854	2,185	20,300	19,322	905	1,673
Sea-salt .. .. .	<i>n.a.</i>	28,365	25,528	24,252	15,517	27,678
Guatemala (sea-salt) ..	18,600	17,800	14,740	19,330	14,366	13,000
Haiti (b) .. .. .	10,000	10,000	10,000	10,000	10,000	10,000
Honduras .. .. .	(b) 10,000	(b) 10,000	(b) 10,000	(b) 10,000	(b) 22,000	(b) 22,000
Mexico .. .. .	1,205,000	1,754,000	2,165,000	2,360,000	3,278,000	<i>n.a.</i>
Netherlands Antilles ..	(c) 106	(c) 47	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Nicaragua (sea-salt) ..	16,234	16,767	17,605	17,911	18,219	<i>n.a.</i>
Panama (sea-salt) .. .	9,923	10,846	11,000	9,000	10,500	<i>n.a.</i>
Salvador (sea-salt) .. .	(b) 30,000	(b) 30,000	19,730	22,758	24,113	<i>n.a.</i>

(a) United States Bureau of Mines' estimate.

(b) Estimated.

(c) Exports.

(d) Years ended September 10 of year stated.

## PRODUCTION OF SALT (cont.)

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
United States (e)—						
Rock-salt .. .. .	7,451,000	7,637,000	8,759,000	9,000,000	10,412,000	11,126,000
Salt in brine .. .. .	15,647,000	16,399,000	17,814,000	19,061,000	19,639,000	20,796,000
Evaporated salt.. .. .	4,260,000	4,198,000	4,397,000	4,496,000	4,722,000	4,930,000
Argentina—						
Rock-salt .. .. .	<i>n.a.</i>	<i>n.a.</i>	3,344	3,690	2,739	1,758
Other salt .. .. .	170,000	385,203	712,977	875,915	841,327	726,752
Brazil (sea-salt) .. .. .	1,097,490	742,015	1,180,732	1,417,971	1,023,280	<i>n.a.</i>
Chile .. .. .	47,480	90,529	55,448	199,480	411,191	817,407
Colombia—						
Rock-salt .. .. .	258,770	284,396	275,465	278,752	303,553	312,336
Sea-salt .. .. .	33,622	49,855	45,455	119,123	156,612	184,669
Ecuador (sea-salt) .. .. .	(a) 30,000	(a) 30,000	(a) 30,000	34,000	<i>n.a.</i>	<i>n.a.</i>
Peru—						
Rock-salt .. .. .	8,895	8,970	9,050	} 170,413	138,438	130,074
Sea-salt .. .. .	72,098	77,410	78,209			
Brine-salt .. .. .	5,043	10,263	5,833			
Venezuela (sea-salt) .. .. .	75,200	199,493	169,051	146,407	168,266	124,000
Afghanistan (d) .. .. .	30,000	30,000	37,000	37,000	30,000	39,000
Burma—						
Sea-salt .. .. .	} 158,000	125,000	130,000	a)(b)116,000	166,000	130,000
Brine-salt .. .. .						
China (a) .. .. .	10,000,000	10,000,000	13,000,000	13,000,000	13,000,000	15,000,000
Formosa (sea-salt) .. .. .	616,233	592,668	551,199	404,596	509,330	306,530
Cambodia .. .. .	59,000	a)(b)58,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Indonesia .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	211,482	a)(b)250,000	(a) 250,000
Iran (d) .. .. .	340,000	217,000	221,000	221,000	254,000	271,000
Iraq (c) .. .. .	30,000	a)(b)27,000	a)(b)60,000	a)(b)54,000	a)(b)59,000	a)(b)59,000
Israel .. .. .	50,799	41,883	53,925	56,727	56,179	64,450
Japan—						
Government-licensed plants .. .. .	735,000	879,000	835,000	837,000	958,000	952,000
Jordan (brine-salt) .. .. .	17,444	19,614	20,115	18,435	13,982	17,217
Korea (North) .. .. .	a)(b)450,000	a)(b)400,000	a)(b)500,000	a)(b)500,000	a)(b)500,000	a)(b)500,000
Korea (South) .. .. .	226,454	379,516	658,310	387,281	602,364	552,000
Lebanon (sea-salt) (a) .. .. .	18,000	20,000	20,000	24,000	25,000	25,000
Philippine Republic—						
Sea-salt .. .. .	69,014	45,891	221,000	140,000	116,000	189,000
Syria .. .. .	15,000	16,000	21,000	a)(b)20,000	a)(b)20,000	a)(b)20,000
Thailand .. .. .	262,000	187,000	185,000	a)(b)200,000	a)(b)110,000	a)(b)150,000
Turkey—						
Rock-salt .. .. .	29,000	32,000	34,000	31,000	} 627,000	560,000
Lake and spring salt .. .. .	} 362,000	317,000	451,000	249,000		
Sea-salt .. .. .						
Vietnam (North) .. .. .	126,000	a)(b)150,000	a)(b)150,000	a)(b)150,000	a)(b)150,000	a)(b)150,000
Vietnam (South) .. .. .	193,135	186,157	158,860	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Yemen .. .. .	a)(b)100,000	a)(b)35,000	—	<i>n.a.</i>	a)(b)98,000	a)(b)84,000
<b>TOTAL*</b> .. .. .	<b>77,000,000</b>	<b>82,000,000</b>	<b>90,000,000</b>	<b>93,000,000</b>	<b>97,000,000</b>	<b>104,000,000</b>
<b>WORLD'S TOTAL*</b> .. .. .	<b>93,000,000</b>	<b>98,000,000</b>	<b>108,000,000</b>	<b>111,000,000</b>	<b>115,000,000</b>	<b>124,000,000</b>

\*Salt is known to have been produced in many countries for which statistics are not available. An allowance has been made for these in the total.

(a) Estimated.

(b) United States Bureau of Mines.

(c) Years ended March 31 of year following that stated.

(d) Years ended March 20 of year following that stated.

(e) Sold or used by producers.



## EXPORTS OF SALT

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	362,866	357,127	399,064	447,101	414,708	475,356
Kenya .. .. .	85	12	18	162	762	1,555
Tanzania .. .. .	12,553	10,146	14,656	12,294	10,914	10,609
Uganda .. .. .	565	546	441	1,144	1,615	1,939
Bahamas (c) .. .. .	105,857	220,786	413,714	520,000	711,250	629,536
St. Kitts .. .. .	783	2,777	3,716	5,505	<i>n.a.</i>	<i>n.a.</i>
Virgin Islands .. .. .	5	3	4	2	—	—
Turks and Caicos Islands	26,559	8,271	6,535	5,580	3,770	2,504
India (b) .. .. .	191,611	278,932	269,521	234,483	281,568	291,609
Malaysia (West) .. .. .	<i>n.a.</i>	<i>n.a.</i>	166	208	1,222	223
Pakistan .. .. .	56,151	185,876	<i>n.a.</i>	<i>n.a.</i>	(a) 124,194	(a) 83,378
Singapore .. .. .	1,177	4,527	3,747	4,051	5,675	6,543
Australia (a)—						
Refined salt .. .. .	253	203	382	—	2,129	1,806
Other salt .. .. .	74,606	107,144	111,289	101,313	90,761	164,352
<b>OTHER COUNTRIES</b>						
Austria .. .. .	1,244	3	1,201	202	4	35
Belgium-Luxemburg						
E.U. .. .. .	526	1,747	3,394	4,183	3,807	6,453
Denmark .. .. .	235	245	351	13,223	12,803	10,942
France .. .. .	135,101	135,083	92,587	115,816	92,336	82,182
Germany (Federal) .. .. .	876,238	857,140	946,191	930,263	997,547	1,150,775
Italy .. .. .	74,266	56,443	56,876	18,403	21,075	20,102
Netherlands—						
Refined salt .. .. .	849,511	943,986	963,759	1,039,909	1,133,681	1,399,944
Norway—						
Common salt .. .. .	5,932	4,621	3,895	4,125	2,946	3,630
Poland .. .. .	141,000	169,000	116,511	169,517	141,180	60,131
Portugal .. .. .	81	8	16	21	300	60
Roumania .. .. .	304,300	381,100	470,800	423,000	390,238	477,044
Spain .. .. .	457,880	329,155	397,630	309,404	294,414	360,844
Sweden .. .. .	1,225	32	1,316	300	26	218
Switzerland .. .. .	2,569	3,282	3,137	2,046	7	7
U.S.S.R. .. .. .	136,000	107,200	161,900	191,900	265,834	271,000
Angola .. .. .	23,958	33,401	24,321	33,971	30,082	19,242
Cape Verde Islands .. .. .	32,346	35,145	28,086	31,341	<i>n.a.</i>	<i>n.a.</i>
Egypt .. .. .	160,130	327,201	225,981	270,000	114,199	47,960
Ethiopia .. .. .	57,276	78,417	78,247	<i>n.a.</i>	154,009	159,524
Malagasy Republic .. .. .	2,364	1,607	2,052	2,083	1,293	2,600
Mozambique .. .. .	3,378	3,692	7,230	8,783	<i>n.a.</i>	<i>n.a.</i>
Morocco .. .. .	10	12	3	—	1	—
Senegal .. .. .	44,685	11,725	6,061	7,843	18,122	<i>n.a.</i>
South Africa .. .. .	23,494	29,707	30,890	33,072	27,576	35,140
South West Africa—						
Rock-salt .. .. .	2,271	2,882	2,513	2,461	<i>n.a.</i>	<i>n.a.</i>
Coarse salt .. .. .	42,558	50,930	44,988	51,909	<i>n.a.</i>	<i>n.a.</i>
Other salt .. .. .	1,512	1,409	1,031	2,166	<i>n.a.</i>	<i>n.a.</i>
Sudan .. .. .	506	981	773	1,684	213	411
Tunisia .. .. .	263,206	191,600	372,318	271,311	274,348	320,000
Honduras .. .. .	3,139	5,816	6,234	6,372	6,397	6,508
Mexico .. .. .	990,573	1,428,287	1,575,789	836,137	2,716,607	2,945,517

(a) Years ended June 30 of that stated.

(b) Years ending March 31 following that stated.

(c) Converted from bushels at the rate of 28 bushels = 1 long ton.

## EXPORTS OF SALT (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Netherlands Antilles ..	106	47	—	—	—	—
Salvador .. ..	1,888	3,026	7,162	4,737	8,428	8,980
United States .. ..	251,014	530,641	615,552	591,563	605,115	649,753
Argentina .. ..	56,498	66,430	88,057	58,937	48,244	47,158
Peru .. ..	578	336	118	179	236	<i>n.a.</i>
Burma .. ..	10,000	5,625	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Formosa .. ..	278,959	392,420	297,649	128,014	16,554	<i>n.a.</i>
Iran (a) .. ..	2,460	3,337	3,549	2,015	3,148	4,644
Japan .. ..	39	13	7	4,732	7,669	392
Southern Yemen ..	72,574	93,021	47,939	74,237	71,464	88,284
Thailand .. ..	114,933	122,903	80,495	83,517	74,771	95,097
Turkey .. ..	57,809	126,902	87,121	51,040	6,693	<i>n.a.</i>
Vietnam (South) ..	20,270	38,433	4,921	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Years ended March 20 of year following that stated.

## IMPORTS OF SALT

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Salt for use of fisheries ..	170,399	30,975	53,119	54,290	29,031	} 32,895
Other salt .. .. .	5,575	5,864	5,573	6,505	7,183	
Channel Islands .. .. .	593	641	548	420	778	
Malta—						
Refined salt .. .. .	(£4,055)	(£4,863)	(£6,546)	(£5,972)	(£5,491)	(£9,472)
Other salt .. .. .	5	236	360	420	56	—
Gambia .. .. .	94	254	98	120	35	64
Ghana .. .. .	2,652	2,079	8,418	706	137	425
Kenya .. .. .	9,658	11,889	5,461	4,930	4,966	6,630
Malawi .. .. .	n.a.	5,973	9,178	9,131	9,125	10,863
Mauritius .. .. .	158	19	148	56	99	154
Nigeria .. .. .	124,005	131,522	127,993	123,557	124,029	127,782
Rhodesia (a) .. .. .	38,570	28,750	38,973	n.a.	n.a.	n.a.
Seychelles .. .. .	343	196	428	233	233	403
Sierra Leone .. .. .	8,720	8,859	6,881	10,788	9,291	n.a.
Tanzania .. .. .	4,130	3,717	4,403	4,368	3,138	5,695
Uganda .. .. .	25,838	26,553	34,744	22,165	21,234	35,878
Zambia .. .. .	n.a.	10,136	10,720	12,166	11,586	13,368
Canada—						
Salt for use of fisheries ..	59,674	40,772	46,291	} 454,954	506,261	575,137
Refined salt .. .. .	—	—	—			
Other salt .. .. .	237,273	321,347	347,995			
Antigua .. .. .	200	286	190	256	764	n.a.
Barbados—						
Rock and coarse salt .. ..	59	} (c) 7,543	1,951	6,992	1,946	1,906
Refined salt .. .. .	648					
Bermuda .. .. .	192	183	177	166	180	164
British Honduras .. .. .	613	469	567	582	715	673
Dominica .. .. .	363	263	242	317	422	361
Grenada .. .. .	585	293	2,388	567	618	636
Jamaica—						
Rock-salt .. .. .	56	192	105	63	124	182
Other salt .. .. .	11,360	11,209	10,920	11,370	11,839	14,019
Montserrat .. .. .	27	63	n.a.	n.a.	n.a.	n.a.
St. Kitts .. .. .	82	55	127	105	100	n.a.
St. Lucia—						
Common salt .. .. .	474	339	595	747	649	503
Refined salt .. .. .	14	2	14	40	4	3
St. Vincent—						
Unrefined salt .. .. .	150	n.a.	6	19	1	n.a.
Refined salt .. .. .	334	n.a.	424	435	415	n.a.
Trinidad and Tobago—						
Rock and coarse salt .. ..	2,878	2,373	2,137	2,339	2,749	2,228
Refined salt .. .. .	3,988	4,796	6,209	7,421	7,670	8,222
Virgin Islands .. .. .	9	12	14	21	15	21
Guyana—						
Rock and coarse salt .. ..	n.a.	17	21	(c) 2	1	18
Refined salt, etc. .. .. .	n.a.	2,546	2,705	2,702	2,832	3,202
Brunei .. .. .	3,273	336	1,006	734	1,095	998
Ceylon—						
Refined salt .. .. .	41	72	50	80	64	167
Other salt .. .. .	36,632	32,748	39,132	4,113	10,950	3,096
Cyprus .. .. .	270	227	245	314	212	369
Hong Kong .. .. .	33,664	32,652	30,803	29,465	32,434	36,482
India (b) .. .. .	28	3,533	105	—	4	7
Malaysia (West) .. .. .	n.a.	n.a.	63,898	71,640	83,114	84,525
Pakistan .. .. .	1,915	2,601	n.a.	n.a.	n.a.	n.a.
Sabah .. .. .	3,288	8,354	3,180	2,965	3,710	3,636

(a) Figure for 1963 relates to Rhodesia and Nyasaland.

(b) Years ended March 31 following that stated.

(c) Excess of re-exports.

## IMPORTS OF SALT (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES (cont.)</b>						
Sarawak .. .. .	6,117	5,008	5,588	5,660	6,379	6,550
Singapore .. .. .	22,137	20,531	19,753	26,826	27,022	34,356
Australia (a)—						
Refined salt .. .. .	11	16	45	77	9	211
Other salt .. .. .	7,203	7,056	6,523	7,012	12,716	8,581
Fiji .. .. .	2,308	1,767	1,514	2,173	1,961	2,317
New Guinea (a) .. .. .	1,352	1,695	1,289	1,566	1,297	1,808
New Hebrides .. .. .	276	207	200	221	—	7
New Zealand (a) .. .. .	65,165	62,429	50,995	50,456	43,749	44,442
Papua (a) .. .. .	356	401	408	462	312	399
Solomon Islands .. .. .	65	80	65	84	67	113
Western Samoa .. .. .	360	280	263	386	435	318
Irish Republic—						
Refined salt .. .. .	4,515	4,403	5,224	4,890	4,717	5,180
Other salt .. .. .	34,991	32,874	35,765	38,913	41,379	43,745
<b>OTHER COUNTRIES</b>						
Austria—						
Common salt .. .. .	364	90	62	767	21	6,437
Belgium-Luxemburg E.U.—						
Common salt .. .. .	647,712	701,448	672,069	722,187	818,204	999,856
Refined salt .. .. .	113,231	109,695	108,668	111,036	110,507	121,855
Denmark—						
Rock-salt .. .. .	89,707	82,869	101,305	153,473	107,057	159,473
Refined salt .. .. .	78,079	80,291	88,687	84,071	39,356	27,546
Faroe Islands .. .. .	33,292	25,453	34,919	20,898	35,807	n.a.
Finland .. .. .	263,110	302,303	320,728	370,071	346,779	239,246
France .. .. .	61,720	131,660	115,875	57,141	50,649	69,768
Germany (Federal) .. .. .	55,520	94,592	92,368	98,659	123,598	143,817
Iceland—						
Common salt .. .. .	53,806	52,101	50,942	42,945	42,189	55,960
Refined salt .. .. .	238	289	295	310	317	367
Italy .. .. .	54,969	36,958	2,143	379	3,589	245
Netherlands—						
Rock-salt .. .. .	26,886	8,968	11,880	46,794	38,939	34,213
Sea-salt, etc. .. .. .						
Refined salt .. .. .	34,952	25,466	23,150			
Norway—						
Common salt .. .. .	102,332	91,014	126,176	136,833	112,559	147,101
Refined salt .. .. .	157,581	157,259	164,945	164,724	151,838	170,399
Portugal .. .. .	11,495	9,535	27,620	20,324	10,866	3,853
Spain .. .. .	105	389	336	638	511	923
Sweden .. .. .	628,295	661,591	732,748	819,887	811,043	240,841
Switzerland .. .. .	2,791	829	1,103	1,104	928	1,575
Yugoslavia .. .. .	88,186	104,255	159,251	163,984	121,756	135,490
Cameroun .. .. .	11,221	16,620	15,672	n.a.	n.a.	n.a.
Central African Republic .. .. .	(b)	3,754	2,104	5,296	3,918	n.a.
Congo (Republic of) .. .. .	(b)	2,701	2,109	3,024	1,667	n.a.
Dahomey .. .. .	1,121	1,236	2,285	2,848	8,944	n.a.
Equatorial African Community .. .. .	13,868	(c)	(c)	(c)	(c)	(c)
Ethiopia .. .. .	398	126	n.a.	n.a.	n.a.	n.a.
Gabon .. .. .	(b)	1,327	1,746	2,012	2,430	n.a.
Ivory Coast .. .. .	24,937	22,673	18,683	22,111	23,990	n.a.

(a) Years ended June 30 of that stated.

(b) Included in Equatorial African Community.

(c) See Central African Republic, Congo (Republic of) and Gabon.

## IMPORTS OF SALT (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Liberia .. .. .	6,669	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Malagasy Republic .. .. .	526	626	910	549	803	661
Mali .. .. .	17,088	17,673	14,919	20,504	15,993	<i>n.a.</i>
Morocco .. .. .	1,921	5,388	235	51	69	41
Mozambique .. .. .	3,746	2,332	1,509	1,341	<i>n.a.</i>	<i>n.a.</i>
Niger .. .. .	5,229	6,598	4,962	<i>n.a.</i>	13,385	<i>n.a.</i>
Reunion .. .. .	<i>n.a.</i>	1,611	2,139	2,111	1,465	<i>n.a.</i>
Senegal .. .. .	177	87	73	102	113	<i>n.a.</i>
South Africa .. .. .	2,419	2,418	2,082	1,732	2,104	<i>n.a.</i>
Sudan .. .. .	59	1,211	58	29	46	93
Togo .. .. .	10,761	10,692	6,877	6,727	3,001	<i>n.a.</i>
Upper Volta .. .. .	10,858	12,147	7,549	<i>n.a.</i>	<i>n.a.</i>	12,246
Costa Rica .. .. .	103	272	254	1,454	4,098	4,040
French West Indies—						
Guadeloupe .. .. .	<i>n.a.</i>	<i>n.a.</i>	1,168	898	1,005	<i>n.a.</i>
Martinique .. .. .	<i>n.a.</i>	<i>n.a.</i>	2,507	2,225	2,933	<i>n.a.</i>
Greenland .. .. .	7,555	3,301	3,699	7,163	9,302	<i>n.a.</i>
Guatemala .. .. .	227	1,617	4,598	2,058	4,679	8,368
Honduras .. .. .	1,755	1,620	2,334	140	3,860	1,291
Mexico .. .. .	1,220	1,027	4,812	1,204	5,112	90
Netherlands Antilles .. .. .	523	577	622	623	1,090	989
Nicaragua .. .. .	580	1,939	2,767	3,963	6,791	16,566
St. Pierre and Miquelon .. .. .	232	2,118	<i>n.a.</i>	1,551	3,790	<i>n.a.</i>
Salvador .. .. .	2,764	4,202	4,182	2,148	1,731	26
United States .. .. .	1,353,713	2,089,176	1,575,828	1,626,000	2,538,382	3,085,000
Bolivia .. .. .	161	120	186	154	37	<i>n.a.</i>
Brazil .. .. .	175	51,395	245,568	194,153	48,712	<i>n.a.</i>
Colombia .. .. .	7	7	4	15	7	8
French Guiana .. .. .	<i>n.a.</i>	277	306	228	317	<i>n.a.</i>
Peru .. .. .	3,439	3,271	4,258	2,645	2,671	<i>n.a.</i>
Surinam .. .. .	1,195	1,181	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Uruguay .. .. .	<i>n.a.</i>	<i>n.a.</i>	57,804	50,072	50,064	<i>n.a.</i>
Burma .. .. .	1,451	816	812	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Iran (a) .. .. .	82	78	113	185	112	46
Iraq .. .. .	55	61	<i>n.a.</i>	62	90	<i>n.a.</i>
Japan .. .. .	2,901,189	3,583,607	3,487,467	3,771,232	4,361,824	4,943,937
Lebanon .. .. .	1,101	1,439	1,811	412	584	<i>n.a.</i>
Syria .. .. .	23,109	—	15,394	28,845	13,271	19,862
Philippine Republic—						
Crude .. .. .	553	690	22,228	<i>n.a.</i>	10,335	<i>n.a.</i>
Refined .. .. .	147	185	169	<i>n.a.</i>	114	<i>n.a.</i>
French Polynesia .. .. .	—	396	557	320	<i>n.a.</i>	<i>n.a.</i>
New Caledonia .. .. .	474	551	431	378	395	<i>n.a.</i>

(a) Years ended March 20 of year following that stated.

## SELENIUM

### PRODUCTION OF SELENIUM

Lb. avdp.

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Zambia (a) .. ..	62,891	57,631	57,573	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada .. ..	468,772	465,746	512,077	575,412	724,573	709,200
<b>OTHER COUNTRIES</b>						
Belgium (b) .. ..	54,000	87,100	93,000	90,100	72,300	54,500
Finland .. ..	15,417	14,500	12,577	11,973	15,000	15,000
Sweden .. ..	156,222	181,540	176,209	144,041	128,529	168,956
Yugoslavia .. ..	4,120	8,439	17,441	20,558	10,238	<i>n.a.</i>
Mexico .. ..	5,463	9,345	8,120	24,458	<i>n.a.</i>	<i>n.a.</i>
United States (c) ..	928,000	929,000	540,200	620,300	598,400	633,000
Peru .. ..	19,790	16,797	18,964	13,131	10,582	13,000
Japan .. ..	313,497	325,929	347,027	423,391	422,172	394,000
<b>WORLD'S TOTAL ..</b>	<b>2,030,000</b>	<b>2,100,000</b>	<b>1,780,000</b>	<b>1,900,000</b>	<b>2,100,000</b>	<b>2,100,000</b>

Selenium is also produced in Australia.

(a) Contained in copper slimes exported for treatment.

(b) Exports.

(c) Including selenium content of compounds.

(d) United States Bureau of Mines' estimate.

### EXPORTS OF SELENIUM

Lb. avdp.

Exporting Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Zambia (a) .. ..	62,891	57,631	57,573	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Canada (b) .. ..	445,700	401,300	451,200	588,100	539,400	787,100
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U. .. ..	54,000	87,100	93,000	90,100	72,300	54,500
Sweden .. ..	194,000	143,000	141,000	165,000	<i>n.a.</i>	<i>n.a.</i>
Peru .. ..	19,764	24,478	19,253	14,870	10,741	12,800
Japan .. ..	105,650	102,092	68,976	92,806	105,275	111,384

(a) Contained in copper slimes exported for treatment.

(b) Including salts.

**IMPORTS OF SELENIUM**

Lb. avdp.

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	276,167	321,938	360,866	419,015	298,248	341,470
India (c) .. .. .	<i>n.a.</i>	<i>n.a.</i>	13,797	7,877	19,324	13,159
<b>OTHER COUNTRIES</b>						
<b>Belgium-Luxemburg</b>						
E.U. .. .. .	2,900	1,500	700	700	5,300	2,094
France .. .. .	70,500	70,500	62,000	93,000	62,000	60,000
Germany (Federal) .. .	230,400	203,500	231,900	323,000	293,876	454,593
Italy .. .. .	46,738	61,593	38,600	38,140	75,178	50,044
Spain .. .. .	9,572	14,533	16,557	14,306	13,190	16,175
Sweden .. .. .	2,200	22,000	51,000	71,000	22,000	13,000
Yugoslavia .. .. .	<i>n.a.</i>	<i>n.a.</i>	5,207	3,862	1,852	4,200
Morocco (b) .. .. .	664	223	1,323	220	220	227
United States (a) .. .	339,000	215,098	234,645	260,028	279,157	558,988
Argentina .. .. .	5,719	12,710	14,716	15,999	15,809	19,899
Brazil .. .. .	9,019	4,740	3,719	17,117	8,190	<i>n.a.</i>
Peru .. .. .	225	677	862	1,466	847	<i>n.a.</i>
Japan .. .. .	3,307	7,184	130	1,795	10,578	15,084

(a) Including salts.

(b) Including tellurium.

(c) Years ending March 31 following that stated.

