

Mineral Industry Surveys

For information, contact:

Michael J. Magyar, Molybdenum Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4964, Fax: (703) 648-7757
E-mail: mmagyar@usgs.gov

Lisa A. Mersdorf (Data)
Telephone: (703) 648-7941
Fax: (703) 648-7975
E-mail: lmersdorf@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

MOLYBDENUM IN APRIL 2007

Domestic production of molybdenum (Mo) in concentrate in April 2007 was about 12% less than the output of the previous month and about the same as that of April 2006, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 5,330 metric tons (t) at the beginning of 2007 and about 3,970 t at the end of April.

According to Ryan's Notes (2007b), the April monthly average price range for U.S. ferromolybdenum (FeMo) was from \$31.188 to \$32.500 per pound of molybdenum content, compared with \$29.611 to \$30.500 in March. European FeMo monthly averages ranged from \$70.625 to \$71.938 per kilogram (kg) of molybdenum content in April compared with \$75.667 to \$77.000 per kg in March. In April, worldwide molybdenum oxide (MoO₃) prices ranged from \$28.006 to \$28.500 per pound versus \$27.778 to \$28.522 per pound in March.

A new resource estimate showed that Thompson Creek's Endako Mine in British Columbia, Canada, had 492 million metric tons of measured and inferred reserves, grading at

0.043% Mo, equating to about 460 million pounds of contained molybdenum. Mine life was extended about 10 years to 19 years overall. A new mine plan, including new operating costs, was to be developed, assuming long-term molybdenum price of \$10 per pound. The feasibility of combining the 3 existing open pits into 1 super pit, and boosting mine capacity from 30,000 metric tons per day (t/d) to 50,000 t/d also was to be investigated (Ryan's Notes, 2007a).

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, U.S. consumption by end use, and stocks of molybdenum material in March and April 2007. Export data for February and March 2007 and import data for March 2007 are also included.

References Cited

Ryan's Notes, 2007a, Endako gets new lease on life: Ryan's Notes, v. 13, no. 17, April 23, p. 4.
Ryan's Notes, 2007b, [untitled]: Ryan's Notes, v. 13, no. 19, May 7, p. 10.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2006 ^P		2007		
	January - December	January - April ^r	March	April	January - April
Production	59,800	20,100	5,240	4,620	19,900
Shipments: ²					
Domestic	38,600	13,200	3,630	3,570	14,000
Export	21,300	7,120	1,320	1,290	6,010

^PPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM
PRODUCTS¹

(Metric tons, contained molybdenum)

	2006 ^P		2007		
	January - December	January - April	March	April	January - April
Gross production	78,000	26,700	6,400	6,240	25,500
Internal consumption ²	47,400	16,500	3,620	3,330	14,900
Gross shipments	51,000	17,500	4,080	4,520	17,100

^PPreliminary.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS¹

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molybdenum ²	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2007, March:						
Steel:						
Carbon	14,300	W	--	--	W	14,300
High-strength low-alloy	39,800	8,950	--	--	11,300	60,000
Stainless and heat-resisting	171,000	63,800	--	W	6,510	242,000
Full alloy	158,000	293,000	--	--	1,510	453,000
Tool	82,500	W	--	--	--	82,500
Total	466,000	365,000	--	W	19,400	851,000
Cast irons (gray, malleable, and ductile iron)	W	6,860	--	--	763	7,620
Superalloys	59,700	W	--	W	77,000	137,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	88	5,180	--	--	--	5,270
Mill products made from metal powder ³	--	--	--	--	207,000	207,000
Cemented carbides and related products ⁴	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	820	820
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,300	11,300
Other	1,090	35,000	72,700	46,000	16,800	172,000
Grand total	605,000	413,000	72,700	46,000	333,000	1,470,000
Stocks, March 31, 2007	559,000	305,000	2,680	34,400	845,000	1,750,000
2007, April:						
Steel:						
Carbon	13,700	W	--	--	W	13,700
High-strength low-alloy	28,900	8,060	--	--	11,300	48,300
Stainless and heat-resisting	175,000	66,100	--	W	6,510	247,000
Full alloy	160,000	310,000	--	--	1,510	471,000
Tool	79,400	W	--	--	--	79,400
Total	457,000	384,000	--	W	19,400	860,000
Cast irons (gray, malleable, and ductile iron)	W	6,860	--	--	763	7,620
Superalloys	67,600	W	--	W	75,300	143,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	222	4,440	--	--	--	4,660
Mill products made from metal powder ³	--	--	--	--	194,000	194,000
Cemented carbides and related products ⁴	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	621	621
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,400	11,400
Other	1,090	30,700	72,700	79,600	16,800	201,000
Grand total	603,000	426,000	72,700	79,600	318,000	1,500,000
Stocks, April 30, 2007	539,000	305,000	2,680	26,500	847,000	1,720,000

W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes calcium molybdate.

