# ${\bf BERYLLIUM\ STATISTICS}^1$ U.S. GEOLOGICAL SURVEY

[All values are in metric tons (t) beryllium content unless otherwise noted]

Last modification: September 10, 2007

		J	∟ast mod	ification	: September 1			
	Mine				Apparent			World mine
Year	production	<b>Imports</b>	<b>Exports</b>	Stocks	consumption	( <b>\$/t</b> )	(98\$/t)	production
1935						249,000	2,960,000	16
1936	1	6			7	249,000	2,920,000	17
1937	3	7			7	220,000	2,500,000	15
1938	1	5			11	220,000	2,550,000	42
1939	3	17			18	220,000	2,590,000	36
1940	4	29			22	99,200		87
1941	6	97		80	44	99,200	1,100,000	164
1942	10	74		51	85	104,000		120
1943	13	176		38	111	99,200		218
1944	14	113		5	79	99,200		118
1945	1	44		3	63	99,200		39
1946	4	43		32	37	99,200		68
1947	5	28		14	63	210,000		57
1948	4	62		38	71	210,000		99
1949	17	138		84	37	210,000		183
1950	20	176		95	109	210,000		269
1951	18	157		51	123	210,000		243
1952	19	217		90	126			301
1953	27	290		181	97	158,000		298
1954	24	211		149	71	158,000		279
1955	18	219		105	140	158,000		323
1956	16	449		168	158	158,000		468
1957	19	265		264	156			410
1957	19	167		164	218			279
1959	15	292		140	218	158,000		406
1939	13	325		99		158,000		
1961	41	309		177	352 341	150,000		446 468
1961	35	310			282	120,000		399
1962				198		120,000		
1963	27	227 201	77	315	288	120,000		265
1965			77 54	261	161 212	120,000		178
		288		259				222
1966		83	28	284	219			165
1967		351	34	297	257	120,000		197
1968	6		43	234	335			263
1969		235	14	215	308			322
1970		182	18	207	345	130,000		249
1971		146	19	229	376			210
1972		122	44	251	282	130,000		157
1973		59	50	214	316	·		144
1974		55	65	161	190	132,000		126
1975		64	17	129	160	131,000		119
1976		39	52	144	46	131,000		93
1977		31	73	129	61	212,000		103
1978		38	37	49	246	227,000		105
1979	250	39	33	30	275	227,000		96
1980	270	67	26	49	291	265,000		373
1981	266	79	35	89	275	326,000		385
1982	198	104	61	194	136	·		327
1983	242	88	17	255	253	392,000		366
1984	219	80	18	205	302	392,000		359
1985	209	111	54	181	263	432,000	655,000	326

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	Mine				Apparent	/	Unit value	World mine
Year	production	Imports	Exports	Stocks	consumption	( <b>\$/t</b> )	(98\$/t)	production
1986	237	73	36	177	278	450,000	669,000	356
1987	220	133	77	164	289	505,000	724,000	345
1988	212	47	37	158	228	538,000	741,000	332
1989	184	38	34	153	187	575,000	756,000	301
1990	182	25	45	119	175	593,000	740,000	284
1991	174	55	33	112	203	617,000	739,000	263
1992	193	6	41	111	159	617,000	717,000	278
1993	198	8	20	114	183	650,000	734,000	243
1994	173	53	29	113	198	650,000	715,000	218
1995	202	32	61	162	198	849,000	908,000	247
1996	211	20	57	139	197	849,000	882,000	255
1997	231	20	40	110	316	849,000	862,000	276
1998	243	50	60	80	320	849,000	849,000	289
1999	200	20	40	20	385	849,000	830,000	248
2000	180	20	35	115	300	1,080,000	1,030,000	202
2001	100	242	150	100	297	165,000	152,000	120
2002	80	141	165	90	156	271,000	246,000	101
2003	85	163	269	45	57	249,000	221,000	107
2004	90	85	217	40	69	276,000	238,000	111
2005	110	93	201	35	84	218,000	182,000	137
2006	155	62	135	50	226	282,000	228,000	179

<sup>&</sup>lt;sup>1</sup>Compiled by D.A. Buckingham, L.D. Cunningham (retired), and K.B. Shedd. Data are calculated, estimated, or reported. See notes for more information.