## SILLIMANITE, Etc.

### PRODUCTION OF SILLIMANITE, ETC.

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Rhodesia—						
Kyanite .. ..	54	230	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
India—						
Kyanite .. ..	31,520	33,623	36,889	62,664	49,164	63,345
Sillimanite .. ..	11,311	12,167	11,098	10,124	5,705	4,562
Australia—						
Kyanite, sillimanite and andalusite (a) ..	3,515	2,634	2,554	2,664	1,183	2,108
<b>OTHER COUNTRIES</b>						
Spain—						
Andalusite .. ..	—	—	128	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sillimanite .. ..	454	1,275	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Cameroun—						
Kyanite .. ..	69	—	—	—	—	<i>n.a.</i>
South Africa—						
Andalusite .. ..	9,850	13,752	21,573	21,146	24,195	22,089
Sillimanite .. ..	55,353	53,787	41,482	34,549	34,826	32,671
South West Africa—						
Kyanite .. ..	—	563	—	18	<i>n.a.</i>	<i>n.a.</i>
United States—						
Kyanite (b) .. ..	40,000	46,000	52,000	60,000	62,000	60,000
Korea (South)—						
Andalusite .. ..	657	110	126	—	59	<i>n.a.</i>

(a) In addition the following amounts of kaolinised sillimanite were produced (long tons): 1963—3,325; 1964—3,325; 1965—6,805; 1966—6,797; 1967—7,679; 1968—6,997.

(b) Estimated. In addition the following amounts of synthetic mullite were produced (long tons): 1963—26,418; 1964—32,239; 1965—35,758; 1966—44,242; 1967—35,971; 1968—32,155.

### EXPORTS OF SILLIMANITE, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
India—						
Kyanite .. ..	27,886	28,363	30,652	35,161	40,011	49,668
Sillimanite .. ..	5,376	8,633	5,695	6,232	2,014	2,474
<b>OTHER COUNTRIES</b>						
France—						
Kyanite, sillimanite, etc.						
Crude .. ..	505	346	371	239	750	363
Calcined .. ..	311	563	229	871	852	1,337



## EXPORTS OF SILLIMANITE, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Germany (Federal)—						
Kyanite, sillimanite, etc.						
Crude .. .. .	247	} 105	{ 120	76	215	569
Calcined .. .. .	13					
Italy—						
Kyanite, sillimanite, etc.						
Crude .. .. .	} 215	471	587	1,129	643	148
Calcined .. .. .						
Netherlands—						
Kyanite, sillimanite, etc.	1,403	1,890	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South-West Africa—						
Kyanite .. .. .	—	546	206	27	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Andalusite .. .. .	5,041	6,179	9,046	12,407	7,354	6,487
Sillimanite .. .. .	37,571	46,926	39,805	28,238	33,757	34,743
United States—						
Kyanite, etc. .. .. .	4,509	5,429	9,141	15,481	19,132	18,283
Japan—						
Sillimanite, etc. . . .	236	45	411	116	152	883

## IMPORTS OF SILLIMANITE, ETC.\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Kyanite, sillimanite, etc.	19,503	27,335	26,152	28,135	17,109	18,765
Canada—						
Kyanite, etc. .. .. .	2,188	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Australia—						
Kyanite .. .. .	870	1,939	1,000	1,332	1,714	1,776
Sillimanite .. .. .	37	218	489	1,055	572	758
<b>OTHER COUNTRIES</b>						
France—						
Kyanite, sillimanite, etc.						
Crude .. .. .	2,225	3,312	3,330	4,578	2,999	2,672
Calcined .. .. .	1,554	1,482	2,036	1,578	1,392	1,627
Germany (Federal)—						
Kyanite, sillimanite, etc.						
Crude .. .. .	20,716	15,128	17,647	18,795	14,686	18,162
Calcined .. .. .	400	157	1,204	1,003	1,214	2,289
Greece—						
Kyanite, sillimanite, etc.	613	701	1,316	2,729	1,814	3,369
Italy—						
Kyanite, sillimanite, etc.						
Crude .. .. .	} 11,828	{ 8,720	4,244	11,246	11,512	6,770
Calcined .. .. .						
Netherlands—						
Kyanite, sillimanite, etc.	2,963	4,626	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Sillimanite .. .. .	<i>n.a.</i>	63	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
United States—						
Kyanite, sillimanite, etc.	2,343	2,131	3,613	3,040	1,626	1,295
Japan—						
Kyanite, sillimanite, etc.	18,258	32,474	26,448	25,079	34,887	45,637
Thailand—						
Kyanite, sillimanite, etc.	550	1,181	855	1,595	1,850	302

\*These minerals are not separately recorded in the trade returns of several countries.

**SILVER**  
**PRODUCTION OF SILVER**  
(Metal content)

Troy ounces fine

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Botswana .. .. .	21	1	—	—	—	—
Ghana (a) .. .. .	4,827	n.a.	—	—	—	—
Kenya .. .. .	52,422	47,702	26,785	19,003	3,038	2,769
Rhodesia .. .. .	83,741	88,463	(a) 83,285	(e) 95,000	n.a.	n.a.
Swaziland .. .. .	120	130	130	28	—	n.a.
Tanzania .. .. .	22,249	25,295	22,865	10,572	2,294	2,387
Uganda (a) .. .. .	9	—	2	—	—	—
Zambia (b) .. .. .	966,868	1,001,267	848,819	815,000	825,000	n.a.
Canada .. .. .	29,932,003	29,902,611	32,272,464	33,362,208	36,315,189	45,621,355
India .. .. .	128,300	152,200	168,300	39,224	111,563	n.a.
Australia .. .. .	19,641,925	18,426,990	17,280,839	18,887,691	19,842,000	21,281,000
Fiji .. .. .	46,870	60,564	60,470	67,499	61,820	54,654
New Guinea .. .. .	23,695	23,206	19,663	18,052	17,176	18,139
New Zealand .. .. .	286	141	55	2	—	3,854
<b>TOTAL .. .. .</b>	<b>50,904,000</b>	<b>49,730,000</b>	<b>50,784,000</b>	<b>53,000,000</b>	<b>55,000,000</b>	<b>68,000,000</b>
<b>OTHER COUNTRIES</b>						
Czechoslovakia (d) .. .. .	2,400,000	2,400,000	2,400,000	2,400,000	(e)2,400,000	2,400,000
Finland .. .. .	579,967	607,906	582,186	520,103	623,000	677,000
France .. .. .	730,110	969,440	1,401,200	2,008,300	2,162,514	2,166,350
Germany (Federal) .. .. .	2,067,100	2,062,600	1,992,200	1,983,200	2,022,300	1,769,300
Germany (East) (d) .. .. .	4,800,000	4,800,000	4,800,000	4,800,000	f)4,800,000	4,800,000
Greece .. .. .	123,000	154,000	139,000	222,000	239,000	269,000
Italy .. .. .	(g)1,006,300	(g)1,073,800	(g)1,103,400	(g)1,131,800	(g)1,382,400	(g)1,155,700
Portugal .. .. .	48,420	48,770	63,020	354,600	380,000	327,000
Roumania (d) .. .. .	600,000	600,000	600,000	600,000	(e) 800,000	(e) 800,000
Spain .. .. .	4,955,200	2,300,000	2,000,000	2,025,000	2,218,000	e 2,400,000
Sweden .. .. .	3,580,200	3,122,300	3,408,800	3,517,100	3,455,000	3,523,800
Yugoslavia (g) .. .. .	r 3,391,550	r 3,408,429	r 4,268,525	r 3,665,249	3,457,716	2,577,000
Algeria (f) .. .. .	260,000	290,000	340,000	300,000	160,000	290,000
Congo Republic .. .. .	1,097,200	1,480,300	1,538,400	1,851,400	1,839,800	2,150,600
Morocco .. .. .	772,743	604,080	599,258	707,413	772,807	920,000
Mozambique .. .. .	—	5	—	n.a.	n.a.	n.a.
South Africa .. .. .	2,736,868	2,916,660	3,131,580	3,134,093	3,063,505	3,337,048
South West Africa (c) .. .. .	1,312,670	1,161,220	1,637,554	1,516,539	1,449,763	1,349,741
Tunisia .. .. .	9,030	12,600	33,800	38,000	44,700	35,600
Guatemala .. .. .	64,173	(h) 9,445	n.a.	n.a.	n.a.	n.a.
Haiti .. .. .	107,022	92,057	77,488	50,690	34,000	13,000
Honduras .. .. .	e 3,164,000	3,220,371	3,670,659	3,734,290	4,009,418	4,397,000
Mexico .. .. .	42,760,000	41,716,260	40,332,080	41,990,000	38,273,350	40,031,000
Nicaragua .. .. .	405,252	332,370	380,377	361,248	336,118	416,000
United States .. .. .	35,243,000	36,334,000	39,806,033	43,668,988	32,344,862	32,728,979
Argentina .. .. .	1,943,191	1,943,127	2,285,853	2,207,176	2,640,000	n.a.
Bolivia (a) .. .. .	4,869,037	4,810,973	4,114,427	5,124,828	4,249,653	4,770,000
Brazil .. .. .	281,400	305,400	227,800	222,400	478,700	464,000
Chile .. .. .	2,530,400	2,800,800	2,972,264	3,609,962	3,065,504	3,739,324

(a) Exports.

(b) Recovered from copper-refinery slimes.

(c) Accounted for by smelters.

(d) "Metallgesellschaft" estimate.

(e) United States Bureau of Mines' estimate.

(f) Estimated.

(g) Refined.

(h) Imports into the United States.

PRODUCTION OF SILVER (cont.)

Troy ounces fine

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Colombia.. .. .	106,280	130,353	113,451	106,757	110,060	99,172
Ecuador .. .. .	121,800	117,126	69,966	76,710	79,657	136,204
Peru (c) .. .. .	36,800,350	34,419,460	36,470,356	32,841,243	35,870,000	36,020,000
Burma .. .. .	2,075,282	1,866,752	1,638,000	1,096,000	917,000	780,000
China (a).. .. .	800,000	800,000	800,000	800,000	800,000	800,000
Formosa .. .. .	61,400	60,600	87,300	79,500	115,800	89,800
Indonesia.. .. .	279,840	r 254,730	298,777	220,779	308,969	309,065
Japan .. .. .	8,812,070	8,714,750	8,970,000	r10,318,716	10,799,659	10,713,000
Korea (South) .. .	444,000	404,460	434,000	500,100	587,910	611,000
Korea (North) (a) ..	500,000	500,000	500,000	600,000	(b) 700,000	(b) 700,000
Philippine Republic ..	767,249	907,504	933,938	1,162,889	1,368,976	1,510,500
<b>TOTAL*</b> .. .. .	<b>173,000,000</b>	<b>169,000,000</b>	<b>174,000,000</b>	<b>179,000,000</b>	<b>169,000,000</b>	<b>172,000,000</b>
<b>WORLD'S TOTAL*</b> ..	<b>224,000,000</b>	<b>218,000,000</b>	<b>225,000,000</b>	<b>232,000,000</b>	<b>224,000,000</b>	<b>240,000,000</b>

\*Totals exclude estimates for the U.S.S.R. for which no authentic figures are available. (In recent years Russian production has been estimated by the United States Bureau of Mines as 29-35,000,000 troy ounces.) An allowance, however, has been made for those other countries for which information is not yet available.

- (a) "Metallgesellschaft" estimate.
- (b) United States Bureau of Mines' estimate.
- (c) Recoverable.

**TOTAL EXPORTS OF SILVER\***

(Metal content)

Troy ounces fine

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom— Bullion (r) .. ..	27,929,609	21,328,105	38,146,064	35,417,248	31,714,026	29,418,055
Ghana— Bullion .. .. .	4,827	<i>n.a.</i>	—	—	—	—
Kenya— Refined bullion.. ..	44,114	46,834	29,750	16,924	—	—
Rhodesia (b)— Bullion .. .. .	85,077	96,280	83,285	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tanzania— Refined bullion.. ..	22,521	25,329	22,865	10,572	2,293	2,386
Uganda— Bullion .. .. .	9	—	2	—	—	—
Zambia— Bullion .. .. .	<i>n.a.</i>	40,000	2,539	40,000	166,000	76,097
Canada— Ore, concentrates, etc. Bullion .. .. .	8,286,756 13,628,006	9,478,317 10,586,939	12,245,877 11,268,110	11,850,469 12,221,142	10,407,418 13,735,675	21,502,022 28,104,562
Hong Kong .. .. .	1,428,913	3,594,709	1,631,164	881,558	897,118	1,849,448
Singapore— Bullion (d) .. .. .	1,130,000	405,000	373,000	628,000	1,086,000	2,082,000
Australia (a)— Ores and concentrates Silver-lead bullion ..	3,045,752 5,233,426	3,766,059 5,502,534	2,740,289 3,367,282	2,959,026 5,887,644	3,432,019 4,714,641	3,309,135 7,543,409
Bullion, refined.. ..	239,166	4,536,735	1,366,813	247,428	} 2,724,878	11,356,431
do. unrefined .. ..	—	4,308	—	901		
Beaten, rolled or drawn	4,429	33,027	89,101	178,218		
Fiji— Bullion .. .. .	(c) 2,560	60,260	60,640	67,783	61,690	54,419
Irish Republic— Bullion (d) .. .. .	182,100	214,000	14,100	34,400	16,000	30,000
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg E.U.— Bullion and scrap ..	10,510,000	10,870,000	8,131,000	9,208,000	8,115,000	17,188,000
Denmark— Bullion .. .. .	15,000	36,000	45,000	58,000	11,000	82,000
Beaten, rolled or drawn	1,000	13,000	12,000	4,000	6,000	20,000
France— Bullion and scrap ..	1,751,000	1,031,000	1,183,000	3,126,000	773,000	8,645,000
Beaten, rolled or drawn	1,096,000	3,077,000	4,904,000	2,026,000	1,409,000	1,624,000
Germany (Federal)— Bullion .. .. .	21,873,000	18,066,000	15,751,000	14,416,000	13,542,000	23,940,000
Netherlands— Bullion and scrap ..	1,432,000	588,000	1,355,000	771,000	722,000	1,659,879
Beaten, rolled or drawn	233,000	284,000	345,000	211,000	217,500	480,460
Sweden— Bullion .. .. .	1,222,000	482,000	390,000	386,000	1,800,000	4,018,843
Switzerland— Bullion .. .. .	470,000	211,000	1,107,000	1,848,000	1,676,000	407,089
Yugoslavia— Bullion .. .. .	2,572,000	2,415,000	3,079,000	2,977,000	2,616,000	2,320,000

\*Excluding silver coin, but including silver shipped for minting.

(a) Years ended June 30 of that stated.

(b) Figure for 1963 relates to Rhodesia and Nyasaland.

(c) Owing to revised method of calculation not comparable with years 1964-1968.

(d) Estimated.

## EXPORTS OF SILVER (cont.)

Troy ounces fine

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Morocco—						
Bullion .. .. .	5,000	85,000	17,500	69,285	<i>n.a.</i>	23,310
South Africa—						
Bullion .. .. .	1,679,079	1,699,777	2,773,203	11,827,383	11,175,744	4,108,791
South West Africa—						
Concentrates <i>(b)</i> ..	634,134	328,808	461,581	483,764	<i>n.a.</i>	<i>n.a.</i>
Guatemala <i>(a)</i> —						
Ore and base bullion ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	378	<i>n.a.</i>	<i>n.a.</i>
Honduras—						
Ore and base bullion ..	4,556,000	2,350,740	3,967,000	3,842,005	3,845,394	1,982,351
Mexico—						
Bullion, etc. .. .. .	46,127,000	34,389,000	29,521,000	34,245,000	<i>n.a.</i>	37,320,000
Nicaragua—						
Bullion .. .. .	203,514	168,791	165,700	447,956	181,870	159,693
Salvador—						
Bullion .. .. .	3,400	—	11,000	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
United States—						
Ore and base bullion ..	1,298,000	2,676,000	537,000	369,000	2,365,000	23,129,000
Refined bullion .. .. .	30,187,000	106,718,000	39,128,000	85,169,000	68,404,000	102,632,000
Argentina—						
Bullion, etc. .. .. .	731,000	268,000	161,000	214,000	337,000	395,000
Bolivia—						
Ores, etc. .. .. .	4,869,037	4,810,973	4,114,427	4,612,924	4,249,653	4,770,000
Chile—						
Ores, etc. .. .. .	2,243,672	2,448,961	2,522,579	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ecuador <i>(a)</i> —						
Ore and base bullion ..	53,000	51,000	39,000	20,000	<i>n.a.</i>	<i>n.a.</i>
Peru—						
Ores and concentrates	14,166,621	14,413,403	13,348,043	14,793,595	} 30,768,258	} 33,100,000
Bullion .. .. .	17,000,000	23,000,000	19,695,419	20,576,305		
Matte, slag, etc. .. .	500,674	125,169	938	—		
Burma—						
Bullion .. .. .	1,250,912	1,406,039	1,002,648	1,200,000	<i>n.a.</i>	<i>n.a.</i>
Japan—						
Bullion and scrap .. .	<i>(c)</i> 94,000	<i>(c)</i> 2,913,000	<i>(c)</i> 155,000	<i>(c)</i> 99,000	<i>(c)</i> 167,259	<i>(c)</i> 701,819
Philippine Republic <i>(a)</i> —						
Ore and base bullion ..	403,000	351,700	356,700	587,000	<i>n.a.</i>	358,000

*(a)* Imports into the United States from the country stated.

*(b)* Contained in lead complex concentrates exported.

*(c)* Including "beaten, rolled or drawn".

**TOTAL IMPORTS OF SILVER\***  
(Metal content)

Troy ounces fine

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ores .. .. .	4,614,000	(d) 8,000	(d) 142,000	(d) 202,000	—	—
Unrefined bullion .. .. .	1,069,413	340,387	5,466,339	6,685,162	13,226,990	53,171,493
Refined bullion (r) .. .. .	20,353,712	62,081,478	35,666,545	48,149,119	50,575,441	72,706,499
Malta—						
Bullion .. .. .	7,800	10,000	(e) 7,800	(e) 11,951	(e) 15,749	(e) 6,289
Ghana—						
Bullion .. .. .	6,368	400	176	—	—	—
Nigeria—						
Bullion, etc. .. .. .	19,363	22,284	20,702	47,250	7,263	1,368
Sierra Leone—						
Bullion .. .. .	6,936	1,344	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Zambia—						
Bullion .. .. .	<i>n.a.</i>	<i>n.a.</i>	2,539	<i>n.a.</i>	812	<i>n.a.</i>
Canada—						
Bullion .. .. .	7,949,829	c) 5,197,764	c) 13,413,434	c) 14,477,787	c) 5,383,872	c) 14,060,635
Jamaica—						
Bullion .. .. .	1,000	1,800	200	9,000	17,500	<i>n.a.</i>
Trinidad and Tobago—						
Bullion .. .. .	13,103	17,401	24,450	20,870	27,868	48,734
Guyana—						
Bullion (e) .. .. .	<i>n.a.</i>	3,260	5,655	6,190	7,134	5,899
Ceylon—						
Bullion .. .. .	18,000	—	9,800	110,000	6,523	—
Cyprus—						
Bullion .. .. .	62,400	43,600	76,000	109,000	112,000	54,898
Hong Kong—						
Bullion .. .. .	86,333	106,546	278,800	245,266	252,261	484,222
India (b)—						
Bullion .. .. .	33,070	7,901	6,646	6,130	<i>n.a.</i>	<i>n.a.</i>
Malaysia (West)—						
Bullion (f) .. .. .	<i>n.a.</i>	<i>n.a.</i>	2,500	300	732	1,868
Sarawak—						
Bullion .. .. .	15	1,051	88	15	58	7
Singapore—						
Bullion (f) .. .. .	7,800	9,300	1,400	2,000	7,000	158,000
Australia (a)—						
Matte .. .. .	5,635	—	—	—	—	—
Bullion .. .. .	93,876	102,906	89,484	98,684	107,001	77,878
Beaten, rolled or drawn	12,850	11,529	2,740	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
New Zealand (a)—						
Bullion .. .. .	77,423	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Beaten, rolled or drawn	20,965	8,056	25,025	25,817	18,475	<i>n.a.</i>
Irish Republic—						
Bullion (f) .. .. .	—	216,981	8,430	37,825	41,724	13,200
<b>OTHER COUNTRIES</b>						
Austria—						
Bullion .. .. .	6,086,000	2,090,000	3,199,000	3,778,000	3,273,000	2,363,080
Belgium-Luxemburg						
E.U.—						
Bullion and scrap .. .. .	6,768,000	7,298,000	7,588,000	14,043,000	10,198,200	35,066,800
Denmark—						
Bullion .. .. .	665,000	678,000	812,000	825,000	546,241	311,862
Beaten, rolled or drawn	2,385,000	3,324,000	3,625,000	3,353,000	3,628,211	2,621,893
Finland—						
Bullion, etc. .. .. .	859,000	340,000	404,000	1,323,000	1,876,000	648,156

\*Excluding silver coin, but including silver shipped for minting.

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

(c) Including anodes.

(d) Owing to reclassification not strictly comparable with earlier years.

(e) Including partly worked.

(f) Estimated.

## IMPORTS OF SILVER (cont.)

Troy ounces fine

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
France—						
Bullion and scrap ..	24,732,000	27,822,000	22,061,000	27,571,000	18,578,242	29,152,580
Beaten, rolled or drawn	810,000	1,000,000	1,091,000	1,353,000	1,530,665	1,760,643
Germany (Federal)—						
Bullion .. ..	40,895,000	45,180,000	55,463,000	45,169,000	47,720,000	59,990,100
Netherlands—						
Bullion and scrap ..	3,326,000	3,039,000	5,098,000	4,316,500	1,513,400	3,545,000
Beaten, rolled or drawn	814,000	1,399,000	3,397,000	1,419,000	2,056,700	2,622,400
Norway—						
Bullion .. ..	629,000	1,105,000	1,726,000	1,234,000	1,051,000	827,624
Beaten, rolled or drawn	867,000	1,491,000	1,540,000	1,846,000	1,978,000	1,780,000
Portugal—						
Bullion and scrap ..	1,021,000	964,000	578,000	316,000	908,000	541,700
Beaten, rolled and drawn	45,000	58,000	129,000	98,000	74,000	60,600
Spain .. ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	6,438,668	4,816,149	3,278,186
Sweden—						
Bullion .. ..	450,000	450,000	510,000	482,000	386,000	386,000
Switzerland—						
Bullion .. ..	10,266,000	11,175,000	4,190,000	17,762,000	18,636,000	16,347,390
South Africa—						
Bullion .. ..	<i>n.a.</i>	1,000	94,494	142,465	161,719	237,104
Guatemala—						
Bullion .. ..	2,500	20,000	1,500	2,200	800	2,668
United States—						
Ore and base bullion ..	41,660,000	43,146,000	47,830,864	36,288,344	25,642,000	28,786,000
Refined bullion ..	17,402,000	8,528,000	6,878,106	27,040,450	29,878,000	41,923,000
Brazil—						
Bullion .. ..	1,195,000	1,512,000	734,000	970,000	901,000	983,330
Colombia—						
Bullion and scrap ..	50,000	56,000	66,000	59,000	13,000	23,000
Japan—						
Bullion and scrap ..	3,627,000	9,937,000	4,789,000	7,032,000	10,157,000	12,291,443
Lebanon—						
Bullion and scrap ..	42,700	47,400	79,000	760,400	46,900	<i>n.a.</i>
Turkey—						
Bullion, etc. .. ..	6,000	7,000	3,000	19,400	48,000	1,000

## STRONTIUM MINERALS

### PRODUCTION OF STRONTIUM MINERALS

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Celestite .. ..	9,019	17,033	9,549	9,405	6,680	7,763
Pakistan (b)—						
Celestite .. ..	379	265	444	527	373	640
<b>OTHER COUNTRIES</b>						
Italy—						
Celestite .. ..	646	450	630	588	650	550
Mexico (a)—						
Celestite .. ..	6,092	4,815	3,076	6,202	2,788	2,500
Argentina—						
Celestite .. ..	<i>n.a.</i>	<i>n.a.</i>	589	364	30	69

Strontium minerals are also known to have been produced in Germany, Poland and the U.S.S.R.

(a) Exports.

(b) West Pakistan.

### EXPORTS OF STRONTIUM MINERALS, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Celestite .. ..	9,437	15,234	5,441	7,383	3,863	5,824
<b>OTHER COUNTRIES</b>						
France—						
Oxide .. .. .	2	69	2	—	5	79
Italy—						
Strontianite and celestite	89	132	97	117	118	80
Mexico—						
Celestite .. ..	6,092	4,815	3,076	6,202	2,788	2,500

### IMPORTS OF STRONTIUM MINERALS, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
United States—						
Strontianite and celestite	14,493	19,301	8,697	10,283	5,011	<i>n.a.</i>
Strontium compounds ..	4	6	7	<i>n.a.</i>	7	<i>n.a.</i>



**SULPHUR**  
(see also Pyrites)  
**PRODUCTION OF SULPHUR**

Long tons

Producing Country and Description	Estimated Sulphur Content					
	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Sulphur content of zinc concentrates ..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Spent oxide ..	65,629	92,591	93,049	87,980	81,101	66,536
Anhydrite (a) ..	104,447	177,229	203,895	204,656	237,641	263,529
Other (b) ..	46,538	53,701	47,992	39,712	45,967	46,131
Canada—						
Smelter gas ..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hydrogen sulphide (g) (i) ..	315,396	395,936	397,105	446,730	528,603	505,086
Trinidad (f) ..	1,115,971	1,596,576	1,846,780	1,822,793	2,073,413	2,308,494
Australia—						
Sulphur content of: ..	6,629	5,322	3,723	n.a.	n.a.	n.a.
zinc concentrates ..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
lead concentrates ..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Spent oxide ..	397	—	—	—	—	—
<b>OTHER COUNTRIES</b>						
Austria—						
Recovered sulphur ..	—	6,000	(h) 6,000	(h) 6,000	n.a.	n.a.
Belgium—						
By-product sulphur ..	5,000	5,000	3,500	n.a.	n.a.	n.a.
Bulgaria (c) ..	6,000	7,000	10,000	9,000	(h) 10,000	(h) 10,000
France—						
Sulphur (d) ..	1,386,280	1,486,800	1,497,200	1,516,111	1,638,824	1,589,000
Finland (e) ..	37,610	67,063	72,606	72,478	e 103,000	e 123,000
Germany (Federal)—						
Refined sulphur ..	84,949	76,602	75,412	82,476	104,071	124,877
Germany (East)—						
Sulphur ..	117,980	123,081	122,835	125,681	121,339	117,597

(a) For sulphuric acid manufacture only.

