

QUARTZ CRYSTAL (INDUSTRIAL) STATISTICS¹

U.S. GEOLOGICAL SURVEY

[All values in metric tons (t) gross weight unless otherwise noted]

Last modification: October 3, 2012

Year	Production	Imports	Exports	Government shipments	Stocks	Apparent consumption	Unit value (\$/t)	Unit value (98\$/t)	World production
1932	0	0.17	NA	NA	NA	0.17	507	6,040	NA
1933	0	4.13	NA	NA	NA	4.1	242	3,030	NA
1934	0	3.73	NA	NA	NA	3.7	664	8,080	NA
1935	0	3.25	NA	NA	NA	3.3	531	6,320	NA
1936	0	10.3	NA	NA	NA	10	934	10,900	NA
1937	0	14.9	NA	NA	NA	15	4,170	47,200	NA
1938	0	25.5	NA	NA	NA	26	5,690	65,800	NA
1939	0	30.4	NA	NA	NA	30	4,560	53,500	NA
1940	0	57.4	NA	NA	NA	57	4,610	53,700	NA
1941	0	760	NA	NA	NA	760	4,980	55,200	NA
1942	0	1,100	NA	NA	NA	1,100	8,130	81,300	NA
1943	2.71	1,520	NA	NA	NA	1,500	7,500	70,800	NA
1944	1.78	961	NA	NA	NA	960	11,600	107,000	NA
1945	0	603	NA	NA	NA	600	10,300	93,600	NA
1946	0	98.2	NA	NA	NA	98	23,700	198,000	NA
1947	0	120	NA	NA	NA	120	14,800	108,000	NA
1948	0	556	NA	NA	NA	560	7,570	51,100	NA
1949	0	139	NA	NA	NA	140	10,500	71,900	NA
1950	0	109	NA	NA	NA	110	7,190	48,600	NA
1951	0	382	NA	NA	NA	380	5,350	33,400	NA
1952	0	476	NA	NA	NA	480	6,050	37,100	NA
1953	0	508	NA	NA	NA	510	4,410	26,900	NA
1954	0	278	NA	NA	NA	280	75,500	458,000	NA
1955	0	318	NA	NA	NA	320	39,700	242,000	NA
1956	0	236	NA	NA	NA	240	39,700	238,000	NA
1957	0	195	NA	NA	NA	200	39,700	231,000	NA
1958	1.67	122	NA	NA	NA	120	40,800	231,000	NA
1959	1.76	200	NA	NA	NA	200	40,800	228,000	NA
1960	2.08	307	NA	NA	NA	310	40,800	224,000	454
1961	2.95	387	NA	NA	NA	390	40,800	223,000	1,180
1962	5.90	147	NA	NA	NA	150	40,800	221,000	907
1963	8.16	128	NA	NA	NA	140	40,800	217,000	907
1964	13.6	120	NA	NA	NA	130	40,800	215,000	907
1965	22.7	147	NA	NA	NA	170	40,800	211,000	147
1966	NA	120	NA	NA	NA	160	40,800	205,000	2,120
1967	39.5	99.8	NA	NA	NA	140	56,500	276,000	102
1968	30.4	130	NA	NA	NA	160	56,900	267,000	102
1969	56.7	108	NA	NA	47.2	170	56,200	250,000	59.9
1970	59.4	42.6	130	47.6	42.2	24.6	76,900	323,000	75.8
1971	49.9	15.9	78.9	64.0	54.9	38.2	55,200	222,000	176
1972	72.6	29.5	67.6	104	43.5	150	56,700	221,000	177
1973	139	47.2	130	210	51.7	258	56,600	208,000	177
1974	240	176	136	186	116	237	56,700	187,000	181
1975	329	265	119	330	142	216	56,900	172,000	177
1976	385	4.54	293	88.9	132	195	142,000	407,000	181
1977	264	0	228	54.4	210	12.4	76,000	204,000	181
1978	149	0	0	35.8	131	264	106,000	265,000	363
1979	261	0	0	110	139	363	83,200	187,000	1,820
1980	343	0	141	0	65.3	276	494,000	977,000	1,910
1981	299	0	114	141	56.7	335	85,800	154,000	79.4
1982	217	0	83.5	7.26	55.3	142	189,000	319,000	90.7

