

THORIUM STATISTICS¹
U.S. GEOLOGICAL SURVEY

[All values in metric tons (t) thorium oxide content unless otherwise noted]

Last modification: December 12, 2012

Year	Production	Imports	Exports	Stocks	Government shipments	Apparent consumption	Unit value (\$/t)	Unit value (98\$/t)	World production
1902	NA	14.4	NA	NA	NA	14.4	NA	NA	NA
1903	NA	21.7	NA	NA	NA	21.7	NA	NA	NA
1904	NA	19.7	NA	NA	NA	19.7	NA	NA	NA
1905	NA	17.6	NA	NA	NA	17.6	NA	NA	NA
1906	NA	13.5	NA	NA	NA	13.5	NA	NA	NA
1907	NA	17.3	NA	NA	NA	17.3	NA	NA	NA
1908	NA	21.9	NA	NA	NA	21.9	NA	NA	NA
1909	NA	53.1	NA	NA	NA	53.1	NA	NA	NA
1910	NA	62.5	NA	NA	NA	62.5	NA	NA	NA
1911	NA	63.0	NA	NA	NA	63.0	NA	NA	NA
1912	NA	57.1	NA	NA	NA	57.1	NA	NA	NA
1913	NA	65.9	NA	NA	NA	65.9	NA	NA	NA
1914	NA	58.7	NA	NA	NA	58.7	NA	NA	NA
1915	NA	82.1	NA	NA	NA	82.1	NA	NA	NA
1916	NA	77.7	NA	NA	NA	77.7	NA	NA	NA
1917	NA	185	NA	NA	NA	185	NA	NA	NA
1918	NA	95.1	NA	NA	NA	95.1	NA	NA	NA
1919	NA	21.2	NA	NA	NA	21.2	NA	NA	NA
1920	NA	69.6	NA	NA	NA	69.6	NA	NA	NA
1921	NA	15.0	NA	NA	NA	15.0	NA	NA	NA
1922	NA	125	NA	NA	NA	125	NA	NA	NA
1923	NA	16.1	NA	NA	NA	16.1	NA	NA	NA
1924	NA	22.1	NA	NA	NA	22.1	NA	NA	NA
1925	NA	7.22	NA	NA	NA	7.22	NA	NA	NA
1926	NA	28.5	NA	NA	NA	28.5	NA	NA	NA
1927	NA	41.4	NA	NA	NA	41.4	NA	NA	NA
1928	NA	32.3	NA	NA	NA	32.3	NA	NA	NA
1929	NA	40.0	NA	NA	NA	40.0	NA	NA	NA
1930	NA	0	NA	NA	NA	0	NA	NA	NA
1931	NA	108	NA	NA	NA	108	NA	NA	NA
1932	NA	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA	NA
1947	NA	NA	NA	NA	NA	14.6	NA	NA	NA
1948	NA	NA	NA	NA	NA	18.4	NA	NA	NA
1949	NA	NA	NA	NA	NA	21.5	NA	NA	NA
1950	NA	NA	NA	NA	NA	23.9	NA	NA	NA
1951	NA	NA	NA	NA	NA	19.1	11,900	74,900	NA
1952	NA	NA	NA	NA	NA	16.9	11,600	71,000	NA
1953	NA	NA	NA	NA	NA	8.59	13,900	84,700	NA

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1954	NA	NA	NA	NA	NA	9.16	18,200	110,000	NA
1955	NA	NA	NA	NA	NA	33.3	18,200	111,000	NA
1956	NA	NA	NA	NA	NA	43.2	18,200	109,000	NA
1957	NA	NA	NA	NA	NA	65.8	17,400	101,000	NA
1958	NA	NA	NA	NA	NA	77.1	15,700	88,700	NA
1959	29.9	129	NA	NA	NA	96.0	15,400	86,200	NA
1960	0	48.6	NA	NA	NA	208	15,400	84,800	363
1961	40.8	181	3.38	NA	NA	166	12,100	65,900	466
1962	0	419	3.98	NA	NA	180	15,200	81,800	805
1963	W	350	2.14	NA	NA	50.0	13,200	70,400	827
1964	W	119	2.44	NA	NA	50.0	13,200	69,600	558
1965	W	111	1.48	NA	NA	50.0	20,700	106,000	640
1966	W	132	0.025	NA	NA	115	22,600	114,000	572
1967	W	114	0.026	NA	NA	114	19,800	96,800	562
1968	W	240	0.670	406	NA	239	17,600	82,800	549
1969	W	231	0.700	598	NA	230	17,600	78,400	701
1970	W	190	0.037	534	0.907	191	17,600	74,000	680
1971	W	188	NA	647	NA	75.8	17,600	71,000	735
1972	W	54.6	NA	396	39.0	344	17,600	68,700	1,140
1973	W	85.7	0.907	454	25.4	53.1	17,600	64,700	890
1974	W	9.07	70.8	390	61.7	30.0	17,600	58,300	789
1975	W	19.1	NA	363	0.9	25.0	17,600	53,400	731
1976	W	18.1	NA	363	3.63	30.0	17,600	50,500	694
1977	W	15.4	NA	363	9.07	30.0	17,600	47,500	699
1978	W	28.1	25.4	NA	9.98	14.0	22,200	55,500	NA
1979	0	26.0	5.00	NA	9.00	31.0	15,500	34,700	NA
1980	0	24.0	2.00	NA	3.00	25.0	16,000	31,700	NA
1981	0	33.0	6.00	NA	3.00	30.0	21,200	38,000	NA
1982	0	23.0	0.25	NA	0	77.0	24,500	41,400	NA
1983	NA	46.0	1.00	NA	0	47.0	31,000	50,700	NA
1984	NA	45.0	1.00	NA	0	51.0	35,900	56,300	NA
1985	NA	69.0	2.00	NA	2.00	74.0	35,900	54,300	NA
1986	NA	20.0	17.0	NA	0	72.0	38,000	56,500	NA
1987	NA	31.0	20.0	NA	0	39.0	41,000	58,800	NA
1988	NA	13.0	3.00	NA	0	64.0	45,000	62,000	NA
1989	NA	87.0	8.00	NA	0	57.0	50,000	65,800	NA
1990	NA	264	0.22	NA	2.17	65.5	55,000	68,600	NA
1991	NA	248	2.65	NA	0	54.3	63,800	76,400	NA
1992	0	201	5.25	NA	0	35.4	63,800	74,100	NA
1993	0	18.3	0.14	NA	0	8.26	65,000	73,400	NA
1994	0	2.31	2.32	NA	0	3.59	63,800	70,200	NA
1995	0	18.0	0.06	NA	0	5.39	88,500	94,700	NA
1996	0	26.5	0.180	35.2	0	4.92	88,500	92,000	NA
1997	0	11.4	0.180	12.8	0.82	13.0	82,500	83,800	NA
1998	0	5.51	0.840	NA	0	7.00	82,500	82,500	NA
1999	0	3.91	1.86	NA	0	7.00	82,500	80,700	NA
2000	0	8.20	3.43	NA	NA	6.00	82,500	78,100	NA
2001	0	1.37	5.40	NA	0	8.67	82,500	75,900	NA
2002	0	0.48	0.65	NA	0	1.13	82,500	74,700	NA
2003	0	3.03	0.44	NA	0	2.62	82,500	73,100	NA
2004	0	3.94	0.54	NA	0	3.40	82,500	71,200	NA
2005	0	3.65	0.55	NA	0	3.10	82,500	68,900	NA