(b) Including sulphur recovered from petroleum refineries.

(c) Sulphur recovered from pyrites or other sulphide ores.

(d) Recovered from natural gas.

(e) Estimated.

(f) Recovered from petroleum refineries.

(g) Sales.

(h) United States Bureau of Mines' estimate.

(i) Recovered from natural gas and nickel sulphide.

PRODUCTION OF SULPHUR (cont.)

Long tons

Producing Country and Description	Estimated Sulphur Content						1968
	1963	1964	1965	1966	1967	1968	
<b>OTHER COUNTRIES (cont.)</b>							
Italy—							
Sulphur rock .. .. .	968,867	667,773	638,822	582,047	480,509	n.a.	n.a.
Fused (c) .. .. .	41,133	28,472	15,824	13,834	9,681	6,916	6,916
Ground sulphur rock (c) ..	28,035	23,033	24,041	18,160	14,355	8,000	4,300
Netherlands (i) .. .. .	34,000	28,400	26,500	45,000	42,000	34,000	46,000
Poland—							
Native sulphur .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	231,500	479,000
Portugal (i) .. .. .	3,000	—	—	—	—	3,000	—
Spain—							
Refined sulphur (h) .. ..	68,036	75,451	42,810	27,819	42,120	68,036	42,120
Sweden—							
Sulphur .. .. .	25,900	27,009	21,082	9,842	n.a.	25,900	n.a.
U.S.S.R. (d)—							
Native sulphur .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	950,000	1,033,000
By-product sulphur .. ..	400,000	394,000	423,000	423,000	443,000	400,000	443,000
Egypt—							
Native sulphur .. .. .	4,675	—	—	—	—	500	—
By-product sulphur (a) ..	2,363	2,427	3,790	11,490	8,839	2,363	3,149
South Africa—							
By-product sulphur (a) ..	1,981	5,701	7,102	6,300	6,000	1,981	6,000
Mexico—							
Crude sulphur (f) .. .. .	1,456,656	1,635,767	1,481,236	1,611,446	1,793,085	1,456,656	1,605,277
Sulphur ore (g) .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	28,968	33,800
Refined sulphur (e) .. ..	43,308	36,284	45,984	38,160	47,577	43,308	52,204
Netherlands Antilles—							
By-product sulphur (a) ..	n.a.	26,000	25,000	n.a.	n.a.	n.a.	n.a.
United States—							
Crude sulphur (f) .. .. .	4,881,512	5,228,207	6,116,273	7,001,360	7,014,448	4,881,512	7,458,392
Sulphur ore (g) .. .. .	1,371	794	2,592	557	568	415	284
Smelter gas (b) .. .. .	1,089,523	1,119,976	1,188,314	1,297,184	1,114,881	355,730	364,477

(a) Recovered from petroleum refineries.

(b) Estimated sulphur content of gas driven off in the smelting of lead, zinc and copper concentrates, recovered as sulphuric acid.

(c) Derived from sulphur rock above.

(d) United States Bureau of Mines' estimate.

(e) Recovered from natural gas.

(f) Frasch-process mines.

(g) Other mines.

(h) Mainly recovered from pyrites.

(i) Sulphur recovered from pyrites or other sulphide ores.

PRODUCTION OF SULPHUR (cont.)

Long tons

Producing Country and Description	Estimated Sulphur Content						
	1963	1964	1965	1966	1967	1968	1968
<b>OTHER COUNTRIES (cont.)</b>							
United States (cont.)—							
By-product sulphur (f) ..	949,567	1,024,649	1,219,312	1,243,960	1,270,289	1,358,926	1,353,692
Hydrogen sulphide and liquid sulphur dioxide (g)	136,509	143,689	162,668	161,962	157,262	247,297	210,780
Argentina—							
Refined sulphur ..	22,141	21,955	23,391	29,942	32,278	33,107	33,107
Bolivia (f)—							
Refined sulphur ..	9,793	10,635	9,305	56,554	49,513	34,869	34,869
Chile—							
Smelter gases, etc. (g)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11,931
Refined sulphur ..	40,271	40,496	77,720	36,694	44,988	40,705	40,705
Colombia—							
Refined sulphur ..	13,000	11,942	18,114	20,649	24,000	28,000	28,000
Ecuador—							
Native sulphur ..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
China (g)—							
Native sulphur ..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	118,000
Recovered sulphur (d) ..	130,000	128,000	128,000	128,000	128,000	128,000	128,000
Formosa—							
Refined sulphur ..	7,945	9,170	6,772	6,860	6,387	4,362	4,362
Indonesia—							
Native sulphur ..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Iran—							
Native sulphur ..	(h)10,500	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
By-product sulphur (a)(c)	20,000	20,000	20,000	25,000	25,000	25,000	25,000
Japan—							
Refined sulphur (e)	219,094	237,412	210,000	225,000	250,000	256,000	256,000
By-product sulphur (a) ..	11,429	18,499	35,988	52,187	61,201	73,000	73,000
Philippine Republic (b) ..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	41
Turkey—							
Refined sulphur ..	19,123	21,800	23,000	22,300	25,000	24,000	24,000

Sulphur is also produced in Iraq.

- (a) Recovered from petroleum refineries.
- (b) Including sulphur recovered from gold and silver mines.
- (c) United States Bureau of Mines' estimate.
- (d) Probably recovered from pyrites.

(e) From sulphur rock and sulphide ores.

(f) Exports.

(g) Sulphur contained in sulphuric acid.

(h) Year ended March 20 of year following that stated.

(i) Produced in treatment of industrial gases.

EXPORTS OF SULPHUR

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	2,045	2,162	1,950	1,484	1,851	<i>n.a.</i>
Canada .. .. .	732,972	1,155,881	1,337,453	1,249,193	1,583,635	1,884,942
Singapore—						
Crude .. .. .	45	27	24	38	2,081	4,355
Refined .. .. .	140	182	193	161	805	372
Australia—						
Zinc concentrates						
( <i>S content</i> ) (a) .. .. .	66,000	57,000	54,000	58,000	74,000	80,000
New Zealand (b) .. .. .	1	5	—	2	2	1
<b>OTHER COUNTRIES</b>						
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Crude .. .. .	422	283	371	—	2,057	3
Refined .. .. .	7,674	7,438	6,658	9,298	8,030	3,977
<b>France—</b>						
Crude .. .. .	993,977	1,017,792	898,815	868,030	1,012,571	1,039,387
Unrefined ground .. .. .	2,413	1,638	2,316	2,127	4,309	2,822
Refined lump .. .. .	492	504	736	735	2,035	1,380
Flowers of sulphur .. .. .	6,527	8,274	8,797	7,697	3,076	2,708
Precipitated sulphur .. .. .	38	—	28	5	2	8
Germany (Federal) .. .. .	24,751	25,700	26,674	66,467	72,961	45,173
Germany (East) .. .. .	20,316	11,702	5,914	7,905	11,399	<i>n.a.</i>
Greece .. .. .	4,390	6,052	14,377	20,359	7,674	22,771
<b>Italy—</b>						
Crude .. .. .	75	3	—	20	49	24
Refined .. .. .	7,461	4,303	2,131	1,415	2,102	2,900
Flowers of sulphur .. .. .	436	286	259	305	326	} 297
Precipitated sulphur .. .. .	21	3	37	13	7	
<b>Netherlands—</b>						
Crude .. .. .	6,833	4,388	3,002	1	2,480	617
Refined .. .. .	6	37	3	49	25	205
Norway .. .. .	7,287	425	—	2,053	—	—
Poland .. .. .	122,337	148,152	237,202	267,435	<i>n.a.</i>	<i>n.a.</i>
Portugal .. .. .	28	152	637	933	2,060	456
<b>Spain—</b>						
Refined .. .. .	487	271	398	343	245	244
Sweden .. .. .	187	189	331	89	24	18
Switzerland .. .. .	—	—	—	294	224	203
U.S.S.R. .. .. .	102,100	144,800	151,800	216,000	277,153	286,600
South Africa .. .. .	—	115	449	127	4,992	<i>n.a.</i>
Mexico .. .. .	1,482,983	1,811,600	1,515,513	496,156	1,611,394	1,400,000
<b>United States—</b>						
Crude .. .. .	1,603,438	1,920,392	2,624,052	2,326,103	2,042,079	1,549,047
Refined and flowers of sulphur .. .. .	9,199	7,700	27,683	47,339	149,825	52,786
Bolivia .. .. .	9,793	10,635	9,305	57,334	49,514	34,869
Chile .. .. .	—	246	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Japan .. .. .	133	154	188	5,717	1,947	25,635
Turkey .. .. .	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	4,114	<i>n.a.</i>	<i>n.a.</i>

(a) Estimated amount recoverable.

(b) Years ended June 30 of that stated.

## IMPORTS OF SULPHUR

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Sulphur .. .. .	543,047	709,651	786,079	753,896	701,040	} 769,029
Wastes and residues .. .. .	12,751	—	9,448	459	15,360	
Malta—						
Crude .. .. .	—	2	31	2	20	7
Flowers of sulphur .. .. .	<i>n.a.</i>	<i>n.a.</i>	241	124	233	299
	(£12,347)	(£13,531)	(£9,128)	(£7,093)	(£11,599)	(£14,219)
Kenya .. .. .	365	1,388	1,450	1,419	270	511
Mauritius .. .. .	39	1	104	111	83	69
Nigeria .. .. .	—	17	190	74	1,290	253
Rhodesia (a) .. .. .	118	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tanzania .. .. .	272	239	266	550	270	407
Uganda .. .. .	1,699	1,539	5,815	5,894	2,746	1,589
Zambia—						
Crude .. .. .	<i>n.a.</i>	<i>n.a.</i>	4,987	3,021	2,836	3,950
Flowers of sulphur .. .. .	<i>n.a.</i>	<i>n.a.</i>	34	21	23	2,261
Canada .. .. .	134,497	133,542	144,822	129,879	111,412	67,692
Jamaica .. .. .	1,103	1,004	1,006	1,009	3,477	1,303
Trinidad and Tobago .. .. .	11,130	16,415	17,132	16,963	14,471	44,080
Guyana .. .. .	<i>n.a.</i>	5	5	6	3	4
Ceylon .. .. .	4,055	2,562	1,907	2,056	1,631	452
Cyprus .. .. .	1,828	1,486	1,833	1,992	1,467	2,397
Hong Kong .. .. .	1,511	422	376	709	1,605	1,540
India .. .. .	256,896	237,352	278,774	283,048	583,281	384,154
Malaysia (West) .. .. .	<i>n.a.</i>	<i>n.a.</i>	5,063	5,372	4,061	5,754
Pakistan .. .. .	4,766	16,948	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Singapore—						
Crude .. .. .	13	1,002	59	2,000	—	—
Refined .. .. .	233	184	1,343	1,346	782	7,769
Australia .. .. .	222,527	376,639	387,868	434,045	513,962	548,563
New Zealand (b) .. .. .	108,717	174,202	204,846	211,548	187,626	<i>n.a.</i>
Irish Republic .. .. .	46,845	53,798	52,532	85,288	97,851	102,495
<b>OTHER COUNTRIES</b>						
Austria .. .. .	84,906	88,731	112,218	80,778	87,776	82,564
Belgium-Luxemburg						
E.U.—						
Crude .. .. .	176,660	210,204	269,824	215,218	220,373	283,592
Refined .. .. .	330	510	403	528	371	525
Czechoslovakia .. .. .	171,000	186,000	222,000	234,000	233,000	<i>n.a.</i>
Denmark .. .. .	12,337	10,791	13,612	10,318	6,595	5,900
Finland .. .. .	58,589	66,329	71,245	76,622	50,426	33,703
France—						
Crude .. .. .	112,824	210,593	259,615	222,468	231,002	329,303
Unrefined ground .. .. .	118	156	119	59	120	710
Refined lump .. .. .	264	618	255	317	265	314
Precipitated .. .. .	38	77	58	39	95	129
Germany (Federal) .. .. .	288,081	398,384	478,168	366,008	319,482	247,575
Greece .. .. .	20,461	45,712	47,302	58,017	76,252	98,876
Hungary .. .. .	124,693	162,992	156,000	149,000	165,347	242,601
Italy .. .. .	156	60,777	72,268	84,400	75,996	39,900
Netherlands—						
Crude .. .. .	133,317	163,227	212,939	196,318	275,705	327,508
Refined .. .. .	1,446	1,570	1,642	1,796	1,687	2,325
Norway .. .. .	35,009	45,966	57,097	40,958	37,298	25,859
Poland .. .. .	26,700	19,200	6,889	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Portugal .. .. .	31,597	37,552	53,863	33,732	18,517	20,481
Spain .. .. .	19,536	39,054	35,483	37,659	63,204	53,147

(a) Figure for 1963 relates to Rhodesia and Nyasaland.

(b) Years ended June 30 of that stated.

## IMPORTS OF SULPHUR (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES (cont.)</b>						
Sweden .. .. .	84,615	126,086	157,226	176,210	121,921	146,576
Switzerland—						
Crude and ground	63,600	52,111	79,912	54,414	41,446	34,684
Flowers of sulphur	187	216	251	239	184	331
U.S.S.R. .. .. .	83,800	143,500	24,800	26,900	45,766	9,252
Yugoslavia .. .. .	12,473	18,187	15,468	14,566	21,364	20,325
Angola .. .. .	236	485	397	560	460	519
Canary Islands—						
Crude .. .. .						
Refined, etc. .. .. .	687	1,257	923	7,483	6,291	7,706
Egypt .. .. .	17,935	5,977	5,028	15,960	<i>n.a.</i>	<i>n.a.</i>
Malagasy Republic	18	29	22	20	22	15
Morocco—						
Crude .. .. .	2,894	4,581	9,851	9,981	5,945	12,376
Unrefined, ground	984	966	843	644	563	380
Refined .. .. .	156	92	117	101	140	120
Flowers of sulphur	2,872	3,492	2,632	3,023	1,604	1,709
Precipitated .. .. .	24	46	34	—	—	—
Mozambique .. .. .	482	583	425	659	<i>n.a.</i>	<i>n.a.</i>
South Africa .. .. .	122,151	142,110	191,008	181,838	197,260	217,845
Tunisia—						
Crude and unrefined	9,637	21,152	72,997	126,913	122,195	145,000
Refined and flowers of sulphur	1,019	203	886	1,280	788	<i>n.a.</i>
Costa Rica .. .. .	132	40	<i>n.a.</i>	59	15	36
Cuba .. .. .	45,061	50,434	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Guatemala .. .. .	35	2	—	98	14	13
Mexico .. .. .	151	340	422	244	240	106
Netherlands Antilles	3,407	1,959	—	—	—	—
Nicaragua .. .. .	6,724	275	50	308	55	142
Salvador .. .. .	3,420	43	39	5,444	6,181	3
United States .. .. .	1,813,338	1,462,211	1,465,093	1,514,032	1,474,182	1,571,542
Argentina—						
Crude .. .. .	13,674	44,310	44,367	34,829	20,606	22,025
Refined and flowers of sulphur	80	165	169	150	91	87
Bolivia .. .. .	58	<i>n.a.</i>	4	18	46	<i>n.a.</i>
Brazil—						
Crude .. .. .	173,814	138,577	189,299	164,331	199,631	234,177
Refined .. .. .	—	—	558	524	2,135	3,496
Precipitated .. .. .	35	23	3	12	5	7
Chile .. .. .	7,759	5,794	22,408	<i>n.a.</i>	31,977	<i>n.a.</i>
Colombia .. .. .	3,346	1,537	3,138	64	1,059	40
Ecuador .. .. .	87	134	148	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru .. .. .	12,745	12,062	15,757	13,043	13,941	<i>n.a.</i>
Uruguay .. .. .	<i>n.a.</i>	<i>n.a.</i>	8,441	9,291	10,059	<i>n.a.</i>
Venezuela .. .. .	10,284	22,381	33,325	3,451	26,447	42,282
Burma .. .. .	402	513	1,234	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Formosa .. .. .	39,775	86,535	116,788	68,210	163,275	<i>n.a.</i>
Iran (a) .. .. .	6,517	269	146	3,717	379	689
Iraq .. .. .	2,402	1,344	<i>n.a.</i>	56	5,134	<i>n.a.</i>
Israel .. .. .	49,449	69,057	47,941	55,538	72,268	68,945
Japan .. .. .	13,588	24,227	53,119	9,630	31	8
Jordan .. .. .	2,787	2,319	1,169	2,050	1,765	775
Korea (South) .. .. .	1,453	89	6,365	21,693	28,141	<i>n.a.</i>
Lebanon .. .. .	9,586	2,375	25,567	10,019	12,871	<i>n.a.</i>
Philippine Republic	3,905	5,438	18,954	<i>n.a.</i>	5,976	<i>n.a.</i>
Syria .. .. .	558	1,363	51	2,041	59	212
Thailand .. .. .	6,644	9,288	5,128	10,998	8,272	15,009
Turkey .. .. .	245	207	98	103	591	9,973

(a) Years ended March 20 of year following that stated.

**TALC**  
**PRODUCTION OF TALC**  
(Including Steatite and Pyrophyllite)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. ..	7,976	10,155	9,977	8,978	8,968	11,345
Rhodesia .. ..	19	14	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Swaziland—						
Pyrophyllite .. ..	2,725	1,964	905	1,426	589	573
Canada (c) .. ..	48,437	51,904	47,176	62,629	54,165	69,018
India—						
Steatite .. ..	119,069	131,706	154,000	145,000	127,900	163,000
Pyrophyllite .. ..	<i>n.a.</i>	5,975	11,641	8,163	4,856	5,497
Pakistan (f) .. ..	1,840	2,519	2,799	3,231	2,607	2,576
Australia—						
Talc .. ..	13,106	15,695	19,719	17,327	17,779	38,681
Pyrophyllite .. ..	837	381	—	—	—	—
<b>OTHER COUNTRIES</b>						
Austria .. ..	64,607	70,737	74,703	75,098	76,505	83,219
Finland .. ..	6,649	5,900	6,900	5,000	2,500	3,000
France .. ..	155,624	202,156	236,493	220,537	213,920	207,000
Germany (Federal) .. ..	24,069	30,004	30,249	32,393	32,772	27,576
Greece .. ..	2,701	3,705	3,401	4,430	3,843	2,500
Italy .. ..	137,134	131,716	119,537	110,899	116,596	114,029
Norway .. ..	71,908	75,880	75,000	77,113	78,043	73,771
Portugal .. ..	531	787	699	709	138	1,437
Spain .. ..	27,069	26,384	27,378	28,596	<i>n.a.</i>	<i>n.a.</i>
Sweden .. ..	18,478	16,400	18,300	18,200	23,900	22,100
U.S.S.R. (a) .. ..	345,000	345,000	350,000	350,000	364,000	364,000
Egypt .. ..	4,714	16,555	39,002	29,170	<i>n.a.</i>	<i>n.a.</i>
South Africa (b) .. ..	6,755	6,512	9,096	8,509	8,992	8,909
Mexico .. ..	(a) 4,000	772	3,333	2,471	2,872	631
United States—						
Talc .. ..	602,982	673,072	657,687	687,324	700,942	738,962
Pyrophyllite .. ..	115,195	121,525	112,737	111,787	104,872	116,629
Argentina .. ..	27,618	24,022	24,693	29,378	24,996	<i>n.a.</i>
Brazil .. ..	34,364	47,355	56,738	28,412	28,895	<i>n.a.</i>
Chile .. ..	2,541	2,716	1,465	2,233	2,836	2,769
Colombia .. ..	650	718	400	1,176	1,176	1,328
Paraguay .. ..	—	46	138	59	71	74
Peru—						
Talc .. ..	169	<i>n.a.</i>	<i>n.a.</i>	} 3,774	4,398	<i>n.a.</i>
Pyrophyllite .. ..	2,394	3,535	4,126			
Uruguay .. ..	1,688	2,090	2,337	2,094	2,596	2,173
China (a) .. ..	150,000	150,000	150,000	150,000	150,000	150,000
Formosa .. ..	14,553	16,713	14,988	28,298	40,662	28,595
Japan—						
Talc .. ..	66,976	95,962	91,724	103,054	127,772	141,726
Pyrophyllite .. ..	r 776,539	r 941,886	r 900,549	988,143	1,220,811	1,520,599
Korea (South)—						
Talc .. ..	31,880	43,207	35,168	52,763	55,391	} 147,046
Pyrophyllite .. ..	31,309	45,429	48,141	53,826	65,540	
Korea (North) (a) .. ..	29,000	39,000	49,000	49,000	49,000	59,000
Philippine Republic .. ..	93	96	584	627	437	858
<b>TOTAL*</b> .. ..	<b>2,950,000</b>	<b>3,370,000</b>	<b>3,390,000</b>	<b>3,470,000</b>	<b>3,770,000</b>	<b>4,230,000</b>

\*Excluding talc known to have been produced in Roumania.

(a) United States Bureau of Mines' estimate.

(b) In addition the following amounts of wonderstone were produced (long tons):  
1963—1,826; 1964—1,677; 1965—3,569; 1966—6,172; 1967—4,546; 1968—5,013.

(c) Shipments. (d) Estimated. (e) Years ended March 20 of year following that stated.

(f) West Pakistan.

EXPORTS OF TALC

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada .. .. .	(a) 2,000	(a) 2,300	(a) 3,100	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
India .. .. .	14,015	11,771	10,376	10,240	10,107	13,378
Malaysia (West) .. .. .	<i>n.a.</i>	<i>n.a.</i>	14	20	46	10
Singapore .. .. .	876	877	335	458	692	901
Australia .. .. .	4,025	5,181	6,778	7,634	8,648	24,982
<b>OTHER COUNTRIES</b>						
Austria .. .. .	50,803	54,915	59,535	59,601	60,772	71,710
Belgium-Luxemburg						
E.U. .. .. .	37	91	30	1,487	8,351	11,564
France .. .. .	48,840	50,468	50,372	43,414	44,280	43,677
Germany (Federal) .. .. .	1,187	1,196	1,201	1,128	1,515	3,989
Greece .. .. .	194	30	173	192	84	<i>n.a.</i>
Italy .. .. .	46,428	42,963	42,384	38,827	31,851	39,963
Netherlands .. .. .	159	144	344	207	140	172
Norway .. .. .	65,508	73,581	68,480	73,621	74,907	71,798
Portugal .. .. .	6	87	12	33	83	42
Sweden .. .. .	1,435	4,131	5,001	3,978	3,762	4,641
Switzerland .. .. .	1,507	1,256	1,256	527	1,707	2,027
Egypt .. .. .	1,012	1,619	1,280	1,235	1,213	1,676
South Africa .. .. .	<i>n.a.</i>	632	167	347	274	184
Mexico .. .. .	2	6	40	18	40	24
United States .. .. .	50,431	66,070	62,140	62,837	59,103	58,614
Japan .. .. .	2,975	629	4,760	982	752	881
Korea (South)—						
Talc .. .. .	17,293	26,482	19,120	40,436	56,948	<i>n.a.</i>
Turkey .. .. .	<i>n.a.</i>	20	1	46	16	50

(a) Estimated.



## IMPORTS OF TALC

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom	44,131	47,832	45,301	47,714	50,149	49,664
Canada .. .. .	24,589	28,212	24,873	22,248	23,645	25,218
Ceylon .. .. .	1,885	1,007	1,302	1,153	1,633	1,143
Hong Kong .. .. .	—	645	1,009	1,181	1,371	1,412
Malaysia (West) .. .. .	<i>n.a.</i>	<i>n.a.</i>	1,890	1,483	2,326	2,856
Singapore .. .. .	3,612	2,961	1,759	1,359	2,982	4,409
Australia (a) .. .. .	3,155	2,631	2,340	(c) 1,897	(c) 2,228	(c) 2,048
New Zealand (a) .. .. .	1,254	1,315	1,311	1,750	1,392	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
Austria .. .. .	1,100	883	1,769	1,469	1,204	1,691
Belgium-Luxemburg .. .. .						
E.U. .. .. .	15,829	16,690	15,986	35,562	26,401	29,191
Denmark .. .. .	10,904	12,966	13,072	13,539	13,839	14,150
Finland .. .. .	2,542	3,766	4,392	4,915	4,841	4,312
France .. .. .	8,543	7,635	6,784	7,549	8,522	9,502
Germany (Federal) .. .. .	49,264	59,769	68,212	67,349	60,330	76,565
Greece .. .. .	61	405	68	179	174	237
Italy .. .. .	12,971	12,115	11,098	12,305	14,196	15,628
Netherlands .. .. .	13,430	13,498	14,032	14,272	14,457	15,023
Norway .. .. .	3,621	3,037	4,009	4,812	4,339	5,922
Poland .. .. .	8,600	10,200	17,801	14,500	10,109	17,270
Portugal .. .. .	1,358	1,912	1,911	1,895	2,279	2,600
Spain .. .. .	1,290	858	2,150	2,481	2,408	2,484
Sweden .. .. .	12,867	14,457	16,487	18,329	18,328	18,622
Switzerland .. .. .	15,186	13,098	13,652	12,535	12,537	12,166
U.S.S.R. .. .. .	59,000	71,500	66,400	59,300	56,297	49,998
Yugoslavia .. .. .	670	6,602	9,733	1,578	658	690
Malagasy Republic .. .. .	3	8	27	76	31	58
Morocco .. .. .	1,865	1,450	1,217	1,592	774	1,184
South Africa .. .. .	<i>n.a.</i>	1,016	742	1,198	1,663	2,960
Tunisia .. .. .	688	619	332	344	434	<i>n.a.</i>
Costa Rica .. .. .	133	103	137	116	201	262
Cuba .. .. .	3,089	3,287	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Guatemala .. .. .	114	116	174	114	232	160
Honduras .. .. .	25	17	34	52	45	71
Mexico—						
Talc .. .. .	31,122	39,361	34,215	46,520	32,423	52,010
Pyrophyllite .. .. .	60	89	148	81	120	<i>n.a.</i>
Salvador .. .. .	53	98	74	124	133	144
United States .. .. .	22,929	20,284	18,770	19,561	15,118	21,708
Argentina .. .. .	70	190	148	227	499	141
Brazil .. .. .	—	—	—	—	30	102
Chile .. .. .	274	57	258	<i>n.a.</i>	200	<i>n.a.</i>
Colombia .. .. .	991	981	971	931	947	523
Ecuador .. .. .	164	169	173	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru .. .. .	602	732	955	795	917	<i>n.a.</i>
Venezuela .. .. .	1,914	2,733	2,954	2,936	3,383	5,712
Iran (b) .. .. .	377	125	138	108	248	425
Iraq .. .. .	325	324	<i>n.a.</i>	666	334	<i>n.a.</i>
Japan .. .. .	45,722	59,798	52,828	75,739	93,313	125,480
Lebanon .. .. .	218	217	226	167	287	<i>n.a.</i>
Philippine Republic .. .. .	2,684	2,531	2,610	<i>n.a.</i>	2,794	<i>n.a.</i>
Syria .. .. .	44	581	485	767	167	285
Thailand .. .. .	1,161	1,747	1,813	1,977	2,009	2,128
Turkey .. .. .	279	93	217	71	137	117

(a) Years ended June 30 of that stated.