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1983	193	0	49.0	1.81	40.8	160	121,000	198,000	272
1984	466	0	145	57.6	71.2	348	120,000	188,000	1,130
1985	258	0	111	38.1	101	155	216,000	327,000	454
1986	238	0	181	0	73.0	85.0	181,000	269,000	544
1987	381	0	266	0	72.0	116	174,000	250,000	454
1988	389	0	232	0	51.0	178	167,000	230,000	363
1989	464	0	57.0	75.0	76.0	457	135,000	177,000	800
1990	441	0	39.0	170	98.0	550	82,100	102,000	423
1991	441	0	53.0	44.0	99.5	431	110,000	132,000	454
1992	407	6.00	15.0	89.0	201	386	92,000	107,000	778
1993	394	8.00	24.0	134	200	512	195,000	220,000	500
1994	294	19.0	38.0	96.0	200	371	248,000	273,000	544
1995	351	47.0	35.0	0	200	363	332,000	355,000	435
1996	327	42.0	89.0	0	200	280	440,000	457,000	435
1997	355	63.0	74.0	0	200	343	307,000	312,000	450
1998	185	47.0	63.0	0	200	169	277,000	277,000	450
1999	192	NA	NA	0	200	NA	NA	NA	450
2000	189	NA	NA	0	105	NA	NA	NA	475
2001	NA	NA	NA	0	105	NA	NA	NA	500
2002	NA	NA	NA	0	105	NA	NA	NA	535
2003	NA	NA	NA	98	7	NA	NA	NA	NA
2004	NA	NA	NA	54	7	NA	NA	NA	NA
2005	NA	NA	NA	28	7	NA	NA	NA	NA
2006	NA	NA	NA	0	7	NA	NA	NA	NA
2007	NA	NA	NA	0	7	NA	NA	NA	NA
2008	NA	NA	NA	0	7	NA	NA	NA	NA
2009	NA	NA	NA	0	7	NA	NA	NA	NA
2010	NA	NA	NA	0	7	NA	NA	NA	NA
2011	NA	NA	NA	0	7	NA	NA	NA	NA

NA Not available.

¹Compiled by C.A. DiFrancesco (retired) and T.P. Dolley.

Data are calculated, estimated, or reported. See notes for more information.

Quartz Crystal (Industrial) Worksheet Notes

Data Sources

The sources of data for the quartz crystal (industrial) worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB), and Mineral Commodity Summaries (MCS) and its predecessor, Commodity Data Summaries (CDS). The years of publication and corresponding years of data coverage are listed in the References section.

Production

U.S. quartz crystal (industrial) production data represent the combined production of natural and cultured quartz crystals. Data are from the MYB for 1932–65, 1967–71, and 1996–2000, and the CDS and the MCS for 1972–95. Data were not available for 1966 and for 2001 to the most recent year.

Imports

Import data for natural and cultured quartz crystal are from the MYB for 1932–54, 1974–75, and 1997–2002 and the CDS and MCS for 1955–73, and 1976–96. Data for 1974–75 are for imports of raw and natural quartz crystal valued at \$0.50, or more, per pound (current dollars), and overestimates imports as it includes both electronic-grade and the lower grade lascas material. Data for 1977–89 were reported as less than ½ unit and were rounded to zero. Data were not available for 1999 to the most recent year.

Exports

Export data for natural and cultured quartz crystal are from the CDS and MCS for 1970–96 and from the MYB for 1997–2002. Data were not available for 1932–69 and for 1999 to the most recent year.

Government Shipments

Data were for shipments of natural quartz crystal from the U.S. Government stockpile and are from the CDS and MCS. Data were not available for 1932–69.

Stocks

Data reporting the amounts amount of natural and cultured quartz held in industry stocks are from the CDS and MCS. Data were not available for 1932–68. As of 2006, there will be no further sales of quartz crystal from the stockpile.

Apparent Consumption

Data for U.S. apparent consumption are for natural and cultured quartz crystal. Apparent consumption was estimated for 1932–65, 1967–73, and 1976–96 by using the formula:

$$\text{APPARENT CONSUMPTION} = \text{PRODUCTION} + \text{IMPORTS} - \text{EXPORTS} \pm \text{STOCK CHANGES} \pm \text{GOVERNMENT SHIPMENTS.}$$

No export, government shipment, or stock data were available for 1932–65 and 1967–68 and were assumed to be zero when apparent consumption was calculated. No production, export, government shipment, or stock data were available for 1966. Apparent consumption datum was estimated for that year by interpolation. No export, government shipment, or stock change data were available for 1969 and were assumed to be zero when apparent consumption was calculated. For 1932–69, apparent consumption was calculated to two significant digits because of limited data. Apparent consumption data for 1974–75 were estimated by liner regression. Apparent consumption data are from the MYB for 1997–98. Data were not available for 1999 to the most recent year.

Unit Value (\$/t)

Unit value is the value in dollars of 1 metric ton (t) of quartz crystal (industrial) apparent consumption. Unit value was estimated for the United States in actual dollars for 1932–98. The unit value (\$/t) was calculated by taking the weight average (using apparent consumption) of the price/average value for both natural and cultured quartz crystal from the MYB for 1932–61 and the CDS and the MCS for 1962–2000. For 1999 to the most recent year, insufficient data exist to calculate a unit value.

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 Production

Data for mine production are from the CDS and MCS. Data were not available for 1932–59, and 2003 to the most recent year. Values were estimated by regression for 1987, 1998, and 2000–02. Datum for 1966 does not include U.S. production.

References

U.S. Bureau of Mines, 1933–75, Minerals Yearbook, 1932–77.

U.S. Bureau of Mines, 1962–77, Commodity Data Summaries, 1962–77.
U.S. Bureau of Mines, 1978–95, Mineral Commodity Summaries, 1978–95.
U.S. Geological Survey, 1995–present, Minerals Yearbook, v. I. (Available via <http://minerals.usgs.gov/minerals>.)
U.S. Geological Survey, 1997–most recent, Mineral Commodity Summaries 1997–most recent. (Available via <http://minerals.usgs.gov/minerals>.)
U.S. Geological Survey and U.S. Bureau of Mines, 1996, Mineral Commodity Summaries, 1996.

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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, accessed [date], at <http://pubs.usgs.gov/ds/2005/140/>.

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