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2006	0	3.49	0.81	NA	0	2.7	175,000	141,000	NA
2007	0	4.71	1.21	NA	0	3.5	200,000	157,000	NA
2008	0	0.47	2.00	NA	0	NA	252,000	191,000	NA
2009	0	1.66	3.51	NA	0	NA	252,000	191,000	NA
2010	0	2.24	1.11	NA	1	1.13	252,000	188,000	NA
2011	0	4.22	3.17	NA	0	1.05	NA	NA	NA

NA Not available. W Withheld to avoid disclosing company proprietary data.

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

Thorium Worksheet Notes

Data Sources

The sources of data for the thorium worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB) and its predecessor, Mineral Resources of the United States (MR), and Mineral Commodity Summaries (MCS) and its predecessor, Commodity Data Summaries (CDS). Data were compiled in terms of contained or chemically equivalent ThO₂. The years of publication and corresponding years of data coverage are listed in the References section below.

Production

Production data are the amount of ThO₂ produced in the United States. Data were from the CDS and the MCS for 1959–62, 1979–82, and 1992 to the most recent year. Blank cells in the worksheet indicate that data were not available for 1902–58 and 1983–91. Data were withheld for 1963–78 in order to avoid disclosing proprietary data. Production was negligible for 1960.

Imports

Import data are the amount of contained ThO₂ in thorium alloys, compounds, metal, ore, and salts imported into the United States. Data were from the MR and the MYB from 1902–31 and 1990–93 and from the CDS and the MCS for 1959–89 and 1994 to the most recent year. Data were not available for 1932–58.

Exports

Export data are the amount of contained ThO₂ in thorium alloys, compounds, metal, ore, scrap, and waste exported from the United States. Data were from the CDS and the MCS for 1961–70, 1973–74, 1978–89, and 1994 to the most recent year and from the MR and the MYB for 1990–91. Data for 1992 and 1993 are unpublished revisions made by the USGS thorium commodity specialist. Data were not available for 1902–60, 1971–72, and 1975–77.

Stocks

Stock data were for the amount of contained ThO₂ held in industry stocks. Data were from the CDS and the MCS. Data were not available for 1900–67, 1978–95, and 1998 to the most recent year.

Government Shipments

Government shipment data were for the amount of contained ThO₂ in shipments from the U.S. Government's National Defense Stockpile (NDS) and the U.S. Department of Energy stockpile. Data were from the MCS for 1970, 1972–89, and 1997, and from the MYB for 1990–96. Data were not available for 1902–69, 1971, 1998–99, and 2000.

Apparent Consumption

Apparent consumption was estimated for 1902–31, 1967–73 by using the formula:

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

Apparent consumption was from the MYB for 1959–66 and 1974–81. Reported consumption, from the MYB, was used for apparent consumption for 1947–58 and 1982–2000. Data for 2001–07 are unpublished estimates made by the USGS thorium commodity specialist. Apparent consumption calculations for 2008–09 resulted in negative numbers. Data were not available for 1932–46.

Unit Value (\$/t)

Unit value is the value in dollars of 1 metric ton (t) of ThO₂ apparent consumption. Unit value was for contained ThO₂ and was estimated in actual U.S. dollars for 1951–2010 by using the price for 97 percent ThO₂ for 1951–77, 99 percent ThO₂ for 1978–94, 99.9 percent ThO₂ for 1995–2005, and 99.99 percent ThO₂ for 2006–09. Data were from the MR and the MYB. Data were not available for 1902–50 and 2010.

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. Data were not available for 1902–50.

World Production

World production data were for contained ThO₂ mine production. Data were from the CDS for 1960–77. Data were not available for 1902–59 and 1978 to the most recent year.

References

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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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