(b) Years ended March 20 of year following that stated.

(c) Owing to reclassification not strictly comparable with earlier years.

**TANTALUM AND NIOBIUM MINERALS**  
**PRODUCTION OF TANTALUM AND NIOBIUM MINERALS**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Nigeria—						
Tantalite .. ..	13	10	13	65	18	27
Columbite .. ..	2,011	2,339	2,548	2,221	1,919	1,150
Rhodesia—						
Tantalum concentrates	67	63	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Uganda—						
Tantalite and columbite	9	7	10	12	28	27
Canada—						
Niobium concentrates ( <i>Nb<sub>2</sub>O<sub>5</sub> content</i> ) .. ..	622	966	1,042	1,178	985	946
Malaysia (West)—						
Columbite .. ..	88	56	46	67	87	51
Australia—						
Tantalite and columbite	14	15	11	5	36	106
<b>OTHER COUNTRIES</b>						
Norway—						
Niobium concentrates( <i>b</i> )	377	320	148	—	—	—
Portugal—						
Tantalite and columbite	10	5	5	10	14	12
Congo Republic—						
Tantalite and columbite concentrates ( <i>d</i> ) .. ..	115	<i>n.a.</i>	<i>n.a.</i>	94	144	112
Ivory Coast—						
Tantalite and columbite	1	1	1	—	—	1
Malagasy Republic—						
Columbite .. ..	17	4	4	1	—	—
Mozambique—						
Tantalite-columbite .. ..	79	43	51	64	92	57
Microlite .. ..	71	139	84	78	69	91
Rwanda and Burundi—						
Tantalite and columbite concentrates ( <i>d</i> ) .. ..	12	154	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Tantalite-columbite .. ..	29	6	3	2	4	18
South West Africa—						
Tantalum and niobium concentrates .. ..	2	1	1	1	—	<i>n.a.</i>
Argentina ( <i>a</i> )—						
Tantalite .. ..	2	—	—	4	1	3
Brazil—						
Tantalite-columbite	129	24	12	4	55	<i>n.a.</i>
Pyrochlore concentrates	—	318	1,177	4,700	4,543	4,920
French Guiana—						
Tantalite and columbite	2	1	—	1	—	—
<b>TOTAL (<i>c</i>) ..</b>	<b>4,320</b>	<b>5,500</b>	<b>6,300</b>	<b>9,500</b>	<b>8,900</b>	<b>7,800</b>

Small quantities of tantalite and columbite have been produced in Zambia, India and the Somali Republic.

(*a*) Imports into the United States.

(*b*) 56.2%  $Nb_2O_5$  in 1963; 53.7%  $Nb_2O_5$  in 1964; 56%  $Nb_2O_5$  in 1965.

(*c*) Total of tantalum and niobium concentrates produced in the countries listed above.

(*d*) Including tantalite-columbite content of tin-tantalite-columbite.

(*e*) 25%  $Nb_2O_5$ .

## EXPORTS OF TANTALUM AND NIOBIUM MINERALS, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ferro-niobium and ferro-niobium-tantalum ..	173	153	212	196	175	152
Nigeria—						
Tantalite .. ..	20	11	8	11	15	16
Columbite .. ..	1,599	3,132	2,776	2,325	2,085	1,349
Rhodesia (d)—						
Tantalum concentrates	87	74	17	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Uganda—						
Tantalite and columbite	6	6	15	12	14	7
Malaysia (West)—						
Columbite .. ..	65	6	52	82	57	53
Australia (a)—						
Tantalite and columbite	12	20	47	7	27	54
<b>OTHER COUNTRIES</b>						
Germany (Federal)—						
Tantalum metal, etc. ..	(13,200lb.)	(9,500lb.)	(11,500lb.)	(21,400lb.)	(29,900lb.)	(13,600lb.)
Niobium metal, etc. ..	(1,000lb.)	(1,500lb.)	(12,500lb.)	(2,900lb.)	(3,700lb.)	(4,700lb.)
Portugal—						
Tantalite and columbite	31	25	20	29	25	9
Norway—						
Niobium concentrates ..	281	308	165	—	—	—
Congo Republic (c)—						
Tantalite and columbite <sup>b</sup>	100	50	60	60	60	150
Malagasy Republic—						
Columbite .. ..	26	16	3	1	—	<i>n.a.</i>
Mozambique—						
Columbite .. ..	136	203	74	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Tantalite .. ..	21	—	6	11	4	14
South West Africa—						
Tantalite .. ..	1	—	1	—	<i>n.a.</i>	<i>n.a.</i>
United States—						
Tantalum concentrates	25	89	127	73	34	29
Niobium concentrates	21	153	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tantalum metal, etc. ..	(44,390lb.)	(32,489lb.)	(35,821lb.)	(21,722lb.)	(48,790lb.)	(98,205lb.)
Niobium metal, etc. ..	(14,276lb.)	(4,674lb.)	(4,217lb.)	(4,101lb.)	<i>n.a.</i>	<i>n.a.</i>
Tantalum powder ..	(14,146lb.)	(32,217lb.)	(9,621lb.)	(51,354lb.)	(157,325lb.)	(83,713lb.)
Brazil—						
Tantalite .. ..	103	81	163	157	202	267
Columbite .. ..	19	11	39	58	100	62
Pyrochlore concentrates	753	67	1,313	3,736	2,682	2,900

(a) Years ended June 30 of that stated.

(b) Estimated.

(c) Including Rwanda and Burundi.

(d) Figure for 1963 relates to Rhodesia and Nyasaland.

IMPORTS OF TANTALUM AND NIOBIUM MINERALS, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Tantalum and niobium ores and concentrates ..	745	1,439	1,635	1,558	1,053	1,054
Tantalum metal ..	(8,394lb.)	(10,940lb.)	(12,353lb.)	(33,040lb.)	(46,411lb.)	(70,135lb.)
<b>OTHER COUNTRIES</b>						
France—						
Tantalum and niobium minerals ..	71	148	136	422	376	551
Germany (Federal)—						
Tantalum and niobium minerals ..						
Tantalum metal, etc. ..	(b) 650	n.a.	1,440	1,383	1,003	1,649
	(6,600lb.)	(11,500lb.)	(26,000lb.)	(40,100lb.)	(19,740lb.)	(58,530lb.)
United States—						
Tantalum concentrates	422	438	534	957	748	549
Niobium concentrates ..	2,628	2,054	2,184	4,142	3,318	1,632
Tantalum metal ..	(1,597lb.)	(3,491lb.)	(26,162lb.)	(47,748lb.)	(54,887lb.)	(17,863lb.)
Niobium metal (a) ..	(1,427lb.)	(3,792lb.)	(9,817lb.)	(4,431lb.)	—	(108lb.)
Japan—						
Niobium minerals ..	76	300	279	553	465	773
Tantalum ores and concentrates ..	n.a.	n.a.	n.a.	6,891	1,089	122
Tantalum metal ..	(13,065lb.)	(261,903lb.)	(302,884lb.)	(8,682lb.)	(241,677lb.)	(30,896lb.)

(a) As recorded in official trade returns. According to U.S. Bureau of Mines includes ferro-alloy.

(b) Estimated.

**TIN**  
**PRODUCTION OF TIN ORE**  
*(Metal content)*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom ..	1,286	1,254	1,263	1,284	1,436	1,642
Nigeria .. ..	8,725	8,721	9,535	9,299	9,340	9,649
Rhodesia .. ..	525	536	(a) 510	(a) 600	(a) 600	(a) 600
Swaziland .. ..	4	2	2	—	—	—
Tanzania .. ..	242	283	255	346	353	323
Uganda .. .. .	165	217	178	120	104	169
Zambia .. .. .	1	9	16	3	—	—
Canada (b) .. .	414	157	168	317	195	150
Malaysia (West) ..	59,948	60,004	63,669	68,886	72,121	75,069
Australia .. ..	2,860	3,642	3,849	4,807	5,586	6,734
<b>TOTAL .. .. .</b>	<b>74,170</b>	<b>74,825</b>	<b>79,400</b>	<b>85,600</b>	<b>89,400</b>	<b>94,300</b>
<b>OTHER COUNTRIES</b>						
France .. .. .	272	486	447	421	447	370
Germany (Eastern) (g) ..	1,000	1,000	1,000	1,000	1,000	1,000
Portugal .. .. .	718	676	557	600	645	668
Spain .. .. .	158	90	111	199	108	118
Cameroun .. .. .	25	39	38	42	33	33
Congo Republic .. .	6,883	5,108	6,324	5,100	4,664	6,470
Congo (Republic of) ..	43	35	44	44	53	26
Morocco .. .. .	9	14	15	(a) 12	(a) 12	(a) 12
Niger .. .. .	55	51	54	57	56	71
Rwanda and Burundi ..	1,271	1,445	1,520	1,382	(a) 1,422	(a) 1,420
South Africa .. ..	1,530	1,586	1,671	1,745	1,763	1,837
South West Africa .. .	443	474	416	687	(f) 720	(f) 700
Mexico .. .. .	1,055	1,206	503	789	588	518
United States .. ..	<i>n.a.</i>	65	47	97	50	<i>n.a.</i>
Argentina .. .. .	225	343	497	458	802	(g) 800
Bolivia (c) .. ..	22,499	22,960	23,828	25,825	27,283	29,101
Brazil .. .. .	1,153	729	1,673	1,475	1,599	1,700
Peru (e) .. .. .	21	36	49	37	78	94
Burma .. .. .	914	568	464	370	259	270
China (d) (f) .. .	28,000	25,000	25,000	22,000	20,000	20,000
Indonesia .. .. .	12,947	16,345	14,699	12,568	13,601	16,632
Japan .. .. .	857	796	838	970	1,166	943
Korea (South) .. ..	—	—	—	—	76	76
Laos .. .. .	326	338	284	335	548	482
Thailand .. .. .	15,585	15,597	19,048	22,565	22,490	23,601
<b>TOTAL* .. .. .</b>	<b>96,000</b>	<b>95,000</b>	<b>99,000</b>	<b>99,000</b>	<b>99,000</b>	<b>107,000</b>
<b>WORLD'S TOTAL*</b> ..	<b>170,000</b>	<b>170,000</b>	<b>178,000</b>	<b>185,000</b>	<b>188,000</b>	<b>201,000</b>

\*Excluding tin ore known to have been produced in Czechoslovakia, the U.S.S.R. and Vietnam.

- (a) International Tin Council estimate.
- (b) Tin in concentrates exported and in tin-lead alloy.
- (c) Content of ore plus metal exported.
- (d) Smelter.
- (e) Recoverable.
- (f) United States Bureau of Mines' estimate.
- (g) "Metallgesellschaft" estimate.

**SMELTER PRODUCTION OF TIN**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom .. .. .	17,444	16,849	16,494	17,499	23,317	24,933
Nigeria .. .. .	9,050	8,749	9,369	8,225	9,131	9,843
Rhodesia .. .. .	499	511	(b) 494	(b) 600	(b) 600	(b) 600
Malaysia (West) .. .. .	84,001	71,351	72,469	71,049	76,328	88,185
Australia .. .. .	2,626	3,021	3,179	3,640	3,594	3,692
<b>TOTAL .. .. .</b>	<b>113,620</b>	<b>100,481</b>	<b>102,000</b>	<b>101,000</b>	<b>113,000</b>	<b>127,000</b>
<b>OTHER COUNTRIES</b>						
Belgium .. .. .	8,280	6,804	5,227	6,472	6,070	5,881
Germany—						
Federal Republic .. .. .	1,052	1,178	1,427	1,362	1,622	1,504
Eastern (d) .. .. .	1,200	1,200	1,200	1,200	1,200	1,200
Netherlands .. .. .	5,762	15,858	18,114	12,551	13,739	7,983
Portugal .. .. .	663	589	603	556	592	638
Spain .. .. .	1,505	1,774	r 1,787	r 1,877	1,823	2,560
Congo Republic .. .. .	1,441	1,485	(b) 1,800	r 2,002	1,404	1,909
Morocco (b) .. .. .	10	10	12	12	12	12
South Africa .. .. .	937	1,016	962	822	658	682
Mexico .. .. .	1,055	1,145	459	795	607	317
United States .. .. .	(b) 1,500	(b) 3,900	3,098	3,825	3,048	3,453
Argentina (b) .. .. .	120	120	120	120	120	120
Bolivia (a) .. .. .	2,209	2,461	3,406	1,083	6,148	n.a.
Brazil .. .. .	2,051	1,478	1,545	1,211	1,415	1,251
China (c) .. .. .	28,000	25,000	25,000	22,000	20,000	20,000
Indonesia (b) .. .. .	2,000	1,800	1,800	1,510	1,481	4,560
Japan .. .. .	1,612	1,485	1,610	1,836	1,666	1,859
Thailand .. .. .	—	—	5,524	16,990	26,551	24,434
<b>TOTAL* .. .. .</b>	<b>59,000</b>	<b>67,000</b>	<b>73,000</b>	<b>77,000</b>	<b>83,000</b>	<b>79,000</b>
<b>WORLD'S TOTAL* .. .. .</b>	<b>173,000</b>	<b>168,000</b>	<b>175,000</b>	<b>178,000</b>	<b>196,000</b>	<b>207,000</b>

\*Excluding tin metal known to have been produced in Czechoslovakia and the U.S.S.R.

In addition secondary tin recovered in the United States (as metal, in alloys, and in chemical compounds) was as follows:

	Long tons			Long tons	
1963 .. .. .	22,332		1966 .. .. .	25,349	
1964 .. .. .	23,508		1967 .. .. .	22,667	
1965 .. .. .	25,076		1968 .. .. .	22,495	

(a) Exports.

(b) International Tin Council estimate.

(c) United States Bureau of Mines' estimate.

(d) "Metallgesellschaft" estimate.

## EXPORTS OF TIN, ETC.\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Unwrought .. ..	8,450	6,443	6,682	6,003	9,377	10,517
do. alloys .. ..	2,656	2,995	2,601	3,565	3,127	2,356
Semi-manufactures (a)	334	514	937	648	730	610
Nigeria—						
Ore and concentrates .. ..	160	25	9	634	9	1,151
Unwrought .. ..	9,673	10,557	10,575	11,495	10,813	11,280
Rhodesia (c)—						
Ore and concentrates .. ..	—	54	71	n.a.	n.a.	n.a.
Unwrought .. ..	463	473	399	n.a.	n.a.	n.a.
Tanzania—						
Ore and concentrates .. ..	341	361	351	487	378	385
Uganda—						
Ore and concentrates .. ..	230	320	294	204	183	291
Zambia—						
Ore and concentrates .. ..	n.a.	155	4	n.a.	n.a.	n.a.
Canada—						
Concentrates (Sn content) .. ..	800	329	216	337	326	118
Hong Kong—						
Scrap .. ..	10	—	19	1	6	2
Semi-manufactures	5	3	8	25	34	39
India (b)—						
Scrap .. ..	3	53	85	10	32	—
Malaysia (West)—						
Ore .. ..	n.a.	n.a.	798	1,254	1,176	957
Unwrought .. ..	n.a.	n.a.	73,287	71,410	73,528	86,017
Semi-manufactures (a)	n.a.	n.a.	182	39	41	27
Australia—						
Ore and concentrates .. ..						
(Sn content) .. ..	139	321	682	1,326	1,662	3,004
Unwrought .. ..	7	1	—	1	} 28	214
do. alloys .. ..	39	8	7	4		
New Zealand (d)—						
Scrap .. ..	5,336	4,926	4,746	7	2	6
<b>OTHER COUNTRIES</b>						
Austria—						
Unwrought (a) .. ..	38	55	41	26	17	23
Belgium-Luxemburg E.U.—						
Unwrought .. ..	6,319	4,506	3,896	4,215	3,739	4,246
do. alloys .. ..	60	68	215	89	81	—
Scrap .. ..	342	317	223	174	124	144
Semi-manufactures (a)	359	209	179	239	37	56
Denmark—						
Unwrought .. ..	53	44	54	67	37	148
do. alloys .. ..	653	729	608	760	1,032	876
Scrap .. ..	4	—	336	—	32	108
Semi-manufactures (a)	29	31	38	27	48	55
France—						
Ore .. ..	371	643	642	560	524	560
Unwrought .. ..	35	70	75	89	53	122
do. alloys .. ..	53	124	155	138	104	165
Semi-manufactures (a)	103	61	81	38	54	76

\*In these tables the description "unwrought" tin corresponds to item 687.1 in the Standard International Trade Classification (Revised) and comprises ingots, pigs, unwrought bars, sticks, etc. "Semi-manufactures" corresponds to S.I.T.C. (R) 687.2 and includes foil and powder as well as sheets, strip, wire, pipes, tubes, etc.

(a) Including alloys.

(b) Years ended March 31 following that stated.

(c) Figures for 1963 relate to Rhodesia and Nyasaland.

(d) Year ended June 30 of that stated.

## EXPORTS OF TIN, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Germany (Federal)—						
Ore .. .. .	81	81	66	59	46	43
Unwrought (a) .. .. .	1,365	1,478	1,581	1,632	1,994	1,512
Scrap .. .. .	111	59	78	30	81	47
Semi-manufactures (a) .. .. .	129	120	168	171	182	230
Italy—						
Unwrought (a) .. .. .	23	241	162	255	115	301
Semi-manufactures (a) .. .. .	9	6	7	8	11	12
Netherlands—						
Unwrought .. .. .	4,187	13,813	15,651	11,659	11,500	8,974
do. alloys .. .. .	666	605	313	232	407	341
Scrap (a) .. .. .	555	323	378	334	322	579
Semi-manufactures (a) .. .. .	260	367	288	362	257	341
Norway—						
Unwrought (a) .. .. .	234	292	239	238	238	256
Semi-manufactures (a) .. .. .	—	4	4	5	2	3
Portugal—						
Ore .. .. .	116	122	35	—	—	—
Unwrought .. .. .	203	375	204	89	350	270
Spain—						
Unwrought .. .. .	—	494	260	41	95	228
Sweden—						
Unwrought .. .. .	3	37	81	79	21	66
do. alloys .. .. .	121	96	74	65	49	131
Switzerland—						
Unwrought .. .. .	18	36	43	52	24	24
Scrap .. .. .	164	132	134	85	60	84
Semi-manufactures (a) .. .. .	35	23	26	29	39	57
U.S.S.R.—						
Unwrought .. .. .	700	—	7	7	6	—
Cameroun—						
Ore .. .. .	36	76	78	31	49	n.a.
Congo Republic (c)—						
Ore (b) .. .. .	9,710	5,970	5,370	7,120	6,130	7,199
Unwrought (b) .. .. .	1,033	1,160	1,250	1,870	1,280	1,828
Congo (Republic of)—						
Ore .. .. .	39	59	70	43	83	n.a.
Niger—						
Ore .. .. .	60	6	64	63	53	89
South Africa—						
Concentrates .. .. .	1,730	978	1,125	943	1,079	1,172
South West Africa—						
Ore and concentrates .. .. .	293	296	462	664	n.a.	n.a.
United States—						
Unwrought (a) .. .. .	1,544	2,726	2,606	1,866	2,050	3,813
Scrap (a) .. .. .	4,975	4,844	1,133	7,012	2,775	4,629
Semi-manufactures (a) .. .. .	887	1,049	221	221	182	499
Argentina—						
Ore .. .. .	47	70	16	3	—	81
Tin-silver ore .. .. .	1,384	1,749	2,190	3,219	4,117	4,568
Bolivia—						
Ores, concentrates, etc. (Sn content) .. .. .	20,290	20,499	20,422	24,742	19,793	28,883
Unwrought .. .. .	2,209	2,461	3,406	1,083	6,148	n.a.
Peru—						
Concentrates (Sn content) .. .. .	21	39	12	19	n.a.	n.a.
Unwrought (Sn content) .. .. .	6	—	77	33	n.a.	n.a.
Burma—						
Ore and concentrates (Sn content) .. .. .	1,467	720	301	124	60	107

(a) Including alloys.

(b) Estimated.

(c) Including Rwanda and Burundi.



EXPORTS OF TIN, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
China—						
Unwrought (b) .. ..	12,000	7,000	7,000	5,000	3,000	4,000
Indonesia—						
Ore .. ..	21,062	n.a.	n.a.	n.a.	n.a.	n.a.
<i>Sn content</i> .. ..	(b) 12,000	(b) 15,000	n.a.	n.a.	n.a.	n.a.
Japan—						
Unwrought .. ..	24	33	157	211	46	105
Semi-manufactures (a)	1,026	78	177	112	73	333
Laos—						
Ore ( <i>Sn content</i> ) ..	402	495	366	463	415	533
Thailand—						
Ore ( <i>Sn content</i> ) ..	15,428	15,666	10,758	454	—	—

(a) Including alloys.

(b) Estimated.

## IMPORTS OF TIN, ETC.\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Ore and concentrates ..	44,883	43,518	44,606	55,697	62,803	67,551
Unwrought (a) ..	7,742	8,685	9,128	9,893	8,199	9,445
Ghana—						
Unwrought (a) ..	6	7	19	—	6	8
Semi-manufactures (a) ..	138	164	51	184	138	99
Kenya—						
Unwrought (a) ..	203	43	72	77	30	70
Malawi—						
Unwrought ..	<i>n.a.</i>	<i>n.a.</i>	34	29	—	—
Semi-manufactures ..	<i>n.a.</i>	<i>n.a.</i>	—	17	1	<i>n.a.</i>
Mauritius—						
Unwrought (a) ..	5	5	2	3	5	4
Semi-manufactures (a) ..	8	17	5	3	13	4
Nigeria—						
Unwrought and semi-manufactures (a) ..	4	237	142	641	187	90
Rhodesia (d)—						
Unwrought and semi-manufactures (a) ..	132	78	76	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tanzania—						
Unwrought (a) ..	58	20	34	18	18	40
Uganda—						
Unwrought (a) ..	39	32	25	20	16	8
Zambia—						
Unwrought and semi-manufactures (a) ..	<i>n.a.</i>	41	53	69	64	43
Canada—						
Unwrought ..	4,193	4,849	4,993	4,254	4,548	4,301
Semi-manufactures ..	6	<i>n.a.</i>	26	9	15	16
Barbados—						
Unwrought (a) ..	3	2	5	4	102	3
Semi-manufactures (a) ..	195	284	227	300	334	341
Jamaica—						
Unwrought (a) ..	28	186	14	31	36	53
Semi-manufactures (a) ..	5	27	232	24	5	171
Trinidad and Tobago—						
Unwrought (a) ..	38	58	13	12	5	6
Semi-manufactures (a) ..	731	2,581	4,124	4,061	6,566	4,340
Guyana—						
Unwrought (a) ..	<i>n.a.</i>	16	15	23	17	18
Semi-manufactures (a) ..	<i>n.a.</i>	3	9	1	2	3
Ceylon—						
Unwrought ..	40	30	14	53	36	47
do. alloys ..	22	14	2	41	4	2
Semi-manufactures (a) ..	3,900	4,346	2,211	2,985	3,592	3,381
Cyprus—						
Unwrought (a) ..	9	8	6	—	—	—
Hong Kong—						
Unwrought (a) ..	108	14	94	51	89	81
Scrap ..	8	4	3	3	2	—
Semi-manufactures (a) ..	(b) 3	—	(b) 10	(b) 9	(b) 3	5
India—						
Unwrought ..	4,403	5,043	4,657	5,695	6,961	4,076
Semi-manufactures (a)(c) ..	172	114	122	54	26	22
Malaysia (West)—						
Ore ..	<i>n.a.</i>	<i>n.a.</i>	10,696	3,242	6,769	25,459
Unwrought (a) ..	<i>n.a.</i>	<i>n.a.</i>	167	203	55	70
Semi-manufactures (a) ..	<i>n.a.</i>	<i>n.a.</i>	50	59	195	87

\*See footnote on page 361 concerning the descriptions "unwrought" tin and "semi-manufactures" used in these tables.

(a) Including alloys.

(c) Years ended March 31 following that stated.

(b) Excess of re-exports.

(d) Figure for 1963 relates to Rhodesia and Nyasaland.