³Includes ingot, wire, rod, and sheet.

⁴Includes construction, mining, oil and gas, metalworking machinery.

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2006		2007		
	January- December	January- March	February	March	January- March
Australia	88,800	7,350	--	--	--
Belgium	7,490,000	2,560,000	351,000	505,000	1,240,000
Brazil	113,000	--	36,300	53,900	90,800
Canada	2,680,000	728,000	177,000	361,000	816,000
Chile	259,000	46,500	--	522,000	522,000
China	405,000	389,000	--	11,800	47,800
India	82,800	2,170	11,800	--	11,800
Japan	2,260,000	501,000	188,000	131,000	405,000
Korea, Republic of	45,000	11,000	23,600	--	24,700
Mexico	6,070,000	1,240,000	192,000	373,000	1,210,000
Netherlands	10,300,000	2,690,000	1,240,000	571,000	3,700,000
Pakistan	--	--	38,800	--	38,800
Sweden	20,000	--	--	--	--
Switzerland	25,200	25,200	--	--	--
Taiwan	53,400	608	413	--	413
Thailand	9,740	--	--	--	9,620
United Kingdom	7,280,000	2,100,000	513,000	272,000	1,220,000
Vietnam	14,100	9,140	--	1,510	3,650
Other	9,420	3,980	--	1,090	2,540
Total	37,200,000	10,300,000	2,780,000	2,800,000	9,350,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2006		2007		
	January- December	January- March	February	March	January- March
Argentina	14,500	--	--	--	--
Australia	24,500	--	--	--	--
Brazil	37,700	25,000	--	--	--
Canada	1,760,000	385,000	73,900	67,500	191,000
Denmark	57	--	--	--	--
India	667	166	--	--	--
Japan	60	--	--	--	--
Mexico	143,000	49,300	--	--	762
Netherlands	14,000	--	--	97,500	97,500
Saudi Arabia	--	--	--	30,200	30,200
Singapore	1,630	--	--	--	--
Switzerland	12,000	12,000	--	--	--
United Kingdom	--	--	--	24,900	24,900
Total	2,010,000	471,000	73,900	220,000	345,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS¹

(Kilograms, unless otherwise specified)

Material	January-December 2006			March 2007			January-March 2007		
	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	9,570,000	5,900,000	\$167,000	691,000	436,000	\$10,600	1,950,000	1,230,000	\$33,400
Ore and concentrates other	10,900,000	5,000,000	227,000	2,250,000	1,020,000	55,400	6,640,000	3,140,000	157,000
Molybdenum chemicals:									
Oxides and hydroxides	629,000	NA	24,300	26,400	NA	886	67,000	NA	2,450
Molybdates of ammonium	1,430,000	844,000	34,100	79,200	44,600	2,150	217,000	123,000	6,920
Molybdates (all others)	241,000	72,700	2,810	25,900	10,300	297	49,600	14,600	693
Molybdenum orange	822,000	NA	5,110	51,300	NA	309	151,000	NA	859
Ferromolybdenum	4,810,000	3,060,000	165,000	268,000	175,000	8,980	1,320,000	833,000	47,100
Molybdenum powders	367,000	270,000	17,600	9,000	8,240	513	27,700	26,900	2,040
Molybdenum unwrought	191,000	191,000	10,800	667	667	69	17,400	17,400	1,110
Molybdenum waste and scrap	452,000	445,000	27,800	48,100	47,600	2,900	123,000	121,000	7,230
Molybdenum wire	18,600	NA	2,550	1,370	NA	224	4,240	NA	649
Molybdenum other	130,000	NA	17,000	11,200	NA	1,410	38,000	NA	4,060
Total	29,600,000	15,800,000	701,000	3,460,000	1,740,000	83,700	10,600,000	5,500,000	263,000

NA Not available.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

Source: U.S. Census Bureau.