# **Beryllium Worksheet Notes**

#### **Data Sources**

Sources of data for the beryllium worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB); Mineral Commodity Summaries (MCS) and its predecessor, Commodity Data Summaries (CDS); Mineral Facts and Problems (MFP); and Metal Prices in the United States through 1998 (MP98) and its predecessor, Metal Prices in the United States through 1991 (MP91). The years of publication and corresponding years of data coverage are listed in the References section below. Blank cells in the worksheet indicate that data are not available.

#### **Mine Production**

Mine production data represent the beryllium content of beryllium-bearing ores shipped from mines within the United States. Data are based on a beryllium metal equivalent of 4 percent beryllium in beryl and/or bertrandite ores, calculated as equivalent to beryl ore containing 11 percent BeO. Data are not available prior to the year 1936 and are withheld to avoid disclosing company proprietary data for the years 1964–67 and 1969–79. Data are from the MYB.

### **Imports**

Data for the years 1936–2000 represent the estimated beryllium content of beryllium ores and/or metal imported into the United States. Import data are not available prior to the year 1936. Data for the years 2001–06 represent the estimated beryllium content of ores and concentrates, oxide and hydroxide, unwrought metal (including powders), beryllium articles, waste and scrap, and beryllium-copper master alloy. For the years 1936–63, data are from the MYB; 1964-83, data are from the MFP; 1984-2006, data are from the MCS.

# **Exports**

Data for the years 1942–2000 represent the estimated beryllium content of various beryllium materials exported from the United States. Export data are not available prior to the year 1942. Data available for the years 1942–63 include the combined gross weights of several materials; reliable estimates of beryllium contents could not be made. Data for the years 2001–06 represent the estimated beryllium content of unwrought metal (including powders), beryllium articles, and waste and scrap. For the years 1964–79, data are from the MFP; for the years 1980–2006, data are from the MCS.

#### **Stocks**

Data are industry stocks, and represent the beryllium content of beryl and/or bertrandite held in consumer and/or producer inventories as of end of year, December 31. Stock data are not available prior to the year 1941. Data for the years 1941–2006 are from the MYB, except for the year 1966, which is from the CDS.

#### **Apparent Consumption**

All data are in terms of beryllium content. Consumption data for the year 1935 is not available. Data for the years 1936–41 are estimated consumption of beryl ore; for the years 1942–68, data are reported consumption of beryl ore; for the years 1969–73, data are reported consumption of beryl and bertrandite ores; for the years 1974–2006, data represent the apparent consumption of various beryllium materials. Data for the years 1936–73 are from the MYB; for the years 1974–2006, data are from the MCS.

# Unit Value (\$/t)

Unit value is defined as the value of 1 metric ton (t) of beryllium apparent consumption. Unit value data are estimated by using the yearend beryllium metal market price as reported in MP91 for the years 1935–46; MP98 for the years 1947–98; the MYB for the year 1999; and the MCS for the year 2000. For the years 2001–06, estimation of the beryllium unit value is calculated on an annual basis from the U.S. dollar (expressed as current dollars) value of imports of beryllium-copper master alloy divided by the estimated beryllium content of those imports, which is reported in the MCS.

#### Unit Value (98\$/t)

The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

#### **World Mine Production**

Data represent the estimated beryllium content of beryllium-bearing ores produced from mines throughout the world. World mine production data are based on a beryllium metal equivalent of 4 percent Be in beryl and bertrandite ores, reported as equivalent to beryl ore containing 11 percent BeO. Data are not available prior to the year 1935. U.S. production data for the years 1964–67 and 1969–79 are not available and not included in the total. Data are from the MYB.

#### References

- U.S. Bureau of Mines, 1933–96, Minerals Yearbook, 1932–94.
- U.S. Bureau of Mines, 1957–77, Commodity Data Summaries, 1948–77.
- U.S. Bureau of Mines, 1975, Mineral Facts and Problems, 1975 ed.: U.S. Bureau of Mines Bulletin 667.

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#### **Recommended Citation Format:**

U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, *in* Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, available online at http://pubs.usgs.gov/ds/2005/140/. (Accessed [date].)

# For more information, please contact:

**USGS Beryllium Commodity Specialist**