## IMPORTS OF TIN, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b> (cont.)						
Pakistan—						
Unwrought (a) ..	380	683	n.a.	n.a.	n.a.	n.a.
Sabah—						
Unwrought .. ..	253	7	12	12	11	12
Semi-manufactures ..	11	25	8	12	9	6
Australia—						
Unwrought .. ..	1,751	1,283	1,582	203	693	156
Semi-manufactures (b) ..	17	20	35	21	27	26
Fiji—						
Semi-manufactures (a)	192	311	308	274	179	284
Sarawak—						
Unwrought and semi-manufactures (a) ..	33	6	36	120	109	135
New Zealand (b)—						
Unwrought (a) ..	91	364	434	388	389	n.a.
Semi-manufactures (a)	72	15	(c) 2	16	20	n.a.
Irish Republic—						
Unwrought (a) ..	49	70	47	63	92	32
<b>OTHER COUNTRIES</b>						
Austria—						
Unwrought (a) ..	782	632	599	564	523	556
Semi-manufactures (a)	36	37	31	42	82	42
Belgium-Luxemburg						
E.U.—						
Ore .. ..	8,630	6,560	5,616	6,797	5,943	6,407
Unwrought .. ..	2,417	3,023	2,235	3,080	2,624	2,409
do. alloys .. ..	1,556	148	145	175	163	170
Scrap .. ..	45	15	1	23	17	8
Semi-manufactures (a)	117	130	152	191	104	138
Denmark—						
Unwrought .. ..	576	631	687	581	680	763
do. alloys .. ..	185	548	261	459	399	343
Scrap .. ..	279	124	70	93	311	254
Semi-manufactures (a)	111	108	96	94	93	77
Finland—						
Unwrought (a) ..	330	315	442	360	237	244
France—						
Unwrought .. ..	10,998	11,061	9,973	10,441	10,148	9,384
do. alloys .. ..	51	24	69	104	68	255
Scrap .. ..	87	81	40	38	31	111
Semi-manufactures (a)	26	53	115	38	38	57
Germany (Federal)—						
Ore .. ..	8,365	7,539	7,816	7,373	8,250	7,988
Unwrought (a) ..	11,597	13,608	13,492	12,941	12,162	16,883
Scrap (a) .. ..	358	212	388	196	175	186
Semi-manufactures (a)	21	19	34	18	7	33
Greece—						
Unwrought .. ..	241	265	240	258	215	311
Hungary—						
Unwrought .. ..	1,162	991	1,730	1,429	1,186	1,263
Iceland—						
Semi-manufactures (a)	14	12	15	14	12	13
Italy—						
Unwrought .. ..	5,168	4,795	5,101	5,686	5,810	6,898
do. alloys .. ..	718	412	321	224	196	170
Scrap .. ..	9	1	6	—	19	43
Semi-manufactures (a)	120	71	39	82	71	44

(a) Including alloys.

(b) Years ended June 30 of that stated.

(c) Excess of re-exports.

## IMPORTS OF TIN, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Netherlands—						
Ore .. .. .	7,804	28,782	24,022	15,880	19,768	11,461
Unwrought .. ..	2,954	1,227	879	3,184	5,053	4,221
do. alloys .. ..	129	275	309	483	890	428
Scrap (a) .. .. .	143	170	330	286	314	238
Semi-manufactures (a)	66	71	64	58	44	63
Norway—						
Unwrought .. ..	308	322	417	417	343	412
do. alloys .. ..	203	215	179	177	218	234
Semi-manufactures (a)	220	302	296	354	414	459
Poland—						
Unwrought .. ..	2,429	2,518	2,518	3,421	3,171	3,246
Portugal—						
Unwrought (a) .. ..	6	10	12	7	15	30
Semi-manufactures (a)	17	26	13	9	13	13
Spain—						
Ore .. .. .	2,779	3,168	2,397	3,094	2,066	2,502
Unwrought .. ..	74	29	24	163	38	43
Sweden—						
Unwrought .. ..	612	707	904	675	574	646
do. alloys .. ..	164	85	214	85	115	116
Semi-manufactures (a)	114	106	103	104	136	147
Switzerland—						
Unwrought .. ..	1,002	727	965	865	854	869
Semi-manufactures (a)	88	90	88	141	115	110
U.S.S.R.—						
Unwrought .. ..	7,700	5,400	5,700	4,700	5,600	6,980
Yugoslavia—						
Unwrought .. ..	2,151	1,373	1,224	1,378	1,792	1,385
Semi-manufactures (a)	23	19	13	35	29	60
Egypt—						
Unwrought and scrap..	442	662	1,567	1,285	438	467
Malagasy Republic—						
Semi-manufactures (a)	13	6	3	3	6	7
Morocco—						
Unwrought .. ..	298	250	199	135	232	247
Mozambique—						
Semi-manufactures ..	46	48	41	56	<i>n.a.</i>	<i>n.a.</i>
South Africa—						
Unwrought .. ..	794	562	440	386	318	384
Sudan—						
Unwrought and scrap..	22	38	22	1	59	1
Semi-manufactures ..	107	258	23	59	22	22
Tunisia—						
Unwrought (a) .. ..	15	18	28	22	28	36
Semi-manufactures (a)	11	66	10	9	13	<i>n.a.</i>
Mexico—						
Unwrought .. ..	525	347	548	482	80	811
United States—						
Ore ( <i>Sn</i> content) .. ..	1,473	8,743	4,326	4,372	3,255	3,266
Unwrought .. ..	43,151	31,582	40,816	41,624	49,923	57,358
do. alloys (b) .. ..	268	1,198	2,622	875	861	766
Scrap .. .. .	2,154	976	335	89	281	344
Argentina—						
Unwrought .. ..	1,189	1,476	1,319	1,467	845	1,078
Brazil—						
Ore .. .. .	2,942	923	1,184	234	1	30
Unwrought (a) .. ..	1	2	1	1	3	8
Colombia—						
Unwrought (a) .. ..	265	115	97	252	127	239
Semi-manufactures (a)	42	14	3	16	6	7

(a) Including alloys.

(b) Including alloyed scrap, dross and residues.

## IMPORTS OF TIN, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Chile—						
Unwrought .. ..	611	797	791	<i>n.a.</i>	862	<i>n.a.</i>
Peru—						
Unwrought (a) .. ..	136	100	229	182	193	<i>n.a.</i>
Uruguay—						
Unwrought .. ..	<i>n.a.</i>	<i>n.a.</i>	46	27	27	<i>n.a.</i>
Venezuela—						
Unwrought .. ..	191	147	125	124	133	103
Burma—						
Unwrought .. ..	5	44	1	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Semi-manufactures (a)	6	—	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Formosa—						
Unwrought (a) .. ..	185	102	227	381	324	<i>n.a.</i>
Iran (b)—						
Unwrought .. ..	276	216	239	236	277	225
Iraq—						
Unwrought .. ..	123	29	<i>n.a.</i>	32	51	<i>n.a.</i>
Semi-manufactures .. ..	65	32	<i>n.a.</i>	63	94	<i>n.a.</i>
Israel—						
Unwrought .. ..	101	149	120	126	126	146
Japan—						
Ore and concentrates .. ..	1,509	2,811	762	1,687	594	1,102
Unwrought .. ..	14,357	16,026	14,619	16,838	19,300	20,273
Jordan—						
Semi-manufactures .. ..	33	18	16	31	<i>n.a.</i>	18
Korea (South)—						
Unwrought and semi-manufactures .. ..	215	261	125	214	201	<i>n.a.</i>
Lebanon—						
Unwrought .. ..	10	7	16	14	18	<i>n.a.</i>
Philippine Republic—						
Unwrought (a) .. ..	597	4,530	591	600	700	<i>n.a.</i>
Southern Yemen						
Semi-manufactures (a)	1,098	1,693	873	710	141	415
Syria—						
Unwrought and scrap .. ..	60	84	82	80	54	130
Turkey—						
Unwrought (a) .. ..	486	844	905	1,060	867	1,089
Semi-manufactures (a)	15	7	3	2	—	3

(a) Including alloys.

(b) Years ended March 20 of year following that stated.

**TITANIUM MINERALS**  
**PRODUCTION OF TITANIUM MINERALS**

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Sierra Leone—						
Rutile concentrates ..	(a) 100	—	—	—	18,918	5,629
Canada (shipments) (b)—						
Ilmenite.. ..	817,286	1,239,520	1,177,145	1,129,181	1,287,712	1,424,552
Ceylon—						
Ilmenite.. ..	(a) 19,857	45,429	(a) 59,588	(a) 40,549	(a) 52,298	(a) 73,430
India— .. ..						
Ilmenite.. ..	25,553	11,851	29,587	29,691	40,952	57,797
Rutile .. ..	1,841	1,841	1,296	1,787	2,496	2,644
Malaysia (West) (a)—						
Ilmenite .. ..	146,718	129,222	121,566	116,386	89,372	123,838
Australia—						
Ilmenite concentrates (c)	201,530	304,284	441,034	513,011	544,216	550,167
Rutile concentrates ..	183,260	182,371	217,330	243,858	265,514	288,987
<b>OTHER COUNTRIES</b>						
Finland—						
Ilmenite concentrates ..	93,000	114,230	105,138	115,703	124,896	138,000
Norway—						
Ilmenite.. ..	238,429	267,727	277,690	363,887	418,836	395,863
Portugal—						
Ilmenite.. ..	40	56	74	473	527	594
Spain—						
Ilmenite.. ..	49,772	43,230	19,792	44,488	37,262	37,105
Egypt—						
Ilmenite .. ..	532	21	—	542	1,045	—
Rutile .. ..	4	—	—	33	6	—
Malagasy Republic—						
Ilmenite.. ..	3,595	4,800	6,211	6,090	1,828	n.a.
Senegal—						
Ilmenite.. ..	11,996	1,299	—	—	—	n.a.
Rutile .. ..	697	53	—	—	—	n.a.
South Africa—						
Ilmenite.. ..	27,713	—	—	—	—	—
Rutile .. ..	1,237	—	—	—	—	—
Mexico—						
Ilmenite.. ..	139	—	—	—	—	n.a.
United States (e)—						
Ilmenite (d) .. ..	793,214	893,868	865,588	861,945	834,903	873,669
Rutile .. ..	10,638	7,198	n.a.	n.a.	n.a.	n.a.
Brazil—						
Ilmenite (f) .. ..	5,691	8,140	9,639	13,321	14,730	17,598
Rutile .. ..	321	223	310	33	280	113
Japan (g)—						
Ilmenite.. ..	4,376	4,779	3,413	5,676	6,664	5,800
<b>WORLD'S TOTAL*—</b>						
Ilmenite .. ..	2,400,000	3,100,000	3,100,000	3,200,000	3,500,000	3,700,000
Rutile .. ..	198,000	192,000	220,000	250,000	294,000	305,000

\*Excluding the U.S.S.R.

(a) Exports.

(b) Production of titanium dioxide slag (70-72% TiO<sub>2</sub>) at Sorel was as follows (long tons): 1963—338,679; 1964—486,358; 1965—487,425; 1966—468,547; 1967—537,906; 1968—600,773.

(c) Despatches. Including leucoxene.

(d) Contains a mixed product containing ilmenite, leucoxene and rutile.

(e) Production of metal (commercial titanium sponge) was as follows (long tons): 1963—7,035; 1964—n.a.; 1965—n.a.; 1966—n.a.; 1967—n.a.; 1968—n.a.

(f) Comissao Nacional de Energie Nuclear only.

(g) Production of metal (commercial titanium sponge) was as follows (long tons): 1963—1,731; 1964—2,945; 1965—4,764; 1966—6,330; 1967—7,716; 1968—5,341.

## EXPORTS OF TITANIUM MINERALS, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Ferro-titanium .. ..	1,024	1,076	1,251	1,085	977	1,456
Sierra Leone—						
Rutile concentrates ..	100	—	—	7	15,768	1,024
Canada—						
Titanium dioxide slag (70% TiO <sub>2</sub> ) .. ..	(a)	(a)	(a)	(a)	(a)	(a)
Ceylon—						
Ilmenite .. ..	19,857	36,982	59,588	40,549	88,220	72,750
India—						
Ilmenite .. ..	75,248	26,102	14,857	31,569	20,607	47,759
Malaysia (West)—						
Ilmenite .. ..	146,718	129,222	121,566	116,386	89,372	123,838
Singapore—						
Titanium oxide .. ..	150	112	111	136	180	207
Australia—						
Rutile .. ..	154,508	193,893	239,454	231,289	258,791	284,995
Ilmenite .. ..	152,040	246,056	360,719	356,462	384,300	395,911
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg						
E.U.—						
Titanium oxide ..	6,228	1,563	3,223	3,897	5,884	6,878
do, extended ..	3,975	10,648	10,322	9,764	9,653	10,402
Finland—						
Ilmenite .. ..	62,305	49,785	82,608	49,864	39,792	45,164
Titanium oxide ..	n.a.	1,496	19,535	21,109	5,042	4,216
France—						
Titanium minerals ..	70	5	1,303	555	25	144
Ferro-titanium .. ..	1,387	1,754	2,414	2,228	2,265	2,788
Titanium oxide .. ..	7,744	10,508	10,557	5,780	13,589	10,012
do, extended .. ..	17,714	23,507	22,507	26,309	27,625	47,646
Germany (Federal)—						
Titanium minerals ..	221	427	253	619	162	681
Titanium oxide .. ..	53,288	54,808	32,232	28,864	26,683	29,667
do, extended .. ..	1,267	14,100	37,554	49,006	57,458	68,019
Italy—						
Titanium oxide .. ..	15,066	13,069	17,339	18,919	17,381	21,590
Netherlands—						
Titanium oxide .. ..	2,575	6,090	8,492	10,557	8,900	14,390
do, extended .. ..	51	86	32	564	436	43
Norway—						
Ilmenite .. ..	236,711	275,039	319,118	344,517	344,238	389,733
Rutile .. ..						
Titanium oxide, extended						
do, extended .. ..	1,650	3,122	5,261	7,865	6,584	n.a.
Spain—						
Ilmenite .. ..	20,432	26,299	18,806	9,744	6,200	6,348
Titanium oxide .. ..	1,203	1,648	1,766	1,587	4,788	3,142
Sweden—						
Titanium minerals ..	25	25	43	28	—	24
Titanium oxide .. ..	18	24	82	66	45	32
do, extended .. ..	66	—	—	—	—	—
Senegal—						
Ilmenite .. ..	13,658	2,114	—	—	—	—
South Africa—						
Ilmenite .. ..	14,459	16,194	—	—	—	—
United States—						
Ores and concentrates ..	1,082	1,929	1,073	1,161	2,703	3,784
Titanium metal (b) ..	1,567	2,395	2,444	1,547	1,276	2,458
Ferro-titanium .. ..	188	483	n.a.	n.a.	n.a.	n.a.
Titanium oxide and pigments .. ..	23,841	26,213	24,014	24,328	23,272	27,050

(a) Information not available. Most of the titanium dioxide slag produced in Canada (figures on page 368) is believed to be exported.

(b) Including alloys and scrap.

EXPORTS OF TITANIUM MINERALS, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Brazil—						
Titanium minerals ..	—	—	—	9	—	—
Japan—						
Titanium sponge metal	1,189	1,549	3,264	4,474	5,310	3,416
Titanium oxide.. ..	23,576	35,411	37,511	37,148	27,306	34,851



## IMPORTS OF TITANIUM MINERALS, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Ilmenite . . . . .	226,810	178,969	266,477	244,947	250,016	249,686
Rutile . . . . .	18,267	13,955	17,225	16,953	16,926	21,149
Other titanium minerals . . . . .	—	(c) 20,924	—	—	—	—
Titanium metal . . . . .	n.a.	1,706	2,409	1,865	861	2,419
Titanium oxide . . . . .	3,895	2,761	3,134	2,782	5,566	4,430
<b>Canada—</b>						
Titanium metal . . . . .	n.a.	649	717	1,267	1,935	208
Titanium oxide . . . . .	3,006	1,642	1,397	4,453	1,443	2,132
do, extended . . . . .	8,321	9,324	8,512	8,727	8,717	8,658
<b>Hong Kong—</b>						
Titanium oxide . . . . .	2,137	2,237	2,262	2,456	2,707	3,218
<b>India—</b>						
Rutile . . . . .	—	336	743	998	640	30
Titanium oxide (b) . . . . .	2,793	3,002	2,758	3,820	4,752	4,650
<b>Malaysia (West)—</b>						
Titanium oxide . . . . .	n.a.	n.a.	904	1,400	1,332	1,502
<b>Singapore—</b>						
Titanium oxide . . . . .	466	547	581	744	899	1,276
<b>Australia (a)—</b>						
Titanium oxide . . . . .	6,075	3,149	3,384	1,464	1,103	1,173
<b>New Zealand (a)—</b>						
Titanium oxide . . . . .	3,783	4,286	4,849	1,639	654	n.a.
<b>Irish Republic—</b>						
Titanium oxide . . . . .	1,594	2,096	2,138	1,750	2,412	2,598
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Ferro-titanium . . . . .	162	103	185	226	163	182
Titanium oxide . . . . .	4,221	4,815	4,734	5,153	5,674	6,257
<b>Belgium-Luxemburg E.U.—</b>						
Titanium minerals . . . . .	n.a.	n.a.	n.a.	1,532	14,642	32,626
Ferro-titanium . . . . .	216	225	251	143	94	209
Titanium oxide . . . . .	6,398	6,862	8,274	10,137	11,473	9,537
do, extended . . . . .	1,361	1,659	1,979	2,417	3,379	4,060
<b>Denmark—</b>						
Titanium oxide . . . . .	4,709	5,362	5,762	5,855	5,860	6,048
do, extended . . . . .	189	172	139	102	88	84
<b>Finland—</b>						
Titanium oxide . . . . .	1,072	1,526	1,390	756	10	22
<b>France—</b>						
Titanium minerals . . . . .	95,020	134,711	93,420	108,771	97,689	132,933
Titanium metal . . . . .	262	250	292	332	487	482
Titanium oxide . . . . .	9,595	12,727	14,488	17,033	14,102	17,603
do, extended . . . . .	83	87	492	3,332	5,702	3,164
<b>Germany (Federal)—</b>						
Ilmenite . . . . .	220,473	207,808	275,967	227,078	212,694	223,997
Other titanium minerals . . . . .	58,792	142,654	128,983	138,689	155,787	183,444
Titanium metal . . . . .	352	693	758	1,030	1,193	1,302
Titanium oxide . . . . .	1,082	1,583	1,783	3,072	2,435	3,029
do, extended . . . . .	3,486	4,345	7,818	9,391	8,667	12,550
<b>Greece—</b>						
Titanium oxide . . . . .	1,339	1,580	1,749	2,082	2,379	2,716
<b>Hungary—</b>						
Ferro-titanium . . . . .	88	98	n.a.	n.a.	—	—

(a) Years ended June 30 of that stated.

(b) Years ended March 31 following that stated.

(c) Imports from Canada; probably titanium dioxide slag.

## IMPORTS OF TITANIUM MINERALS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Iceland—						
Titanium oxide, extended	227	236	77	1	39	<i>n.a.</i>
Italy—						
Titanium minerals ..	97,351	110,456	84,552	113,085	104,718	135,235
Ferro-titanium ..	401	528	771	607	502	626
Titanium oxide ..	13,478	14,366	15,744	17,840	21,012	23,842
do, extended ..	156	140	103	76	76	163
Netherlands—						
Ferro-titanium ..	37	40	41	68	38	62
Titanium oxide ..	11,210	2,218	3,898	1,794	2,491	4,186
do, extended ..	9,019	14,839	10,402	13,868	16,545	14,779
Norway—						
Titanium oxide ..	1,079	—	—	—	1,105	949
do, extended ..	5,290	5,183	4,868	3,902	3,932	5,253
Poland—						
Titanium oxide ..	2,891	3,144	4,338	6,570	8,542	10,471
Portugal—						
Rutile ..	<i>n.a.</i>	200	341	549	343	262
Titanium oxide ..	1,670	1,999	2,157	2,394	2,595	3,064
Spain—						
Ilmenite ..	3,474	3,936	53	7,334	2,718	23,476
Titanium oxide ..	1,679	2,482	3,687	5,244	5,491	5,231
Sweden—						
Titanium minerals ..	3,612	3,419	3,632	4,468	2,747	2,619
Ferro-titanium ..	736	1,167	1,406	1,423	1,055	1,261
Titanium oxide ..	12,524	13,147	9,648	11,734	7,829	5,551
do, extended ..	701	—	—	—	—	—
Switzerland—						
Titanium oxide ..	5,503	6,721	6,953	6,872	7,211	8,828
Yugoslavia—						
Rutile ..	1,645	1,194	1,119	1,840	1,672	989
Titanium oxide ..	1,589	3,008	1,522	2,700	3,863	4,521
Morocco—						
Titanium oxide ..	391	331	361	152	367	658
do, extended ..	1	<i>n.a.</i>	191	359	191	233
Tunisia—						
Titanium oxide ..	148	182	251	258	345	<i>n.a.</i>
Costa Rica—						
Titanium oxide ..	141	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	—	—
Mexico—						
Titanium oxide ..	1,537	21	1,196	102	17	46
United States—						
Ilmenite (a) ..	179,357	154,660	148,496	166,553	185,630	219,740
Rutile ..	64,277	99,090	135,489	135,251	149,196	155,684
Titanium metal ..	1,320	1,835	2,798	4,665	6,379	3,074
Ferro-titanium ..	37	<i>n.a.</i>	15	—	—	—
Titanium compounds ..	22,569	36,348	44,364	(b) 42,846	(b) 41,763	(b) 47,611
Argentina—						
Titanium oxide ..	2,887	7,159	4,905	6,107	2,057	1,083
Brazil—						
Titanium oxide ..	6,982	6,464	6,455	9,764	9,319	15,065
Chile—						
Titanium oxide extended ..	2,471	1,766	2,011	<i>n.a.</i>	2,090	<i>n.a.</i>
Colombia—						
Titanium oxide ..	2,742	2,234	271	1,602	896	1,860
Peru—						
Titanium oxide ..	721	1,012	71	1,415	—	<i>n.a.</i>
Venezuela—						
Titanium oxide ..	196	314	330	312	533	621
do, extended ..	2,257	3,207	2,917	2,679	4,099	4,556

 (a) Including titanium dioxide slag (70% TiO<sub>2</sub>) imported from Canada.

(b) Dioxide only.

## IMPORTS OF TITANIUM MINERALS, ETC. (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Formosa—						
Titanium oxide ..	721	1,363	1,564	2,291	2,695	<i>n.a.</i>
Iran (a)—						
Titanium oxide ..	116	304	414	642	919	1,234
Japan—						
Ilmenite . . . . .	139,649	183,049	208,602	319,820	269,288	358,176
Titanium oxide . .	65	193	249	716	3,279	5,594
Korea (South)—						
Titanium oxide ..	967	1,580	1,569	1,651	2,110	<i>n.a.</i>
Philippine Republic—						
Titanium oxide . .	1,955	2,259	2,324	<i>n.a.</i>	3,313	<i>n.a.</i>
do, extended ..	841	744	1,185	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Turkey—						
Titanium oxide ..	1,383	1,396	2,502	2,782	2,771	3,827
Titanium minerals ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	383	165

(a) Years ended March 20 of year following that stated.

**TUNGSTEN**  
**PRODUCTION OF TUNGSTEN ORES AND CONCENTRATES**

Long tons

Producing Country and Description	Estimated WO <sub>3</sub> Content						1968	1967	1966	1965	1964	1963
	1968	1967	1966	1965	1964	1963						
<b>COMMONWEALTH COUNTRIES</b>												
Nigeria—												
Wolfram ..		n.a.	1	2					1			
Rhodesia—												
Concentrates ..		n.a.	n.a.	n.a.					16			
Tanzania—												
Wolfram ..		47	11									19
Uganda—												
Wolfram ..		131	117	41					27			
Canada (a)—												
Concentrates ..		n.a.	n.a.	n.a.					1,668			
Hong Kong—												
Wolfram ..		4	8	6	1				4			1
India—												
Concentrates ..		28	24	13	7				8			
Malaysia (West)—												
Wolfram ..		13	6	14	5				9			34
Scheelite ..		9			1							5
Australia—												
Wolfram ..		450	497	487	380				354			370
Scheelite ..		1,202	1,308	1,150	1,020				822			970
New Zealand—												
Scheelite ..		16	3		5							12
<b>TOTAL</b>												
									2,954	1,010	980	3,140
<b>OTHER COUNTRIES</b>												
Austria—												
Concentrates ..		143	121	169	93				115	62	132	174

(a) Shipments (chiefly scheelite).

(b) Exports.

PRODUCTION OF TUNGSTEN ORES AND CONCENTRATES (cont.)

Long tons

Producing Country and Description	Estimated WO <sub>3</sub> Content					
	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
France— Concentrates .. .. .	—	—	—	19	20	16
Italy— Concentrates .. .. .	2	1	1	1	1	1
Portugal— Scheelite .. .. .	1,309	1,401	1,329	1,601	1,842	2,361
Wolfram .. .. .						
Spain— Concentrates .. .. .	46	27	40	90	137	236
Tin-tungsten concentrates	212	8	20	n.a.	n.a.	n.a.
Sweden— Concentrates .. .. .	334	—	—	—	—	n.a.
U.S.S.R. (b) .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Yugoslavia .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Congo Republic— Concentrates .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Tin-tungsten ore .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Rwanda and Burundi— Concentrates .. .. .	14	n.a.	n.a.	n.a.	n.a.	n.a.
South Africa— Concentrates .. .. .	7	4	4	7	23	47
South West Africa— Scheelite .. .. .	—	—	1	1	n.a.	n.a.
Tin-wolfram concentrates	753	660	588	607	n.a.	n.a.
Mexico .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
United States— Concentrates (a) .. .. .	5,051	8,254	7,097	7,957	8,114	9,557

(a) Shipments from mine.

(b) United States Bureau of Mines' estimate.

PRODUCTION OF TUNGSTEN ORES AND CONCENTRATES (cont.)

Long tons

Producing Country and Description	Estimated WO <sub>3</sub> Content					
	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
Argentina— Concentrates .. .. .	148	n.a.	128	130	201	354
Bolivia (a)— Concentrates .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Brazil— Wolfram and scheelite ..	456	314	313	494	589	n.a.
Peru— Concentrates .. .. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Burma— Tungsten concentrates ..	88	85	27	44	93	139
Tin-wolfram concentrates	1,279	958	606	367	185	515
China— Concentrates (b) .. .. .	22,000	20,000	17,000	15,000	15,000	15,000
Japan— Concentrates .. .. .	640	704	586	576	679	923
Korea— South— Concentrates .. .. .	4,662	4,582	3,777	3,629	3,586	3,710
North— Concentrates (b) .. .. .	4,000	4,000	4,000	4,000	4,500	4,500
Thailand— Concentrates .. .. .	187	391	503	511	844	920
TOTAL .. .. .	32,000	33,000	30,000	30,000	32,000	35,000
WORLD'S TOTAL .. .. .	33,000	34,000	33,000	33,000	34,000	38,000

(a) Exports.  
(b) Estimated.  
(c) Recoverable.

