

THORIUM STATISTICS

By Carl A. DiFrancesco and James B. Hedrick

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

Last modification: February 12, 2004

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

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1954						9.16	18,200	110,000	
1955						33.3	18,200	111,000	
1956						43.2	18,200	109,000	
1957						65.8	17,400	101,000	
1958						77.1	15,700	88,700	
1959	29.9	129				96.0	15,400	86,200	
1960	0	48.6				208	15,400	84,800	363
1961	40.8	181	3.38			166	12,100	65,900	466
1962	0	419	3.98			180	15,200	81,800	805
1963		350	2.14			50.0	13,200	70,400	827
1964		119	2.44			50.0	13,200	69,600	558
1965		111	1.48			50.0	20,700	106,000	640
1966		132	0.025			115	22,600	114,000	572
1967		114	0.026			114	19,800	96,800	562
1968		240	0.670	406		239	17,600	82,800	549
1969		231	0.700	598		230	17,600	78,420	701
1970		190	0.037	534	0.907	191	17,600	74,040	680
1971		188		647		75.8	17,600	71,000	735
1972		54.6		396	39.0	344	17,600	68,730	1140
1973		85.7	0.907	454	25.4	53.1	17,600	64,700	890
1974		9.07	70.8	390	61.7	30.0	17,600	58,300	789
1975		19.1		363	0.9	25.0	17,600	53,430	731
1976		18.1		363	3.63	30.0	17,600	50,510	694
1977		15.4		363	9.07	30.0	17,600	47,450	699
1978		28.1	25.4		9.98	14.0	22,200	55,470	
1979	0	26.0	5.00		9.00	31.0	15,500	34,700	
1980	0	24.0	2.00		3.00	25.0	16,000	31,660	
1981	0	33.0	6.00		3.00	30.0	21,200	38,000	
1982	0	23.0	0.250		0	77.0	24,500	41,380	
1983		46.0	1.00		0	47.0	31,000	50,730	
1984		45.0	1.00		0	51.0	35,900	56,270	
1985		69.0	2.00		2.00	74.0	35,900	54,330	
1986		20.0	17.0		0	72.0	38,000	56,510	
1987		31.0	20.0		0	39.0	41,000	58,820	
1988		13.0	3.00		0	64.0	45,000	62,020	
1989		87.0	8.00		0	57.0	50,000	65,750	
1990		264	0.220		2.17	65.5	55,000	68,610	
1991		248	2.65		0	54.3	63,800	76,350	
1992	0	201	5.25		0	35.4	63,800	74,130	
1993	0	18.0	0.140		0	8.26	65,000	73,360	
1994	0	2.31	2.32		0	3.59	63,800	70,160	
1995	0	18.0	0.0600		0	5.39	88,500	94,660	
1996	0	26.5	0.180	35.2	0	4.92	88,500	91,970	
1997	0	11.4	0.180	12.8	0.82	13.0	82,500	83,790	
1998	0	5.51	0.840		0	7.00	82,500	82,500	
1999	0	3.91	1.86		0	7.00	82,500	80,720	
2000	0	8.20	3.43		-1.35	6.00	82,500	78,130	
2001	0	1.37	7.30		0	8.67	82,500	78,130	
2002	0	0.48	0.65		0	1.13	82,500	74,700	

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. Blank cells in the worksheet indicate that data were either not available or were withheld because they are proprietary.

Production

Production data were for the amount of ThO₂ produced in the United States. Data were from the CDS and the MCS for the years 1959–62, 1979–82, and 1992–2002. Blank cells in the worksheet indicate that data were not available for the years 1900–58 and 1983–91. Data were withheld for the years 1963–78 in order to avoid disclosing proprietary data. Production was negligible for 1960.

Imports

Import data were for 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 1902–1931 and 1990–2002 and from the CDS and the MCS for the years 1959–89. Blank cells in the worksheet indicate that data were not available for the years 1900–01 and 1932–58.

Exports

Export data were for 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 the years 1961–70, 1973–74, and 1978–89, and from the MR and the MYB for the years 1990–2002. Blank cells in the worksheet indicate that data were not available for the years 1900–60, 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. Blank cells in the worksheet indicate that data were not available for the years 1900–67, 1978–95, and 1998–2002.

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 Department of Energy stockpile. Data were from the MCS for the years 1970 and 1972–89, and from the MYB for the years 1990–2002. Blank cells in the worksheet indicate that data were not available for the years 1900–69 and 1971. A negative amount in 2000 indicates that material was added to the NDS.

Apparent Consumption

Apparent consumption was estimated for the years 1902–31, 1967–73 and 2001–02 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 the years 1959–66 and 1974–81. Reported consumption was used for apparent consumption from the MYB for the years 1947–58 and 1982–2000. Blank cells in the worksheet indicate that data were not available for the years 1900–1901 and 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 the years 1951–2000 by using the price for 97% ThO₂ for the years 1951–77, 99% ThO₂ for 1978–94, and 99.9% ThO₂ for 1995–2002. Data were from the MR and the MYB. Blank cells in the worksheet indicate that data were not available for the years 1900–50.

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. Blank cells in the worksheet indicate that data were not available for the years 1900–50.

World Production

World production data were for contained ThO₂ mine production. Data were from the CDS for the years 1960–77. Blank cells in the worksheet indicate that data were not available for the years 1900–59 and 1978–2002.

References

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