

COLUMBIUM (NIOBIUM) STATISTICS¹

U.S. GEOLOGICAL SURVEY

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

Last modification: October 30, 2008

Year	Mine production	Primary production	Producer shipments	Government shipments	Imports	Exports	Stocks	Consumption	Apparent consumption	Unit value (\$/t)	Unit value (98\$/t)	World mine production
1964	0	372		310	1,260	80	1,010	727	1,650	2,680	14,100	2,480
1965	0	889		320	1,420	2	1,760	1,010	1,760	2,680	13,900	3,120
1966		1,660		305	2,630	3	2,770	1,270	1,930	3,500	17,600	5,060
1967		889	453	399	2,720	3	3,970	1,500	1,910	3,060	14,900	5,150
1968		1,080	984	671	1,420	3	3,170	1,420	2,890	2,900	13,600	4,950
1969		1,160	801	734	1,800	19	3,620	1,590	2,070	3,310	14,700	6,610
1970	0	649	598	409	1,950	21	3,570	1,290	2,400	3,530	14,800	8,460
1971	0	463	439	17	1,150	9	2,830	1,520	1,890	3,280	13,200	3,740
1972	0	669	494	353	1,650	7	2,640	1,770	2,190	4,070	15,900	5,950
1973	0	679	617	1,060	2,120	22	2,970	1,960	2,820	4,480	16,400	14,700
1974	0	870	766	1,240	2,300	8	3,360	2,200	3,150	5,170	17,100	9,340
1975	0	447	483	210	1,330	12	2,930	1,580	1,950	5,390	16,300	7,860
1976	0	710	424	32	2,140	15	2,370	1,670	2,720	8,480	24,300	9,470
1977	0	660	489	0	2,320	17	2,500	1,990	2,170	8,700	23,400	8,800
1978	0	710	838	1	2,980	22	2,480	2,580	2,990	9,560	23,900	9,670
1979	0	440	917	0	3,780	23	3,010	2,870	3,230	21,400	48,100	14,400
1980		920	649	0	4,410	78	3,890	2,950	3,450	20,500	40,600	15,100
1981		519	414	0	3,610	41	3,780	2,830	3,680	19,300	34,600	14,800
1982			430	-12	1,970	40	2,710	1,670	2,990	14,600	24,700	10,600
1983	0		678	0	1,480	35		1,960	2,610	14,600	23,900	8,580
1984	0		668	0	2,790	36		2,450	3,480	11,800	18,500	13,900
1985	0		705	-97	2,720	35		2,710	3,420	11,800	17,900	14,800
1986	0		554	0	2,160	33		2,270	3,200	8,670	12,900	14,600
1987	0		597	0	2,750	39		2,350	3,310	7,660	11,000	9,360
1988	0		642	0	2,730	45		2,670	3,580	7,660	10,600	16,900
1989			662	0	3,640	104		2,440	3,400	10,300	13,500	14,100
1990				0	3,030	227		2,590	3,360	10,300	12,800	15,300
1991				0	3,290	270		2,410	3,310	8,930	10,700	15,700
1992				0	3,680	350		2,460	3,500	8,930	10,400	15,300
1993	0			0	3,510	300		2,470	3,500	8,200	9,250	12,400
1994	0			0	4,240	320		2,750	3,700	8,200	9,020	15,700
1995	0			0	4,450	370		2,860	3,800	9,460	10,100	15,600
1996	0			30	4,210	190		3,380	3,830	9,460	9,830	16,200
1997	0			126	6,120	70		3,770	4,030	9,460	9,610	20,500
1998	0			145	6,520	50		3,640	4,150	9,460	9,460	26,200
1999	0			280	6,260	160		3,460	4,100	9,460	9,260	24,600
2000	0			217	6,500	100		4,090	4,300	19,700	18,700	24,800