## EXPORTS OF TUNGSTEN, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Tungsten ore .. ..	—	45	12	—	5	—
Ferro-tungsten .. ..	1,225	896	1,005	1,175	1,176	1,366
Tungsten metal, etc. .. ..	53	58	71	96	87	42
Rhodesia (d) .. ..						
Tungsten ores .. ..	2	<i>n.a.</i>	26	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tanzania—						
Wolfram ore .. ..	—	—	—	11	46	31
Uganda—						
Wolfram ore .. ..	6	18	64	104	145	100
Hong Kong—						
Tungsten ore .. ..	—	70	10	13	5	2
India—						
Wolfram ore .. ..	—	—	1	1	—	—
Malaysia (West)—						
Wolfram .. ..	<i>n.a.</i>	<i>n.a.</i>	5	19	36	36
Scheelite .. ..	—	1	1	—	2	7
Australia (a)—						
Wolfram ores and concentrates .. ..	452	475	361	560	472	362
(WO <sub>3</sub> content) .. ..	327	343	269	345	343	252
Scheelite ores and concentrates .. ..	295	1,045	1,725	1,300	1,206	1,248
(WO <sub>3</sub> content) .. ..	205	727	1,191	884	788	850
<b>OTHER COUNTRIES</b>						
Austria—						
Ore .. ..	207	79	189	99	161	274
Belgium-Luxemburg						
E.U.—						
Ferro-tungsten .. ..	96	19	10	—	35	40
France—						
Tungsten ore .. ..	106	63	5	3	32	1
Ferro-tungsten .. ..	215	168	260	451	313	254
Tungsten metal, etc. .. ..	71	171	201	260	230	331
Germany (Federal)—						
Tungsten metal, etc. .. ..	248	246	260	674	334	296
Netherlands—						
Ore .. ..	187	217	225	218	245	266
Portugal—						
Tungsten ores .. ..	1,133	1,292	1,101	1,134	1,304	1,579
do. residues .. ..	—	87	—	116	127	<i>n.a.</i>
Ferro-tungsten .. ..	<i>n.a.</i>	265	217	267	371	297
Spain—						
Tungsten ore .. ..	37	50	40	73	184	146
Sweden—						
Ore .. ..	18	222	33	24	43	440
Tungsten metal, etc. .. ..	96	31	33	75	190	110
Ferro-tungsten .. ..	169	71	86	147	104	112
Congo Republic (c)—						
Tungsten ores (b) .. ..	98	450	210	270	98	180
South Africa—						
Tungsten ore .. ..	4	20	3	4	39	29
South West Africa—						
Tin-tungsten ore .. ..	761	680	511	621	<i>n.a.</i>	<i>n.a.</i>
Mexico—						
Tungsten ore and concentrates .. ..	85	14	201	224	256	412
(WO <sub>3</sub> content) .. ..	20	5	108	85	<i>n.a.</i>	<i>n.a.</i>

(a) Years ended June 30 of that stated. (b) Estimated. (c) Including Rwanda and Burundi.

(d) Figure for 1963 relates to Rhodesia and Nyasaland.

## EXPORTS OF TUNGSTEN, ETC. (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
United States—						
Ore and concentrates ..	44	69	10	88	843	539
Ferro-tungsten ..	1	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tungsten metal, alloys and scrap ..	71	228	136	114	300	265
Tungsten powder ..	80	100	47	18	23	21
Argentina—						
Tungsten ore ..	1,026	5	24	49	98	207
Bolivia—						
Tungsten ore ( <i>WO<sub>3</sub> content</i> ) ..	1,347	1,224	1,094	1,555	1,919	2,200
Brazil—						
Tungsten ores ..	785	323	419	335	413	660
Peru—						
Tungsten ore and concentrates ( <i>WO<sub>3</sub> content</i> ) ..	172	578	445	425	730	640
Burma—						
Ore and concentrates ..	551	406	173	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Tin-tungsten ores ..	381	521	514	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Japan—						
Tungsten metal ..	55	15	105	84	28	23
Korea (South)—						
Tungsten ore ..	5,026	5,377	4,041	3,701	3,927	<i>n.a.</i>
Thailand—						
Tungsten ore ..	253	74	206	804	844	806



## IMPORTS OF TUNGSTEN, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom—						
Tungsten ores .. ..	4,904	5,008	5,097	5,066	5,515	4,603
Tungsten metal, etc. ..	24	32	31	51	46	64
Ferro-tungsten .. ..	<i>n.a.</i>	180	202	102	217	196
Canada—						
Tungsten ore .. ..	288	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>W</i> content .. ..	<i>n.a.</i>	174	160	234	104	59
Ferro-tungsten .. ..	279	77	158	86	86	53
India—						
Tungsten ore .. ..	35	226	98	—	184	203
Australia (b)—						
Tungsten metal .. ..	16	34	31	18	13	13
<b>OTHER COUNTRIES</b>						
Austria—						
Tungsten ore .. ..	2,851	3,228	3,299	3,494	2,616	2,354
Tungsten metal, etc. ..	44	79	33	24	83	89
Ferro-tungsten .. ..	—	226	188	59	—	10
Belgium-Luxemburg						
E.U.—						
Tungsten ore .. ..	11	3	42	86	58	106
Ferro-tungsten .. ..	82	57	14	22	33	10
France—						
Tungsten ore .. ..	2,156	1,538	2,153	2,430	1,942	1,578
Tungsten metal, etc. ..	40	67	64	73	77	54
Germany (Federal)—						
Tungsten ore .. ..	3,913	4,831	6,024	5,228	4,411	5,486
Tungsten metal, etc. ..	79	347	442	1,156	614	681
Greece—						
Tungsten metal .. ..	39	180	1	—	—	—
Italy—						
Tungsten ore .. ..	78	59	12	45	45	54
Tungsten metal, etc. ..	40	28	34	73	79	82
Ferro-tungsten .. ..	129	107	96	178	165	595
Netherlands—						
Tungsten ore .. ..	20	60	239	431	216	215
Ferro-tungsten .. ..	2	14	4	4	3	2
Poland—						
Tungsten concentrates ..	2,364	2,631	2,291	2,908	2,406	3,199
Sweden—						
Tungsten ore .. ..	1,277	1,285	1,851	1,873	900	1,900
Tungsten metal, etc. ..	68	93	131	151	55	37
Ferro-tungsten .. ..	256	402	693	709	380	272
U.S.S.R. (a)—						
Tungsten concentrates	11,800	5,900	5,900	3,000	6,000	<i>n.a.</i>
Yugoslavia—						
Tungsten metal, etc. ..	16	30	36	40	11	6
Tungsten concentrates ..	15	203	58	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Ferro-tungsten .. ..	1	—	36	36	87	139
United States—						
Tungsten ore .. ..	2,413	2,449	3,055	3,346	1,280	1,276
( <i>W</i> O <sub>3</sub> content) .. ..	1,366	1,405	1,615	1,919	759	779
Tungsten metal and carbide .. ..						
( <i>W</i> content) .. ..	37	27	20	<i>n.a.</i>	64	7
Ferro-tungsten .. ..	487	87	172	169	<i>n.a.</i>	<i>n.a.</i>
Tungsten ingots, bars, scrap, etc. .. ..	156	179	32	182	62	18
Japan—						
Tungsten ore .. ..	2,290	2,807	1,477	2,710	4,436	2,835
Tungsten metal .. ..	—	2	2	2	37	30

(a) Imports from China.

(b) Years ended June 30 of that stated.

## URANIUM MINERALS

### PRODUCTION OF URANIUM MINERALS

(Metal content)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada (a) .. ..	6,323	5,516	3,364	2,977	2,830	2,802
	£ 45,332,644	27,716,372	20,691,256	18,058,024	17,898,304	20,151,307
Australia .. ..	919	280	n.a.	n.a.	n.a.	n.a.
<b>OTHER COUNTRIES</b>						
France .. ..	1,065	993	1,055	1,121	1,208	1,152
Portugal (b) .. ..	8	15	32	35	79	79
Spain (b) .. ..	n.a.	58	51	50	58	58
Gabon .. ..	(b) 450	430	434	(b) 400	500	472
Malagasy Republic (c) ..	(b) 80	126	101	84	64	21
South Africa .. ..	3,435	3,375	2,231	2,489	2,544	2,932
	£ b37,000,000	b35,000,000	b23,000,000	b26,000,000	b27,000,000	b30,000,000
United States .. ..	10,765	8,970	7,906	7,259	6,909	9,342
	£ 80,400,000	68,000,000	60,000,000	54,000,000	b53,000,000	b70,000,000
Argentina .. ..	7	28	41	—	23	n.a.
<b>WORLD'S TOTAL (b) ..</b>	<b>31,000</b>	<b>27,000</b>	<b>23,000</b>	<b>22,000</b>	<b>21,000</b>	<b>24,000</b>

(a) Producers' shipments.

(b) Estimated.

(c) Uranium content of uranothorianite.

Uranium is known to have been produced in the U.S.S.R., in several Eastern European countries, Finland, Italy, Sweden, Western Germany, Mozambique, China, India and elsewhere. An allowance has been made for these countries in the world's total.

## EXPORTS OF URANIUM MINERALS, ETC.

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada— Ores and concentrates £	45,540,191	24,777,024	17,810,184	12,061,692	8,059,006	10,046,635
<b>OTHER COUNTRIES</b>						
Congo Republic— Radium products (Ra content) Mgrams ..	18,300	18,100	n.a.	n.a.	n.a.	n.a.
Gabon— Concentrates Long tons ..	1,228	1,370	1,497	1,422	1,376	1,178
Malagasy Republic— Uranothorianite Long tons	474	610	414	353	302	553
South Africa— Concentrates (U <sub>3</sub> O <sub>8</sub> content) Long tons	3,696	n.a.	n.a.	n.a.	n.a.	n.a.
United States— Ores, concentrates and compounds Long tons	33,381,194	29,034,237	16,653,899	n.a.	n.a.	n.a.
Metal and alloys Long tons .. .. .	5	1	—	21	—	—
Radium metal (Ra content) Mgrams.	3	3	2	2	—	—
	311	177	n.a.	n.a.	n.a.	n.a.

## IMPORTS OF URANIUM MINERALS, ETC.

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada— Radium and compounds .. £	197,000	105,823	47,753	118,076	32,406	38,542
<b>OTHER COUNTRIES</b>						
Belgium-Luxemburg E.U.— Ore Long tons	—	—	22	—	—	6
France— Ore Long tons	1,912	1,880	2,204	1,714	1,914	2,096
Germany (Federal)— Ore Long tons	6	23	—	—	—	—
United States— Concentrates Long tons (U <sub>3</sub> O <sub>8</sub> content) .. .. .	7,859	4,729	2,366	1,829	1,288	n.a.
Radium salts Mgrams.	44,660	n.a.	n.a.	n.a.	n.a.	n.a.

**VANADIUM**  
**PRODUCTION OF VANADIUM ORES**  
*(Metal content)*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
Finland .. .. .	688	968	949	955	1,154	1,179
France (a) .. ..	56	33	83	71	95	n.a.
South Africa .. ..	1,237	1,142	1,355	1,526	1,888	1,724
South West Africa ..	1,015	966	1,128	1,208	1,180	1,180
Mexico .. .. .	—	—	1	—	n.a.	n.a.
United States (c) ..	5,399	4,629	5,037	5,076	4,543	6,344
Argentina .. .. .	2	2	—	—	—	—
<b>WORLD'S TOTAL (b) ..</b>	<b>8,400</b>	<b>7,700</b>	<b>8,600</b>	<b>8,800</b>	<b>8,900</b>	<b>10,500</b>

(a) By-product vanadium from aluminium plants.

(b) Totals represent the sum of the countries shown and exclude vanadium ore known to have been produced in other countries. Vanadiferous iron concentrates (about 0.5% V) are produced in Norway.

(c) Shipments.

**EXPORTS OF VANADIUM, ETC.**

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom— Ferro-vanadium ..	3	5	117	61	41	42
<b>OTHER COUNTRIES</b>						
<b>Belgium-Luxemburg E.U.—</b>						
Ferro-vanadium ..	387	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Finland—</b>						
Oxide .. .. .	1,560	2,187	—	2,098	2,452	2,532
<b>France—</b>						
Ferro-vanadium ..	10	86	194	167	244	66
<b>Italy—</b>						
Ferro-vanadium ..	n.a.	39	18	5	—	1
<b>Sweden—</b>						
Ferro-vanadium ..	197	139	105	193	172	371
<b>South Africa—</b>						
Oxide .. .. .	(c) 728	(d) 3,252	(e) 2,159	(f) 2,719	(b) 2,756	(g) 3,881
<b>South West Africa—</b>						
<b>Concentrates</b>						
(V content) (a) ..	900	900	800	1,000	n.a.	n.a.
<b>United States—</b>						
Ore, concentrates, etc. (V content) .. ..	478	1,099	695	1,412	1,255	737
Flue dust and other waste (V content) ..	829	97	n.a.	n.a.	n.a.	n.a.
Ferro-vanadium ..	164	92	197	430	314	247

(a) Estimated.

(b) Including 43 tons of ammonium vanadate.

(c) Including 24 tons of ammonium vanadate.

(d) Including 60 tons of ammonium vanadate.

(e) Including 45 tons of ammonium vanadate.

(f) Including 57 tons of ammonium vanadate.

(g) Including 614 tons of ammonium vanadate.

## IMPORTS OF VANADIUM, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom (a)—						
Ferro-vanadium ..	59	85	239	81	141	482
Canada—						
Ferro-vanadium ..	<i>n.a.</i>	232	290	427	346	237
OTHER COUNTRIES						
Belgium-Luxemburg						
E.U.—						
Ferro-vanadium ..	24	20	6	13	10	23
Oxide .. .. .	501	968	403	452	594	1,015
France—						
Oxide .. .. .	218	398	601	772	1,206	746
Hungary—						
Ferro-vanadium ..	109	129	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Italy—						
Ferro-vanadium ..	<i>n.a.</i>	179	334	334	616	254
Oxide .. .. .	113	228	203	247	231	109
Netherlands—						
Ferro-vanadium ..	4	6	9	15	8	3
Sweden—						
Ferro-vanadium ..	52	76	156	359	173	372
United States—						
Ore .. .. .	—	99	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
(V content) .. ..	—	11	—	64	67	<i>n.a.</i>
Japan—						
Ore .. .. .	—	—	92	—	—	—

(a) Excluding vanadium contained in petroleum soot, slags and residues.

**VERMICULITE  
PRODUCTION OF VERMICULITE**

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Kenya .. .. .	91	33	22	75	247	275
Tanzania .. .. .	27	129	96	261	90	30
India .. .. .	666	422	720	492	312	2,311
<b>OTHER COUNTRIES</b>						
South Africa .. .. .	88,177	99,886	113,313	101,546	99,898	108,440
United States (a) .. .. .	202,034	202,053	222,636	234,215	227,679	258,926
Argentina .. .. .	2,736	3,599	1,658	4,096	2,858	<i>n.a.</i>
<b>WORLD'S TOTAL*</b> .. .. .	<b>294,000</b>	<b>306,000</b>	<b>339,000</b>	<b>341,000</b>	<b>333,000</b>	<b>373,000</b>

\*Excluding vermiculite produced in the U.S.S.R. and Brazil.

(a) Sold or used by producers.

**EXPORTS OF VERMICULITE**

Long tons

Exporting Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Rhodesia (a) .. .. .	4	22	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
South Africa .. .. .	80,768	96,620	94,596	87,768	94,059	103,165

(a) Figure for 1963 relates to Rhodesia and Nyasaland.

**IMPORTS OF VERMICULITE**

Long tons

Importing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (a) .. .. .	25,275	30,805	33,513	24,354	26,977	24,772
Canada .. .. .	<i>n.a.</i>	22,910	25,478	25,740	26,197	24,642
	(£189,842)	(£157,530)	(£188,221)	(£198,342)	(£211,653)	(£237,802)
Australia (c) .. .. .	1,711	1,997	2,877	2,544	2,215	3,284
<b>OTHER COUNTRIES</b>						
France (b) .. .. .	13,019	15,806	19,402	21,384	36,363	31,526
Greece .. .. .	64	32	62	63	63	3
Mexico .. .. .	367	607	554	568	367	474
United States (a) .. .. .	12,801	16,444	14,904	7,529	14,252	9,443
Venezuela .. .. .	280	335	491	446	218	515

(a) Exports from South Africa to country stated.

(b) May include perlite, etc.

(c) Years ended June 30 of that stated.

# ZINC

## PRODUCTION OF ZINC ORE

(Metal content)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Zambia (c) .. ..	48,670	45,974	46,687	41,654	43,781	51,547
Canada (h) .. ..	422,966	611,172	733,960	860,809	992,369	1,043,598
India .. ..	5,767	5,914	5,233	4,809	5,187	6,858
Australia .. ..	351,470	344,600	349,231	369,341	400,527	413,501
<b>TOTAL .. ..</b>	<b>829,000</b>	<b>1,008,000</b>	<b>1,135,000</b>	<b>1,277,000</b>	<b>1,416,000</b>	<b>1,516,000</b>
Irish Republic .. ..	—	—	1,283	22,670	35,490	52,470
<b>OTHER COUNTRIES</b>						
Austria .. ..	9,025	9,609	9,396	10,317	10,984	12,401
Bulgaria .. ..	57,000	63,200	65,200	75,600	77,900	62,000
Finland (b) .. ..	65,305	61,996	67,920	53,516	59,839	64,366
France .. ..	17,911	16,575	20,572	22,926	24,279	21,462
Germany (Federal) (i) ..	91,716	94,318	93,128	97,098	104,882	108,649
Germany (East) (g) ..	7,000	7,000	8,000	12,000	12,000	12,000
Greece .. ..	12,148	10,088	10,310	10,100	10,268	10,200
Hungary .. ..	2,600	2,800	3,200	(g) 3,200	n.a.	n.a.
Italy .. ..	106,175	101,670	112,495	111,571	122,237	136,267
Norway .. ..	12,842	12,296	12,726	13,101	11,980	11,654
Poland .. ..	144,800	148,300	149,700	147,900	152,700	n.a.
Portugal .. ..	168	937	2,905	2,308	499	450
Spain .. ..	90,284	87,062	38,646	56,124	57,084	74,455
Sweden .. ..	83,645	75,955	77,870	82,219	80,529	80,037
U.S.S.R. (c) (e) .. ..	440,000	450,000	470,000	500,000	510,000	530,000
Yugoslavia .. ..	86,891	90,351	90,368	83,895	88,595	93,963
Algeria .. ..	(e) 34,000	(e) 38,000	36,504	14,900	8,000	8,000
Congo Republic ..	101,910	103,874	117,272	113,036	119,604	116,000
Congo, Republic of ..	42	5,408	7,383	6,601	2,337	n.a.
Morocco .. ..	32,516	41,677	50,409	45,952	38,873	32,767
South Africa .. ..	—	—	2	—	—	—
South West Africa ..	22,900	29,732	29,407	27,796	22,200	20,000
Tunisia .. ..	4,300	3,200	4,662	5,702	4,087	5,020
Guatemala (b) .. ..	1,150	—	1,376	490	243	—
Honduras .. ..	(d) 7,352	8,433	10,951	12,197	12,842	14,550
Mexico .. ..	236,030	231,882	221,324	215,718	210,351	236,000
United States (b) .. ..	472,548	513,266	545,672	511,212	490,547	472,720
Argentina .. ..	28,283	22,551	29,210	26,028	26,820	26,000
Bolivia (a) .. ..	4,574	9,604	13,472	16,438	16,433	11,599
Brazil .. ..	—	—	5,167	n.a.	n.a.	n.a.
Chile .. ..	473	863	1,093	2,054	1,105	1,235
Colombia (g) .. ..	100	100	50	295	545	640
Ecuador .. ..	353	373	232	133	158	112
Peru (b) .. ..	193,207	232,922	250,477	253,746	299,985	304,217
Burma .. ..	8,100	7,800	8,000	6,000	5,000	8,400
China (g) .. ..	100,000	100,000	100,000	100,000	90,000	100,000
Iran (f) .. ..	(g) 10,000	(g) 15,000	(g) 15,000	(g) 17,000	(g) 24,000	(g) 25,000
Japan .. ..	194,830	213,037	217,529	249,622	258,530	260,169
Korea (South) .. ..	1,100	2,500	7,000	11,500	13,400	19,000
Korea (North) (g) ..	100,000	100,000	105,000	105,000	120,000	120,000

- (a) Exports.
- (b) Recoverable.
- (c) Smelter production.
- (d) Imports into the United States.
- (e) Estimated.

- (f) Years ended March 20 of year following that stated.
- (g) United States Bureau of Mines' estimate.
- (h) Refined zinc plus recoverable zinc in ores, etc., exported.
- (i) Excluding zinc in pyrites.

PRODUCTION OF ZINC ORE (cont.)

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
Philippine Republic .. ..	3,832	2,102	2,026	1,622	1,462	2,207
Thailand .. ..	(a) 900	(a) 1,400	(a) 2,000	(a) 2,500	n.a.	n.a.
Turkey .. ..	4,518	7,888	7,000	n.a.	n.a.	n.a.
<b>TOTAL .. ..</b>	<b>2,800,000</b>	<b>2,900,000</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>3,100,000</b>	<b>3,200,000</b>
<b>WORLD'S TOTAL ..</b>	<b>3,600,000</b>	<b>3,900,000</b>	<b>4,100,000</b>	<b>4,300,000</b>	<b>4,600,000</b>	<b>4,700,000</b>

Zinc ore is also produced in the United Kingdom, Czechoslovakia, Roumania and North Vietnam.

(a) Estimated.



METAL PRODUCTION OF ZINC

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom ..	99,028	109,282	105,127	99,745	102,675	140,625
Zambia .. ..	48,670	45,974	46,687	41,654	43,781	54,547
Canada .. ..	253,589	301,543	320,087	341,612	361,729	381,174
Australia .. ..	179,777	185,531	198,988	194,410	194,472	205,482
<b>TOTAL .. ..</b>	<b>581,064</b>	<b>642,330</b>	<b>670,889</b>	<b>677,427</b>	<b>704,264</b>	<b>781,828</b>
<b>OTHER COUNTRIES</b>						
Austria .. ..	11,673	12,692	12,906	13,977	13,933	15,052
Belgium .. ..	203,070	218,634	236,013	247,738	223,738	247,148
Bulgaria .. ..	55,179	57,648	64,725	(d) 60,000	64,000	n.a.
France .. ..	170,600	190,900	192,700	197,400	185,000	204,200
Germany (Federal) ..	154,262	153,528	152,277	173,567	138,596	142,068
Germany (East) (a) ..	10,000	10,000	10,000	12,000	11,000	15,000
Hungary .. ..	1,500	1,400	1,500	(d) 1,500	n.a.	n.a.
Italy .. ..	72,403	71,699	79,620	76,901	86,603	110,501
Netherlands .. ..	35,197	37,107	40,176	40,704	38,000	48,000
Norway .. ..	45,821	47,593	51,746	50,313	53,935	59,161
Poland .. ..	178,000	184,000	187,000	190,000	193,000	200,000
Spain .. ..	63,708	63,413	52,671	52,881	69,295	74,997
U.S.S.R. (a) .. ..	440,000	450,000	470,000	500,000	510,000	530,000
Yugoslavia .. ..	41,577	43,809	45,337	50,282	52,344	78,000
Congo Republic .. ..	51,893	54,676	56,119	60,529	60,521	61,584
Mexico .. ..	55,854	58,487	61,748	70,454	69,741	78,773
United States (b) (c) ..	796,950	851,861	887,859	915,237	838,241	911,510
Argentina .. ..	19,388	21,876	23,227	21,931	22,626	20,607
Peru .. ..	53,834	60,942	61,938	62,000	62,000	66,000
China (d) .. ..	90,000	90,000	90,000	90,000	80,000	90,000
Japan .. ..	r 277,811	r 311,090	r 312,784	r 437,141	508,066	595,992
Korea (South) .. ..	—	—	—	1,402	2,419	2,500
Korea (North) (d) .. ..	65,000	70,000	75,000	75,000	80,000	80,000
<b>TOTAL .. ..</b>	<b>2,900,000</b>	<b>3,000,000</b>	<b>3,200,000</b>	<b>3,400,000</b>	<b>3,400,000</b>	<b>3,700,000</b>
<b>WORLD'S TOTAL .. ..</b>	<b>3,500,000</b>	<b>3,700,000</b>	<b>3,900,000</b>	<b>4,100,000</b>	<b>4,100,000</b>	<b>4,500,000</b>

Zinc is also produced in Czechoslovakia, Roumania and North Vietnam.

(a) Estimated.

(b) In addition secondary zinc recovered was as follows (long tons):

1963 .. ..	239,513	1966 .. ..	321,617
1964 .. ..	266,423	1967 .. ..	285,579
1965 .. ..	315,504	1968 .. ..	316,696

(c) The production by grades (including redistilled secondary) was as follows (long tons):

	1963	1964	1965	1966	1967	1968
A—High grade—Special ..	367,191	418,525	428,336	404,216	390,044	401,481
Ordinary .. ..	93,126	100,050	100,403	124,834	82,996	104,664
B—Intermediate grade ..	16,404	17,009	16,058	21,031	23,680	50,612
C and D—Brass special ..	87,670	72,352	77,406	92,129	81,321	67,714
Selected .. ..	3,490	291	276	—	—	—
E—Prime Western .. ..	282,912	307,559	340,040	347,370	325,829	358,346

(d) United States Bureau of Mines' estimate.

PRODUCTION OF ELECTROLYTIC ZINC IN CERTAIN COUNTRIES\*

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Canada .. .. .	253,589	301,543	320,087	341,612	361,729	381,174
Australia (Tasmania) ..	179,777	185,531	198,988	194,410	194,472	205,482
<b>OTHER COUNTRIES</b>						
Austria .. .. .	11,673	12,692	12,906	13,977	13,933	15,052
Norway .. .. .	45,821	47,593	51,746	50,313	53,935	59,161
Poland .. .. .	82,200	85,900	88,600	90,400	92,000	95,100
Congo Republic .. ..	51,893	54,676	56,119	60,529	60,521	61,584
United States .. ..	319,726	347,663	364,400	387,121	331,488	355,594
Japan .. .. .	171,899	196,240	240,000	270,000	306,000	363,000

\*This production is already included in the Metal table.

PRODUCTION OF ZINC DUST IN CERTAIN COUNTRIES

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom ..	13,343	13,581	12,716	12,183	12,272	14,024
Australia .. .. .	4,030	4,495	3,422	3,299	n.a.	3,057
<b>OTHER COUNTRIES</b>						
France .. .. .	4,441	4,055	4,262	4,642	5,120	5,220
Germany (Federal) ..	7,156	8,145	6,658	5,777	3,939	290
United States .. ..	36,037	41,053	46,391	49,540	44,887	55,000
Japan .. .. .	9,201	10,183	n.a.	n.a.	14,874	n.a.

PRODUCTION OF ROLLED ZINC SHEETS, PLATES AND STRIPS  
IN CERTAIN COUNTRIES

Long tons

Producing Country	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom (a) ..	23,007	25,395	24,738	26,750	22,859	25,346
<b>OTHER COUNTRIES</b>						
France .. .. .	61,130	71,550	63,620	70,730	76,080	69,480
United States (b) ..	36,623	38,361	39,932	45,914	39,500	42,432
Japan .. .. .	5,822	6,802	5,643	6,699	9,690	30,690

(a) Including wire.

(b) Excluding strip and ribbon zinc re-rolled from scrap originating in fabricating plants operated in connection with zinc rolling-mills, as follows:

Long tons			Long tons		
1963	.. ..	10,837	1966	.. ..	18,804
1964	.. ..	12,991	1967	.. ..	16,671
1965	.. ..	15,199	1968	.. ..	19,586

EXPORTS OF ZINC\*

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<b>United Kingdom—</b>						
Ore and concentrates ..	1,382	1,138	18	10	43	<i>n.a.</i>
Unwrought (a) .. ..	8,792	5,852	1,234	1,099	11,124	22,394
Scrap .. ..	1,080	2,752	270	178	649	1,185
Semi-manufactures (a)	4,338	5,513	6,182	4,951	4,159	4,527
Oxide .. ..	7,036	5,413	3,629	4,289	3,419	4,566
Lithopone, etc .. ..	3,897	2,955	2,376	3,110	2,524	2,064
<b>Nigeria—</b>						
Ore and concentrates ..	—	200	1,875	1,501	10	<i>n.a.</i>
<b>Zambia (d)—</b>						
Ores and concentrates ..	1,518	—	—	—	621	—
Unwrought .. ..	46,546	45,151	44,449	40,900	39,183	44,315
<b>Canada—</b>						
Ore ( <i>Zn content</i> ) .. ..	190,218	359,912	435,219	527,966	656,879	764,123
Unwrought .. ..	178,573	212,568	235,892	228,708	265,761	284,560
Scrap (a) .. ..	5,109	6,955	8,164	8,896	7,339	5,587
<b>Hong Kong—</b>						
Unwrought (a) .. ..	—	100	—	—	—	—
Scrap .. ..	1	—	—	—	—	143
Semi-manufactures (a)	—	1	—	—	—	—
<b>India (c)—</b>						
Concentrates, etc. ..	9,765	7,364	2,663	—	—	—
Dross, scrap and ashes ..	1,102	2,665	817	2,212	2,171	628
Semi-manufactures (a)	184	231	4	20	38	14
Zinc white .. ..	336	455	708	372	464	943
<b>Singapore—</b>						
Unwrought .. ..	69	6	3	84	213	2,201
Semi-manufactures (a)	490	147	241	99	1,273	173
Oxide .. ..	467	341	343	245	293	253
<b>Australia (b)—</b>						
Ores and concentrates ( <i>Zn content</i> ) .. ..	153,818	131,690	110,370	139,386	140,198	171,707
Unwrought .. ..	98,730	83,534	84,658	99,182	(a) 114,038	(a) 89,136
Scrap .. ..	308	66	67	119	—	—
Semi-manufactures ..	801	2,023	2,258	979	(a) 433	(a) 815
Oxide .. ..	51	4	30	64	188	398
<b>Irish Republic—</b>						
Ores and concentrates	—	—	—	26,077	33,905	84,098
<b>OTHER COUNTRIES</b>						
<b>Austria—</b>						
Ore .. ..	—	1,562	53	—	—	3
Unwrought (a) .. ..	2,736	4,098	3,627	3,811	6,614	4,508
Scrap .. ..	859	1,001	514	57	25	62
Lithopone .. ..	2,060	2,496	2,463	1,822	1,912	1,397
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Ore .. ..	50,306	20,704	12,053	12,556	26,429	49,183
Unwrought .. ..	120,874	124,740	127,609	144,993	134,020	148,970
Scrap .. ..	5,743	8,440	7,356	7,555	7,042	7,959
Semi-manufactures (a)	30,773	32,014	33,127	29,494	35,779	40,811
Lithopone, etc. . .	18,705	18,066	18,125	12,098	126	3

\*In these tables the description "unwrought" zinc corresponds to item 686.1 in the Standard International Trade Classification (Revised) and comprises blocks, pigs, slabs, etc. "Semi-manufactures" corresponds to S.I.T.C.(R). 284.0 (8) and 686.2, and includes zinc dust as well as rods, wire, sheets, tubes, pipes, etc.

(a) Including alloys.

(b) Years ended June 30 of that stated.

(c) Years ended March 31 following that stated.

(d) Figures for 1963 relate to Rhodesia and Nyasaland.

## EXPORTS OF ZINC (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Denmark—</b>						
Unwrought .. ..	150	83	185	64	98	161
do. alloys .. ..	904	1,142	485	321	230	876
Scrap .. ..	1,917	2,195	1,778	2,063	3,208	3,270
Semi-manufactures .. ..	284	9	13	14	20	27
<b>Finland—</b>						
Concentrates .. ..	140,685	144,929	145,296	110,765	113,506	123,958
Unwrought .. ..	238	—	—	20	—	—
<b>France—</b>						
Ore .. ..	491	708	497	233	216	26,801
Unwrought .. ..	14,020	11,156	17,375	19,723	9,891	19,914
do. alloys .. ..	324	578	364	383	2,046	369
Semi-manufactures (a) .. ..	4,557	2,715	4,268	3,828	3,476	4,437
Oxide .. ..	4,536	4,016	4,643	7,459	7,378	9,751
Lithopone, etc. . . .	1,268	1,116	995	1,007	1,533	2,407
<b>Germany (Federal)—</b>						
Ore .. ..	32,574	43,503	45,555	49,993	88,967	114,996
Unwrought (a) .. ..	29,398	21,162	13,217	27,539	28,162	37,195
Scrap (a) .. ..	3,180	2,682	4,169	7,522	4,644	5,592
Semi-manufactures (a) .. ..	7,280	7,514	6,823	8,988	9,379	11,803
Zinc-white, zinc-grey .. ..	11,463	10,324	9,902	10,314	9,223	8,957
Lithopone .. ..	33,688	36,347	30,715	32,768	35,989	38,192
<b>Greece—</b>						
Ore and concentrates .. ..	18,766	22,053	23,603	20,410	23,947	14,835
<b>Italy—</b>						
Ore .. ..	39,049	48,484	28,946	40,503	21,906	48,581
Unwrought .. ..	297	1,064	1,401	52	39	880
Semi-manufactures (a) .. ..	304	454	140	349	403	2,243
Oxide .. ..	681	555	383	1,083	819	907
Lithopone, etc. . . .	3,420	2,664	2,166	3,073	3,078	2,809
<b>Netherlands—</b>						
Ore .. ..	3,809	8,032	5,729	4,373	7,603	20,069
Unwrought .. ..	23,064	25,378	22,213	22,825	34,900	32,786
do. alloys .. ..	46	35	122	43	36	157
Scrap (a) .. ..	7,829	9,140	9,969	10,162	7,923	8,392
Semi-manufactures (a) .. ..	1,279	1,332	1,366	1,086	1,117	1,558
Oxide .. ..	10,134	10,601	9,360	9,469	8,774	10,876
Lithopone, etc. . . .	10,224	11,890	10,314	12,045	13,270	10,512
<b>Norway—</b>						
Ore .. ..	14,276	14,377	19,225	15,895	14,995	12,883
Unwrought .. ..	32,335	38,089	35,655	39,114	35,552	49,504
do. alloys .. ..	783	1,252	1,533	1,096	1,234	3,360
Scrap .. ..	704	584	798	543	401	386
Semi-manufactures (a) .. ..	1,131	1,499	1,449	1,687	1,655	2,015
Zinc-white .. ..	766	299	195	219	180	264
<b>Poland—</b>						
Unwrought and sheets .. ..	87,400	96,200	95,600	71,633	70,912	76,034
Unwrought alloys .. ..	7,955	8,338	7,869	8,765	5,644	6,206
Zinc-white .. ..	n.a.	8,921	9,020	5,527	2,984	2,421
Lithopone .. ..	468	424	n.a.	n.a.	n.a.	n.a.
<b>Portugal—</b>						
Ore .. ..	385	718	8,300	5,596	970	—
Zinc-white .. ..	72	91	57	77	102	116
<b>Spain—</b>						
Ore .. ..	32,178	23,924	6,479	6,060	12,418	6,817
Unwrought (a) .. ..	23,437	19,057	10,637	1,915	13,654	21,985
Oxide .. ..	189	113	55	274	444	1,030
<b>Sweden—</b>						
Ore .. ..	146,049	146,258	146,261	158,650	115,931	139,465
Unwrought (a) .. ..	71	286	188	119	306	449
Scrap .. ..	1,080	1,476	1,457	1,392	1,007	1,342
Zinc-white .. ..	945	467	459	646	645	347
Lithopone .. ..	63	59	31	22	10	1

(a) Including alloys.

## EXPORTS OF ZINC (cont.)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Switzerland—						
Unwrought and scrap ..	1,111	1,258	1,047	1,647	1,622	1,664
Semi-manufactures (a)	37	66	29	37	57	39
Zinc-white .. ..	2	1	11	1	2	9
U.S.S.R.—						
Unwrought .. ..	81,100	147,400	131,600	84,900	72,900	77,500
Yugoslavia—						
Concentrates .. ..	24,662	31,673	20,093	10,585	2,791	9,059
Unwrought .. ..	5,710	3,063	2,828	5,241	5,135	30,138
Semi-manufactures ..	8,674	10,553	10,040	11,947	10,483	13,387
Oxide .. ..	750	1,157	1,141	797	1,204	988
Lithopone .. ..	443	2,028	3,629	2,664	2,451	708
Algeria—						
Ore .. ..	57,352	51,596	66,604	14,763	13,007	25,695
Congo Republic (c)—						
Ores and concentrates ..	65,600	92,400	88,600	93,400	65,000	71,431
Unwrought .. ..	50,800	55,800	55,700	50,100	56,200	41,200
Congo, Republic of—						
Ore .. ..	<i>n.a.</i>	<i>n.a.</i>	16,236	11,546	<i>n.a.</i>	<i>n.a.</i>
Morocco—						
Ore .. ..	65,187	63,352	96,598	78,743	85,338	78,496
South Africa—						
Unwrought .. ..	—	9	23	22	18	<i>n.a.</i>
Fume, dust, shavings, etc. .. ..	84	330	76	92	71	<i>n.a.</i>
South West Africa—						
Ores and concentrates (b) .. ..	38,421	33,617	31,693	35,054	<i>n.a.</i>	<i>n.a.</i>
Tunisia—						
Ore .. ..	6,970	8,842	2,132	10,807	13,127	7,283
Guatemala—						
Ore .. ..	2,919	831	853	1,228	12	44
Honduras—						
Ore and concentrates ..	10,561	10,689	19,340	9,592	9,725	17,498
Mexico—						
Ores and concentrates	351,785	270,107	307,449	305,076	275,591	195,000
Unwrought .. ..	28,911	28,710	25,453	32,091	32,563	41,498
Oxide .. ..	2,619	3,201	6,428	7,861	7,658	4,359
United States—						
Ore and concentrates (b)	15	35	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Unwrought .. ..	30,226	23,675	6,438	2,386	15,682	31,616
Scrap (b) .. ..	1,602	5,757	5,015	3,990	1,487	2,047
Semi-manufactures (a)	5,398	10,924	5,903	5,973	4,439	13,973
Oxide .. ..	2,644	2,174	2,375	7,461	3,071	3,250
Lithopone .. ..	749	1,057	544	2,694	723	1,161
Argentina—						
Ore .. ..	46,624	29,383	2,629	—	—	—
Unwrought .. ..	3,134	1,070	146	2	918	1,823
Bolivia—						
Ores (b) .. ..	4,574	9,604	13,472	16,438	16,433	11,599
Chile—						
Concentrates .. ..	<i>n.a.</i>	3,653	<i>n.a.</i>	<i>n.a.</i>	2,046	<i>n.a.</i>
Peru—						
Ores, etc. (Zn content) ..	145,800	199,557	208,644	212,086	228,631	298,000
Unwrought (Zn content)	38,179	71,074	54,836	47,797	63,892	<i>n.a.</i>
Burma—						
Concentrates .. ..	16,002	15,407	14,310	16,040	<i>n.a.</i>	<i>n.a.</i>
Iran (d)—						
Ore .. ..	24,704	73,062	96,244	76,322	39,488	50,304

(a) Including alloys.

(c) Estimated.

(b) Zn content.

(d) Years ended March 20 following that stated.

EXPORTS OF ZINC (*cont.*)

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
Japan—						
Unwrought .. ..	1,121	5,320	54,529	58,213	64,713	85,477
Semi-manufactures .. ..	784	844	1,054	2,161	3,407	2,918
Oxide .. ..	157	170	332	1,137	807	1,834
Lithopone .. ..	<i>n.a.</i>	<i>n.a.</i>	205	323	398	683
Korea (South)—						
Ore .. ..	3,094	5,878	13,694	31,666	21,967	<i>n.a.</i>
Philippine Republic—						
Concentrates .. ..	11,779	4,811	3,848	<i>n.a.</i>	2,933	<i>n.a.</i>
Turkey—						
Ore .. ..	837	1,896	7,712	16,335	8,532	18,814

## IMPORTS OF ZINC\*

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
COMMONWEALTH COUNTRIES						
United Kingdom—						
Ore and concentrates ..	212,113	303,531	229,273	234,709	254,945	330,530
Unwrought (a) ..	159,171	187,109	185,268	178,698	159,515	168,071
Waste and scrap ..	2,713	2,298	1,944	1,214	3,905	3,452
Semi-manufactures (a)	848	601	288	600	587	1,622
Oxide ..	n.a.	189	425	302	332	n.a.
Lithopone, etc. ..	2,083	2,251	1,089	1,528	1,389	1,022
Malta—						
Semi-manufactures ..	(£9,161)	(£7,376)	(£11,409)	(£14,222)	(£9,373)	(£2,515)
Ghana—						
Unwrought (a) ..	42	29	977	303	838	18
Semi-manufactures (a)	56	30	52	16	40	17
Kenya—						
Unwrought (a) ..	1,379	1,419	1,206	1,166	1,006	1,150
Semi-manufactures (a)	16	8	9	3	23	12
Nigeria—						
Unwrought and semi-manufactures (a)	37	950	1,948	846	2,500	1,701
Rhodesia (c)—						
Semi-manufactures (a)	537	1,085	757	n.a.	n.a.	n.a.
Tanzania—						
Unwrought (a) ..	301	1,407	2,015	1,153	1,154	1,596
Semi-manufactures (a)	23	25	19	15	42	192
Uganda—						
Unwrought ..	—	7	241	1,275	1,229	876
Semi-manufactures (a)	3	5	14	8	—	21
Canada—						
Ore and concentrates ..	n.a.	12,063	7,964	n.a.	n.a.	n.a.
Unwrought (a) ..	571	19	15	112	951	1,355
Semi-manufactures (a)	1,749	2,390	2,027	1,833	1,671	1,600
Zinc-white ..	1,993	1,045	976	1,442	1,521	1,471
Lithopone ..	—	481	512	194	282	360
Barbados—						
Semi-manufactures (a)	7	5	9	2	26	26
Jamaica—						
Semi-manufactures (a)	91	79	20	17	7	—
Trinidad and Tobago—						
Semi-manufactures (a)	32	36	18	21	23	25
Ceylon—						
Unwrought (a) ..	182	85	274	151	546	1,812
Semi-manufactures (a)	35	19	49	138	87	57
Cyprus—						
Semi-manufactures (a)	46	55	60	63	208	237
Hong Kong—						
Unwrought (a) ..	3,357	6,164	1,240	3,614	4,398	7,344
Scrap ..	77	265	62	27	100	270
Semi-manufactures (a)	369	401	233	516	350	664
Oxide ..	640	716	632	686	668	1,066
Lithopone ..	1,079	1,272	1,097	1,293	593	1,073
India (b)—						
Ore and concentrates ..	—	—	—	19,764	512	27,387
Unwrought ..	79,856	65,345	68,430	35,718	54,297	64,963
do. alloys ..	3,023	3,600	7,060	9,636	8,899	21,949
Semi-manufactures (a)	1,140	1,115	3,452	1,956	1,671	1,525
Zinc-white ..	182	102	172	31	46	9
Lithopone ..	501	343	689	802	617	734
Malaysia (West)—						
Ore ..	n.a.	n.a.	1,228	833	2,251	2,641
Unwrought (a) ..	n.a.	n.a.	1,228	1,533	1,200	2,000
Semi-manufactures (a)	n.a.	n.a.	148	47	1,204	1,327

\*See footnote on p. 389 concerning the descriptions "unwrought" zinc and "semi-manufactures" used in these tables.

(a) Including alloys.

(b) Years ended March 31 following that stated.

(c) Figure for 1963 relates to Rhodesia and Nyasaland.

## IMPORTS OF ZINC (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
<i>(cont.)</i>						
<b>Pakistan—</b>						
Unwrought (a) .. ..	2,781	4,960	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Zinc-white .. ..	378	15	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Lithopone .. ..	1,557	1,369	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Singapore—</b>						
Unwrought .. ..	16	192	2,532	4,354	4,428	7,115
Semi-manufactures (a)	597	272	248	387	330	1,356
Oxide .. ..	500	457	384	418	555	682
<b>Sarawak—</b>						
Semi-manufactures (a)	303	126	67	102	69	67
<b>Australia (b)—</b>						
Ore and concentrates ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	5,083	6,210	—
Unwrought and semi-manufactures (a) ..	1,839	195	273	(c) 177	(c) 198	(c) 132
Lithopone .. ..	1,497	1,073	1,142	927	976	1,081
<b>New Zealand (b)—</b>						
Unwrought (a) .. ..	} 3,048	{ 3,227	4,666	4,220	3,983	<i>n.a.</i>
Semi-manufactures (a)			592	905	787	<i>n.a.</i>
Oxide .. ..			10	2	2	<i>n.a.</i>
Lithopone .. ..			94	131	146	117
<b>Irish Republic—</b>						
Unwrought (a) .. ..	2,733	3,439	3,286	3,203	3,603	4,433
Semi-manufactures (a)	164	312	264	200	252	657
<b>OTHER COUNTRIES</b>						
<b>Albania—</b>						
Oxide .. ..	157	—	169	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Austria—</b>						
Ore .. ..	12,441	13,366	12,421	12,253	13,039	10,052
Unwrought (a) .. ..	5,541	8,293	7,286	7,182	5,488	6,499
Semi-manufactures (a)	422	502	548	627	626	727
Zinc-white and zinc-grey .. ..	483	512	445	477	518	688
Lithopone .. ..	372	221	289	391	498	312
<b>Belgium-Luxemburg</b>						
<b>E.U.—</b>						
Ore .. ..	416,148	442,420	501,723	530,130	517,386	612,283
Unwrought .. ..	24,023	25,719	12,087	11,447	14,020	19,655
Scrap .. ..	405	1,012	1,400	693	879	1,082
Semi-manufactures (a)	430	958	393	544	921	1,369
Oxide .. ..	2,013	1,991	1,774	1,862	2,070	2,631
Lithopone, etc. ..	1,361	1,646	1,636	2,497	4,105	3,555
<b>Denmark—</b>						
Unwrought .. ..	8,765	11,231	11,336	9,551	8,513	9,897
do. alloys .. ..	636	254	183	340	333	752
Scrap .. ..	67	89	91	186	108	88
Semi-manufactures (a)	5,084	6,449	6,744	6,422	7,542	6,645
Zinc-white .. ..	1,428	1,467	1,370	1,531	1,684	1,597
Lithopone .. ..	2,060	1,843	1,810	1,756	1,584	1,442
<b>Finland—</b>						
Unwrought (a) .. ..	5,770	3,781	7,769	6,985	6,629	5,395
Scrap .. ..	—	—	2	6	6	—
Semi-manufactures (a)	302	523	467	552	600	711
Zinc-white .. ..	403	268	417	313	326	356
Lithopone .. ..	1,737	1,767	1,517	1,457	1,119	829
<b>France—</b>						
Ore .. ..	276,635	362,325	326,980	342,758	326,894	355,676
Unwrought .. ..	20,207	21,767	13,636	24,207	30,064	25,869
Scrap .. ..	13,156	18,585	16,937	18,430	14,868	18,890
Semi-manufactures (a)	6,528	6,918	6,856	7,912	8,958	7,675
Oxide .. ..	1,341	2,219	1,725	1,233	1,415	2,270
Lithopone, etc. ..	21,385	23,592	19,499	17,805	12,092	14,797

(a) Including alloys.

(b) Years ended June 30 of that stated.

(c) Owing to reclassification not strictly comparable with earlier years.



## IMPORTS OF ZINC (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b>						
<i>(cont.)</i>						
<b>Germany (Federal)—</b>						
Ores .. .. .	122,680	143,539	118,840	162,081	147,583	232,295
Unwrought (a) .. .	133,960	164,635	181,395	124,797	139,642	184,064
Scrap (a) .. .. .	780	535	540	615	642	803
Semi-manufactures (a) .. .	14,795	14,731	20,979	18,643	22,028	23,812
Zinc-white and zinc-grey .. .	3,763	5,292	4,470	3,922	2,357	2,774
Lithopone .. .. .	2,867	2,816	3,042	3,098	2,144	2,160
<b>Greece—</b>						
Unwrought .. .. .	4,905	5,537	5,493	7,817	7,375	7,275
Semi-manufactures (a) .. .	357	179	219	149	260	330
Zinc-white .. .. .	485	395	362	340	433	289
Lithopone .. .. .	3,606	3,921	3,718	4,158	4,080	4,075
<b>Hungary—</b>						
Crude .. .. .	10,777	11,630	13,162	14,176	13,086	17,940
<b>Iceland—</b>						
Unwrought (a) .. .. .	12	12	8	15	17	13
Semi-manufactures (a) .. .	61	80	77	56	64	65
Zinc-white .. .. .	37	17	17	13	6	n.a.
<b>Italy—</b>						
Ore .. .. .	8,922	1,024	23	4,558	21,079	25,647
Unwrought .. .. .	28,952	41,636	33,235	54,368	64,964	88,954
do. alloys .. .. .	1,879	1,162	6,644			
Scrap .. .. .	7,005	4,473	3,876	7,002	7,913	6,761
Semi-manufactures (a) .. .	3,683	2,964	2,997	3,312	3,443	3,686
Oxide .. .. .	2,281	3,526	2,549	3,022	2,903	3,235
Lithopone, etc. . . . .	757	1,399	1,225	751	385	991
<b>Netherlands—</b>						
Ore .. .. .	75,554	103,926	83,802	84,376	81,229	94,740
Unwrought .. .. .	13,490	13,482	15,548	14,376	16,110	16,881
do. alloys .. .. .	2,165	2,102	1,758	1,491	1,597	1,860
Scrap .. .. .	424	249	1,262	1,997	210	548
Semi-manufactures (a) .. .	6,458	7,876	6,768	6,122	6,604	7,916
Oxide .. .. .	1,768	1,838	2,061	1,490	1,661	1,797
Lithopone, etc. . . . .	1,986	2,714	2,543	1,838	1,354	1,198
<b>Norway—</b>						
Ore .. .. .	83,521	77,485	101,521	85,712	80,260	111,230
Unwrought .. .. .	1,720	2,234	5,207	1,171	1,571	2,493
Scrap .. .. .	941	774	1,068	1,366	1,676	2,736
Semi-manufactures (a) .. .	2,629	2,414	1,946	1,906	1,942	1,658
Zinc-white .. .. .	451	568	904	1,112	1,042	643
Lithopone, etc. . . . .	235	242	224	144	159	145
<b>Poland—</b>						
Concentrates .. .. .	146,200	164,600	143,824	99,298	105,580	84,505
<b>Portugal—</b>						
Unwrought and scrap .. .	5,008	4,979	6,010	5,006	6,374	6,100
Semi-manufactures .. .	264	296	260	254	313	683
Oxide .. .. .	436	299	291	282	195	229
Lithopone .. .. .	2,113	2,741	2,724	2,204	2,296	2,316
<b>Spain—</b>						
Unwrought and scrap .. .	1	11	1,026	4,889	113	100
Semi-manufactures (a) .. .	13	29	106	267	71	108
Oxide .. .. .	79	113	145	523	195	231
Lithopone .. .. .	151	429	625	960	1,250	113
<b>Sweden—</b>						
Unwrought .. .. .	25,134	26,059	31,470	27,116	31,207	34,487
do. alloys .. .. .	2,442	2,579	3,749	2,294	2,775	3,334
Scrap .. .. .	55	61	72	29	89	132
Semi-manufactures (a) .. .	1,281	1,617	1,649	1,580	1,532	1,585
Zinc-white .. .. .	3,541	3,355	3,454	2,347	1,873	2,086
Lithopone, etc. . . . .	4,348	3,927	3,110	2,506	2,665	2,100

(a) Including alloys.