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2001	0			-4	7,170	140		4,230	4,400			31,100
2002	0			9	5,630	130		3,150	5,510	16,900	15,300	33,300
2003	0			223	5,590	170		3,670	5,640	16,400	14,900	40,400
2004	0			90	6,910	276		4,220	6,730	15,800	14,000	41,900
2005	0			152	7,610	337		4,600	7,430	16,000	13,800	60,300
2006	0			156	10,500	561		5,050	10,100	16,300	13,600	51,200
2007	0			0	10,100	1,100		6,510	9,020	23,200	18,800	60,400

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

Niobium (Columbium) Worksheet Notes

Data Sources

The sources of data for the niobium (columbium) 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), Mineral Facts and Problems (MFP), Mineral Commodity Profiles (MCP), and Metal Prices in the United States through 1998 (MP98). The years of publication and corresponding years of data coverage are listed in the References section below. Niobium data prior to 1964 were not included in the niobium statistics worksheet because they were either recorded in gross weight, combined with tantalum data, ambiguous in detail, or were not available. Blank cells in the worksheet indicate that data either were not available or were withheld because they are proprietary.

Mine Production

Mine production data represent the niobium content in niobium-bearing ores and mineral concentrates that were mined within the United States. A small, unreported quantity of niobium contained in niobium-bearing concentrates was produced in the years 1980–82 and 1989–92. For the years in which a zero is reported, no niobium-bearing ores and mineral concentrates were reported mined within the United States. Data are recorded from the MYB.

Primary Production

Primary production data represent the niobium content in ferroniobium that was produced in the United States. Data for the years 1964–81 are from the MYB. For the years 1982 to the most recent, data were not available.

Producer Shipments

Producer shipments data represent the niobium content of niobium metal, compounds, alloys, and other niobium materials that were shipped by domestic producers. For the years 1967–89 shipments data are from the MYB and the MFP. For the years 1964–66 and 1990 to the most recent, data were not available.

Government Shipments

Government shipments data are shipments or releases of niobium-bearing materials from the National Defense Stockpile (NDS). Negative numbers for the years 1982, 1985, and 2001 indicate an increase in the NDS inventory. Shipments data were recorded from the MFP and the MYB. Starting in 2002, government shipments were recorded from the MYB.

Imports

Import data represent the niobium content of U.S. imports for consumption of niobium, tantalum, and synthetic minerals, niobium oxide, ferroniobium, and niobium metal (unwrought, alloys, and powder). Data for the years before 1969 included the niobium content of tin slag and were recorded from the MFP. Starting in 2005, data were recorded from the MYB.

Exports

Export data represent the niobium content of various niobium materials that were exported from the United States. Data for the years 1964–71 were recorded from the MFP and data for the years 1972 to the most recent were recorded from the MYB.

Stocks

Stock data represent the niobium content of various niobium materials that were held in domestic inventories. Data for the years 1964–72 are from the MFP and the MCP, and data for the years 1973–82 are from the MFP and the MCS. Beginning in 1983, data were not available.

Consumption

Consumption data for the years 1964–76 represent the niobium content of niobium metal, ferroniobium, nickel niobium, and various niobium materials including small quantities of tantalum contained in some niobium materials, that were consumed in the United States. Data for the years 1977 to the most recent represent the niobium content of ferroniobium and nickel niobium that were consumed in the United States. Data were recorded from the MYB.

Apparent Consumption

Apparent consumption data represent the niobium content of various niobium-bearing materials that were consumed in the United States. Data for the years 1964–75 were recorded from the MFP and the MCP, and data for the years 1976 to the most recent were recorded from the MCS.

Unit Value (\$/t)

Unit value is defined as the value of 1 metric ton (t) of niobium apparent consumption. The 1964–2000 unit value was estimated using a yearend average price of niobium pentoxide contained in niobium concentrates as reported in the MP98 and the MYB. The price was converted to unit price (\$/t) of niobium in niobium pentoxide. Price data for 2001 was not available. Starting in 2002, unit value was estimated as the mass-weighted average value from U.S. niobium trade statistics, making unit value representative of the materials that comprise apparent consumption.

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

Mine production data represent the niobium content of niobium-bearing ores and mineral concentrates that were produced from mines throughout the world. Data for the years 1964–68 were recorded from the MFP and the MCP, and for the years 1969 to the most recent were recorded from the MYB.

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