## IMPORTS OF ZINC (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> (cont.)						
Switzerland—						
Unwrought .. ..	20,082	20,342	25,301	22,784	24,114	25,401
Semi-manufactures (a)	3,551	3,125	3,456	3,263	4,303	4,509
Zinc-white .. ..	1,560	1,820	1,651	1,398	1,287	1,126
U.S.S.R.—						
Unwrought .. ..	49,200	70,600	57,900	16,000	29,230	35,820
do. alloys .. ..	5,905	5,807	5,800	5,400	4,000	3,840
Semi-manufactures ..	3,937	3,838	3,900	3,900	700	780
Yugoslavia—						
Unwrought .. ..	2,090	1,604	2,961	1,646	2,197	7,347
Semi-manufactures ..	75	182	140	241	329	186
Oxide .. ..	785	1,451	564	710	241	46
Lithopone .. ..	507	601	506	n.a.	1,269	669
Angola—						
Semi-manufactures (a)	57	90	114	111	289	276
Oxide .. ..	42	59	44	35	52	106
Egypt—						
Unwrought .. ..	2,411	1,954	509	491	n.a.	n.a.
Malagasy Republic—						
Semi-manufactures (a)	87	76	53	105	108	104
Oxide .. ..	—	6	28	15	2	19
Morocco—						
Unwrought .. ..	557	454	576	567	731	912
Semi-manufactures (a)	284	240	151	253	251	239
Oxide .. ..	560	566	496	479	432	n.a.
Lithopone .. ..	1,358	1,217	969	1,273	1,386	1,569
Mozambique—						
Semi-manufactures ..	25	9	27	48	n.a.	n.a.
Oxide .. ..	93	88	54	78	n.a.	n.a.
South Africa—						
Unwrought .. ..	33,767	41,385	36,628	38,406	48,322	38,289
Semi-manufactures ..	154	943	694	382	980	1,581
Lithopone .. ..	1,097	1,458	1,473	1,498	1,512	1,378
Oxide .. ..	270	389	115	150	185	267
Sudan—						
Unwrought .. ..	20	—	—	—	—	74
Semi-manufactures ..	195	58	166	54	9	187
Tunisia—						
Unwrought and scrap (a)	25	—	108	59	96	n.a.
Semi-manufactures (a)	80	86	93	98	128	n.a.
Oxide .. ..	144	200	205	244	394	n.a.
Honduras—						
Unwrought .. ..	20	18	27	20	39	—
Semi-manufactures ..	78	31	59	31	9	48
Mexico—						
Semi-manufactures ..	32	45	43	48	80	70
Oxide .. ..	43	45	39	46	100	n.a.
Nicaragua—						
Semi-manufactures ..	65	38	721	1,078	147	74
United States—						
Ore (Zn content) .. ..	332,071	278,067	363,540	357,343	386,880	439,905
Unwrought .. ..	118,154	119,748	138,829	249,589	197,607	272,042
Dross and scrap .. ..	2,568	3,371	4,198	1,814	1,308	784
Semi-manufactures ..	3,696	5,003	1,684	3,031	4,068	2,104
Oxide .. ..	12,377	7,546	10,264	12,939	12,292	13,885
Lithopone .. ..	142	154	170	162	104	220
Argentina—						
Unwrought .. ..	428	439	2,490	2,138	2,133	4,060
Sheets and plates ..	63	71	35	25	326	361
Zinc-white .. ..	2	10	6	18	26	71

(a) Including alloys.

## IMPORTS OF ZINC (cont.)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968	
<b>OTHER COUNTRIES</b>							
<i>(cont.)</i>							
<b>Brazil—</b>							
Unwrought (a) ..	38,288	30,222	31,075	40,780	35,876	42,404	
Semi-manufactures (a) ..	17	344	3	3	—	—	
Zinc-white .. ..	120	70	300	59	38	87	
Lithopone .. ..	7,708	6,483	5,982	5,447	3,441	3,548	
<b>Chile—</b>							
Unwrought .. ..	5,238	7,756	6,393	<i>n.a.</i>	5,941	<i>n.a.</i>	
Bars and sheets (a) ..	285	221	187	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Zinc-white .. ..	1	—	31	<i>n.a.</i>	—	<i>n.a.</i>	
Lithopone .. ..	10	18	20	<i>n.a.</i>	5	<i>n.a.</i>	
<b>Colombia—</b>							
Unwrought (a) ..	4,739	4,301	2,311	7,564	2,296	4,166	
Semi-manufactures (a) ..	148	168	95	49	744	54	
Zinc-white .. ..	1,642	1,121	7	31	16	5	
Lithopone .. ..	790	489	186	549	196	236	
<b>Peru—</b>							
Semi-manufactures (a) ..	284	196	242	243	103	<i>n.a.</i>	
Zinc-white .. ..	21	15	72	25	—	<i>n.a.</i>	
Lithopone .. ..	337	414	374	230	—	<i>n.a.</i>	
<b>Uruguay—</b>							
Unwrought and sheets ..	<i>n.a.</i>	<i>n.a.</i>	735	1,037	868	<i>n.a.</i>	
Lithopone .. ..	<i>n.a.</i>	<i>n.a.</i>	282	250	270	<i>n.a.</i>	
Zinc-white .. ..	<i>n.a.</i>	<i>n.a.</i>	7	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
<b>Venezuela—</b>							
Unwrought .. ..	301	2,987	4,006	5,250	4,619	6,756	
Oxide .. ..	784	983	813	668	702	504	
Lithopone .. ..	400	490	422	406	490	518	
<b>Burma—</b>							
Unwrought .. ..	22	318	433	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Semi-manufactures (a) ..	327	188	—	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
<b>Formosa—</b>							
Unwrought (a) ..	3,740	4,132	5,631	6,765	10,455	<i>n.a.</i>	
Semi-manufactures (a) ..	145	254	539	216	348	<i>n.a.</i>	
Lithopone .. ..	1,394	1,238	1,375	1,052	1,133	<i>n.a.</i>	
<b>Iran (b)—</b>							
Unwrought .. ..	157	166	448	731	1,757	3,245	
Semi-manufactures (a) ..	85	66	75	173	1,725	226	
Oxide .. ..	448	314	488	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	
Lithopone .. ..	1,717	1,242	973	1,178	1,410	1,806	
<b>Iraq—</b>							
Semi-manufactures ..	15	21	<i>n.a.</i>	196	32	<i>n.a.</i>	
<b>Israel—</b>							
Unwrought (a) ..	2,019	2,748	3,484	2,678	3,673	3,769	
Semi-manufactures ..	401	291	402	276	433	566	
Oxide .. ..	423	612	592	368	424	524	
<b>Japan—</b>							
Ore .. ..	145,176	283,891	374,325	439,066	604,380	843,138	
Unwrought .. ..	8,271	67,948	6,938	7,529	17,815	8,417	
Scrap .. ..	27	43	11	84	95	4	
Semi-manufactures (a) ..	79	21	81	—	10	290	
<b>Korea (South)—</b>							
Unwrought .. ..	10,302	4,741	8,791	6,748	4,527	<i>n.a.</i>	
Semi-manufactures ..							
Lithopone .. ..		1,500	1,761	1,558	981	2,259	<i>n.a.</i>
<b>Lebanon—</b>							
Unwrought .. ..	690	655	581	926	447	<i>n.a.</i>	
Semi-manufactures ..	248	65	89	65	49	<i>n.a.</i>	
Oxide and lithopone ..	57	105	90	130	100	<i>n.a.</i>	
<b>Philippine Republic—</b>							
Unwrought (a) ..	7,694	10,199	10,785	16,100	16,000	<i>n.a.</i>	
Semi-manufactures (a) ..	1,541	2,253	534				
Oxide .. ..	880	676	780		<i>n.a.</i>	909	<i>n.a.</i>
Lithopone .. ..	422	423	209		<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

(a) Including alloys.

(b) Years ended March 20 of year following that stated.

IMPORTS OF ZINC (*cont.*)

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>OTHER COUNTRIES</b> ( <i>cont.</i> )						
Syria—						
Oxide and lithopone ..	568	869	505	(b) 177	46	(b) 113
Thailand—						
Unwrought (a) ..	9,147	10,341	8,930	11,412	16,387	14,414
Semi-manufactures (a) ..	1,595	1,660	1,594	2,448	2,128	2,104
Oxide .. .. .	343	392	576	650	690	1,053
Lithopone .. ..	538	653	912	884	1,226	846
Turkey—						
Unwrought .. ..	1,920	2,238	5,322	3,102	4,010	7,988
Semi-manufactures (a) ..	3,289	2,728	2,388	2,708	2,028	1,361
Oxide .. .. .	1,718	2,088	2,426	2,325	2,537	2,487
Lithopone .. ..	73	129	5	<i>n.a.</i>	—	—

(a) Including alloys.

(b) Oxide only.

## ZIRCONIUM MINERALS

### PRODUCTION OF ZIRCONIUM MINERALS

Long tons

Producing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Nigeria .. .. .	791	153	—	—	<i>n.a.</i>	<i>n.a.</i>
Ceylon (b) .. .. .	<i>n.a.</i>	<i>n.a.</i>	(a) 2	151	119	25
Malaysia (West) (a) .. .. .	258	145	582	774	465	1,109
Australia—						
Zircon concentrates .. .. .	184,830	184,082	226,863	235,649	283,682	309,910
<b>OTHER COUNTRIES</b>						
Egypt .. .. .	39	40	—	383	49	<i>n.a.</i>
Malagasy Republic .. .. .	382	504	634	693	205	<i>n.a.</i>
Senegal .. .. .	3,022	546	—	—	—	—
South Africa .. .. .	2,364	—	—	—	—	—
Brazil (b) .. .. .	350	508	485	487	413	<i>n.a.</i>

Zirconium minerals are also known to have been produced in India, the U.S.S.R., the United States and Cambodia.

(a) Exports.

(b) Zircon and baddeleyite.

### EXPORTS OF ZIRCONIUM MINERALS, ETC.

Long tons

Exporting Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
Nigeria—						
Ores and concentrates	876	—	20	—	536	—
Ceylon—						
Baddeleyite .. .. .	<i>n.a.</i>	<i>n.a.</i>	2	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Malaysia (West)—						
Zircon .. .. .	258	145	582	774	465	1,109
Australia—						
Zircon concentrates .. .. .	179,697	198,664	216,661	210,428	247,179	266,121
<b>OTHER COUNTRIES</b>						
Germany (Federal)—						
Ore .. .. .	567	1,669	1,252	777	710	1,244
Malagasy Republic .. .. .	<i>n.a.</i>	—	3	123	—	—
Senegal—						
Zircon .. .. .	3,247	—	—	—	—	<i>n.a.</i>
South Africa—						
Zircon concentrates .. .. .	2,504	71	2	—	—	—
United States—						
Ores and concentrates	1,266	2,232	1,573	2,063	2,437	1,809
Zirconium metal, etc. .. .	131	238	95	57	35	103

## IMPORTS OF ZIRCONIUM MINERALS, ETC.

Long tons

Importing Country and Description	1963	1964	1965	1966	1967	1968
<b>COMMONWEALTH COUNTRIES</b>						
United Kingdom— Zirconium ores ..	32,356	49,351	42,140	36,885	24,721	49,265
Canada— Zirconium alloys ..	<i>n.a.</i>	8	10	12	56	98
Zirconium oxide ..	(£20,172)	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Zirconium silicate ..	(£105,702)	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>OTHER COUNTRIES</b>						
France— Zirconium ore ..	19,374	22,695	29,349	27,562	17,618	23,542
Germany (Federal)— Zirconium ore ..	25,176	28,661	25,084	26,285	22,229	29,327
Italy— Zirconium ore ..	10,980	13,029	11,603	14,260	17,523	16,808
United States— Zirconium ore ..	46,913	39,655	52,563	51,765	52,950	53,482
Zirconium metal ..	—	24	16	<i>n.a.</i>	73	5
Brazil— Zirconium ore ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	1,000	2,084	1,432
Japan— Zirconium ore ..	<i>n.a.</i>	<i>n.a.</i>	25,571	29,583	51,691	57,447
Turkey— Zirconium ore ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	116	224

## OTHER MINERALS AND METALS

These minerals are not separately recorded in the statistical returns of several countries.

Country and Description	1963	1964	1965	1966	1967	1968
<b>Germanium</b> (in terms of metal)						
<b>PRODUCTION*</b> —						
Congo Republic Lb.	16,060	18,230	32,271	33,003	763	—
South West Africa Lb.	31,132	—	—	1,854	<i>n.a.</i>	<i>n.a.</i>
United States (b) Lb.	20,000	15,000	30,000	30,000	30,000	30,000
<b>EXPORTS</b> —						
Italy .. .. Lb.	<i>n.a.</i>	53	1,512	3,086	6,834	9,039
South-West Africa Lb.	468	11,434	7,023	5,710	<i>n.a.</i>	<i>n.a.</i>
<b>IMPORTS</b> —						
Italy .. .. Lb.	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	881	1,323	1,102
<b>Indium</b>						
<b>PRODUCTION†</b> —						
Japan Troy ounces	150,800	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>Nepheline Syenite</b>						
<b>PRODUCTION</b> —						
Canada .. .. Ton	226,786	259,196	303,555	327,407	358,572	290,592
Norway .. .. Ton	21,653	30,258	40,369	56,401	64,180	81,712
<b>EXPORTS</b> —						
Canada .. .. Ton	181,484	202,653	220,714	235,379	274,654	288,555
<b>IMPORTS</b> —						
Mexico .. .. Ton	<i>n.a.</i>	<i>n.a.</i>	84	102	161	<i>n.a.</i>
United States .. Ton	175,749	183,656	193,724	226,281	256,837	271,981
<b>Perlite</b>						
<b>PRODUCTION</b> —						
United Kingdom Ton	3,895	1,765	255	258	116	70
Australia .. Ton	—	489	764	1,544	1,389	996
New Zealand .. Ton	564	914	1,124	1,028	1,055	1,840
Greece .. .. Ton	28,879	39,142	80,586	102,799	<i>n.a.</i>	130,000
Morocco .. .. Ton	<i>n.a.</i>	<i>n.a.</i>	243	—	—	—
Mexico .. .. Ton	<i>n.a.</i>	<i>n.a.</i>	8,217	9,936	10,405	9,772
United States .. Ton	361,000	381,000	448,000	489,000	570,000	498,000
Turkey .. .. Ton	1,000	1,200	<i>n.a.</i>	<i>n.a.</i>	20	<i>n.a.</i>
<b>Sodium Carbonate</b> (Natural)						
<b>PRODUCTION</b> —						
Kenya .. .. Ton	101,870	80,380	81,880	110,624	103,100	<i>n.a.</i>
United States (a) Ton	999,000	1,138,000	1,334,000	1,552,000	1,541,000	1,824,000
<b>EXPORTS</b> —						
Kenya .. .. Ton	106,873	63,997	73,501	105,065	96,777	110,718
Sudan .. .. Ton	345	149	421	7	61	67

\*Germanium is also produced in the United Kingdom.

†The United States is also a substantial producer of indium but statistics of production are not available.

(a) Sold or used by producers.

(b) From primary material of both domestic and foreign origin. Estimated.

OTHER MINERALS AND METALS (cont.)

Country and Description	1963	1964	1965	1966	1967	1968
<b>Sodium Sulphate (Natural)</b>						
<b>PRODUCTION—</b>						
Canada .. .. Ton	229,387	297,556	308,454	361,887	382,425	418,818
Spain .. .. Ton	32,936	41,815	40,757	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
United States (d) Ton	388,000	513,000	554,000	571,000	569,000	625,000
Chile .. .. Ton	31,909	30,200	55,448	33,625	17,928	<i>n.a.</i>
Argentina .. Ton	<i>n.a.</i>	<i>n.a.</i>	15,959	21,557	27,181	<i>n.a.</i>
Turkey .. .. Ton	1,244	2,387	4,885	7,306	8,968	10,865
<b>EXPORTS—</b>						
Canada .. .. Ton	58,346	95,820	103,571	90,551	110,565	97,308
<b>Tellurium</b>						
<b>PRODUCTION—</b>						
Canada .. .. Lb.	76,842	77,782	69,794	72,239	73,219	65,193
United States (a) Lb.	201,000	145,000	195,000	199,000	135,000	121,000
Peru .. .. Lb.	26,634	46,757	36,045	39,654	37,000	53,000
Japan .. .. Lb.	13,256	7,573	20,126	22,701	29,760	31,000
<b>EXPORTS—</b>						
Germany (Federal) Lb.	1,543	441	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Peru .. .. Lb.	2,121	22,992	62,131	113,421	25,199	<i>n.a.</i>
<b>IMPORTS—</b>						
Germany (Federal) Lb.	8,800	14,100	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Spain .. .. Lb.	639	573	3,166	3,161	4,377	2,275
<b>Wollastonite</b>						
<b>PRODUCTION—</b>						
Kenya .. .. Ton	—	—	—	—	12	1,360
New Zealand .. Ton	9	14	54	—	—	<i>n.a.</i>
Finland .. .. Ton	2,091	3,000	2,355	3,813	3,445	4,228
South West Africa Ton	—	116	205	330	<i>n.a.</i>	<i>n.a.</i>
Mexico (b) .. Ton	5,000	5,000	5,000	5,000	<i>n.a.</i>	<i>n.a.</i>
<b>United States—</b>						
Industrial .. ..	(c)	(c)	(c)	(c)	(c)	(c)
Ornamental .. Ton	2,679	3,237	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<b>EXPORTS—</b>						
South West Africa Ton	—	<i>n.a.</i>	232	56	<i>n.a.</i>	<i>n.a.</i>

(a) Including tellurium content of compounds.

(b) Estimated.

(c) In the range 30,000 to 40,000 tons per annum.

(d) Sold or used by producers.



# MINERALS PRODUCED IN COUNTRIES OF THE COMMONWEALTH AND STERLING AREA

*The following list comprises those minerals produced in Commonwealth and Sterling Area countries during the period 1963-1968 for which data have been given in the preceding tables. Minerals outside the general coverage of the statistics in this Summary are excluded. Where the name of an element appears alone, the word "ores" or "minerals" is implied to follow; this list does not extend to the production of metals.*

<p><b>Abu Dhabi</b> (Protected State) Petroleum</p> <p><b>Australia</b> Antimony Asbestos Barytes Bauxite Bentonite Beryl Cadmium China Clay Chrome Coal Cobalt Copper Diamonds Diatomaceous earth Feldspar, China stone Fluorspar Fuller's earth Garnet Gold Gypsum Iron Lead Lithium Magnesite, Dolomite Manganese Mica Molybdenum Monazite Natural gas Perlite Petroleum Phosphate Platinum Pyrites Salt Selenium Sillimanite, Andalusite Silver Sulphur Talc, Pyrophyllite Tantalite, Columbite Tin Titanium Tungsten Uranium Zinc Zircon</p> <p><b>Bahamas</b> Salt</p>	<p><b>Bahrein</b> (Protected State) Petroleum</p> <p><b>Barbados</b> Natural gas Petroleum</p> <p><b>Botswana</b> Asbestos Gold Manganese Silver</p> <p><b>Brunei</b> Natural gas Natural gasoline Petroleum</p> <p><b>Canada</b> Arsenic Asbestos Barytes Bentonite Bismuth Cadmium Coal Cobalt Copper Diatomaceous earth Feldspar Fluorspar Garnet Gold Graphite Gypsum, Anhydrite Indium Iron Lead Lithium Magnesite, Dolomite Mercury Mica Molybdenum Natural gas Natural gasoline Nepheline syenite Nickel Niobium Petroleum Platinum Potash salts Pyrites Salt Selenium Silver Sodium sulphate</p>	<p><b>Canada—(cont.)</b> Sulphur Talc Tantalite, Columbite Tellurium Thorium Tin Titanium Tungsten Uranium Zinc</p> <p><b>Ceylon</b> China clay Feldspar Graphite Ilmenite Magnesite, Dolomite Monazite Salt Zircon</p> <p><b>Christmas Island</b> Phosphate</p> <p><b>Cyprus</b> Asbestos Bentonite Chrome Cobalt Copper Gypsum Pyrites Salt</p> <p><b>Fiji</b> Gold Iron Manganese Silver</p> <p><b>Ghana</b> Bauxite Diamonds Gold Manganese Salt Silver</p> <p><b>Guyana</b> Bauxite Diamonds Gold Manganese</p> <p><b>Hong Kong</b> China clay Feldspar Graphite Iron Tungsten</p>
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**Minerals produced in countries of the Commonwealth and Sterling Area (cont.)**

<b>India</b>	<b>Kuwait</b> (Protected State)	<b>Ocean Island</b>
Asbestos	Petroleum	Phosphate
Barytes	<b>Lesotho</b>	<b>Pakistan</b>
Bauxite	Diamonds	Antimony
Bentonite	<b>Malaysia (West)</b>	Barytes
Beryl	Bauxite	Bauxite
Bromine	China clay	Bentonite
China Clay	Columbite	China clay
Chrome	Gold	Chrome
Coal	Iron	Coal
Copper	Manganese	Dolomite
Columbite	Monazite	Feldspar
Corundum	Tin	Fuller's earth
Diamonds	Titanium	Gypsum
Feldspar	Tungsten	Iron
Fluorspar	Zircon	Magnesite
Fuller's earth	<b>Malta</b>	Manganese
Garnet	Salt	Mica
Gold	<b>Mauritius</b>	Natural gas
Gypsum	Salt	Petroleum
Iron	<b>Nauru Island</b>	Salt
Lead	Phosphate	Strontium
Magnesite, Dolomite	<b>New Guinea</b>	Talc
Manganese	Gold	<b>Papua</b>
Mica	Platinum	Gold
Monazite	Silver	Manganese
Nitrate of potash	<b>New Hebrides</b>	<b>Qatar</b> (Protected State)
Petroleum	Manganese	Petroleum
Phosphate	<b>New Zealand</b>	<b>Rhodesia</b>
Salt	Asbestos	Antimony
Sillimanite, Kyanite	Bentonite	Arsenic
Silver	Coal	Asbestos
Talc, Pyrophyllite	Copper	Barytes
Titanium	Diatomaceous earth	Bauxite
Tungsten	Gold	Beryl
Vermiculite	Iron	China clay
Zinc	Magnesite, Dolomite	Chrome
Zircon	Natural gas	Coal
<b>Jamaica</b>	Natural gasoline	Copper
Bauxite	Perlite	Corundum
Gypsum	Petroleum	Fluorspar
Phosphate	Pumice	Gold
<b>Kenya</b>	Salt	Iron
Asbestos	Silver	Kyanite
Barytes	Tungsten	Lead
Beryl	Wollastonite	Lithium
China clay	<b>Nigeria</b>	Magnesite, Dolomite
Copper	China clay	Manganese
Diatomaceous earth	Coal	Mica
Feldspar	Gold	Nickel
Gold	Lead	Phosphate
Gypsum	Molybdenum	Pyrites
Magnesite	Monazite, Thorite	Silver
Mica	Natural gas	Talc
Phosphate	Petroleum	Tantalite
Pumice	Salt	Tin
Salt	Tantalite, Columbite	Tungsten
Silver	Tin	<b>St. Kitts</b>
Sodium carbonate	Tungsten	Salt
Vermiculite	Zircon	

**Minerals produced in countries of the Commonwealth and Sterling Area (cont.)**

<p><b>Sarawak</b> Antimony Bauxite Gold Petroleum Phosphate</p> <p><b>Seychelles</b> Phosphate</p> <p><b>Sierra Leone</b> Bauxite Chrome Diamonds Gold Iron Titanium</p> <p><b>Swaziland</b> Asbestos Barytes Beryl China clay Coal Gold Iron Pyrophyllite Silver Tin</p> <p><b>Tanzania</b> Bentonite China clay Coal Copper Corundum Diamonds Gold Gypsum Lead Magnesite Mica Niobium Phosphate Salt Silver Tin Tungsten Vermiculite</p> <p><b>Trinidad</b> Gypsum Natural asphalt Natural gas Natural gasoline Petroleum Sulphur</p> <p><b>Turks and Caicos Islands</b> Salt</p> <p><b>Uganda</b> Beryl Bismuth Cobalt Copper Gold Lithium</p>	<p><b>Uganda—(cont.)</b> Mica Phosphate Salt Silver Tantalite, Columbite Tin Tungsten</p> <p><b>United Kingdom</b> Barytes, Witherite Bromine China clay China stone Coal Copper Diatomaceous earth Fluorspar Fuller's earth Germanium Gypsum, Anhydrite Iron Lead Magnesite, Dolomite Natural gas Oil-shale Perlite Petroleum Salt Strontium Sulphur Talc Tin Zinc</p> <p><b>Virgin Islands</b> Salt</p> <p><b>Zambia</b> Cadmium Cobalt Copper Gold Gypsum Lead Manganese Mica Selenium Silver Tantalite, Columbite Tin Zinc</p> <hr/> <p><b>Burma</b> Antimony Barytes Bismuth Coal Copper Gold Gypsum</p>	<p><b>Burma—(cont.)</b> Iron Lead Nickel Petroleum Salt Silver Talc Tin Tungsten Zinc</p> <p><b>Iceland</b> Pumice</p> <p><b>Irish Republic</b> Barytes Coal Copper Gypsum Lead Pyrites Zinc</p> <p><b>Jordan</b> Gypsum Phosphate Salt</p> <p><b>Libya</b> Gypsum Petroleum Salt</p> <p><b>South Africa</b> Antimony Asbestos Barytes Bentonite Beryl Bismuth China clay Chrome Coal Copper Corundum Diamonds Diatomaceous earth Feldspar Fluorspar Fuller's earth Gadolinite Garnet Gold Graphite Gypsum Iron Lead Lithium Magnesite Manganese Mica Monazite Nickel Phosphate</p>
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**Minerals produced in countries of the Commonwealth and Sterling Area (cont.)**

**South Africa—(cont.)**

Platinum, Osmiridium  
Pyrites  
Salt  
Silver  
Sillimanite, Andalusite  
Sulphur  
Talc  
Tantalite  
Tin  
Titanium  
Tungsten  
Uranium  
Vanadium  
Vermiculite  
Zinc  
Zircon

**South West Africa**

Arsenic  
Beryl  
Bismuth  
Cadmium  
Copper  
Diamonds  
Feldspar  
Fluorspar  
Germanium  
Gold  
Graphite  
Iron  
Lead  
Lithium  
Manganese  
Mica

**South West Africa**

—(cont.)

Phosphate  
Salt  
Sillimanite, Kyanite  
Silver  
Tantalite, Columbite  
Tin  
Tungsten  
Vanadium  
Wollastonite  
Zinc

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