

Mineral Industry Surveys

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MOLYBDENUM IN MAY 2006

Domestic production of molybdenum in concentrate in May 2006 was about 10% more than that of the previous month and about 27% more than that of May 2005, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 7,630 metric tons (t) at the beginning of 2006, and about 6,050 t at the end of May.

According to Ryan's Notes (2006), the May monthly average prices for U.S. ferromolybdenum (FeMo) ranged from \$26.611 to \$27.333 per pound of molybdenum content, compared with \$24.881 to \$25.375 in April. European FeMo monthly averages ranged from \$59.000 to \$60.222 per kilogram (kg) of molybdenum content in May, compared with \$52.875 to \$54.375 per kg in April. In May, worldwide molybdenum oxide (MoO₃) prices ranged from \$25.389 to \$26.044 per pound versus \$22.925 to \$23.325 per pound in April.

Kazakhstan state-owned National Atomic Company, Kazatomprom, announced its intention to enter the global molybdenum market. Kazatomprom formed an alliance, called

Molyken, with Eureka Mining Plc. (United Kingdom), which developed the Shorskoe molybdenum deposit in Kazakhstan. In June 2006, Kazatomprom will begin production of 130 to 140 metric tons per month of molybdenum concentrate for export, mostly to Russia and China. Within 2 years, Kazatomprom stated it would invest more than \$180 million to develop a refinery capable of producing technical-grade molybdenum oxide and ferromolybdenum (Metal Bulletin, 2006).

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 April and May 2006. Trade data for March and April 2006 are also included.

References Cited

Metal Bulletin, 2006, Kazakhstan to enter world molybdenum market by June:
Metal Bulletin, no. 8942, May 1, p. 16.
Ryan's Notes, 2006, [untitled]: Ryan's Notes, v. 12, no. 22, June 5, p. 10.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2005		2006		
	January- December ^p	January- May	April ^f	May	January- May
Production	57,900	22,500	4,770	5,240	25,300
Shipments: ²					
Domestic	38,200	14,600	3,600	3,540	16,900
Export	19,400	7,510	1,360	1,750	8,620

^pPreliminary. ^fRevised.

¹Data are rounded to no more than three significant digits.

²As reported by producers.

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

(Metric tons, contained molybdenum)

	2005		2006		
	January- December ^p	January- May	April	May	January- May
Gross production	78,500	32,700	5,980	7,020	33,800
Internal consumption ²	48,700	20,900	3,760	4,340	20,700
Gross shipments	46,700	20,000	3,970	4,710	22,400

^pPreliminary.

¹Data are rounded to no more than three significant digits.

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
2006, April:						
Steel:						
Carbon	12,400 ^r	W	--	--	W	12,400 ^r
High-strength low-alloy	34,800 ^r	10,000 ^r	--	--	11,300	56,200 ^r
Stainless and heat-resisting	175,000	65,000	--	W	6,510	246,000
Full alloy	170,000	211,000 ^r	--	--	1,510	382,000 ^r
Tool	65,300	W	--	--	--	65,300
Total	457,000 ^r	286,000 ^r	--	W	19,400	763,000 ^r
Cast irons (gray, malleable, and ductile iron)	W	8,170	--	--	763	8,940
Superalloys	92,500	W	--	(3)	156,000 ^r	249,000 ^r
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	129	3,000	--	--	--	3,120
Mill products made from metal powder ⁴	--	--	--	--	209,000	209,000
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	773	773
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,100	11,100
Other	1,090	34,300 ^r	74,600 ^r	1,840	16,800	129,000 ^r
Grand total	628,000 ^r	331,000 ^r	74,600 ^r	1,840	413,000	1,450,000
Stocks, April 30, 2006	508,000	232,000 ^r	4,260 ^r	19,200 ^r	848,000	1,610,000 ^r
2006, May:						
Steel:						
Carbon	13,000	W	--	--	W	13,000
High-strength low-alloy	36,500	9,170	--	--	11,300	57,000
Stainless and heat-resisting	161,000	63,700	--	W	6,510	232,000
Full alloy	177,000	218,000	--	--	1,510	397,000
Tool	60,600	W	--	--	--	60,600
Total	449,000	291,000	--	W	19,400	759,000
Cast irons (gray, malleable, and ductile iron)	W	7,870	--	--	763	8,640
Superalloys	88,400	W	--	(3)	147,000	236,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	112	2,650	--	--	--	2,760
Mill products made from metal powder ⁴	--	--	--	--	215,000	215,000
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	773	773
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,100	11,100
Other	1,090	33,000	74,600	1,840	16,800	127,000
Grand total	616,000	335,000	74,600	1,840	411,000	1,440,000
Stocks, May 31, 2006	421,000	239,000	4,260	15,600	851,000	1,530,000

^rRevised. 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.

³Included in "Other" of the "Superalloys" category.

⁴Includes ingot, wire, rod, and sheet.

⁵Includes 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	2005		2006		
	January- December	January- April	March	April	January- April
Australia	110,000	82,200	--	--	7,350
Austria	3,230	2,590	--	--	--
Belgium	9,430,000	876,000	1,420,000	629,000	3,190,000
Brazil	66,700	4,070	--	16,900	16,900
Canada	3,840,000	1,270,000	229,000	335,000	1,060,000
Chile	177,000	110,000	23,400	22,300	68,800
China	4,390,000	1,160,000	81,500	--	389,000
Costa Rica	3,810	2,620	--	--	--
India	41,100	34,400	--	--	2,170
Italy	35,100	35,100	--	--	--
Japan	2,050,000	516,000	205,000	194,000	695,000
Korea, Republic of	11,700	5,770	11,000	--	11,000
Mexico	3,130,000	906,000	554,000	464,000	1,700,000
Netherlands	15,000,000	6,160,000	721,000	862,000	3,550,000
Taiwan	3,600	3,600	608	--	608
United Kingdom	7,310,000	3,140,000	1,000,000	629,000	2,730,000
Other	767,000	144,000	29,200	--	38,300
Total	46,400,000	14,400,000	4,280,000	3,150,000	13,500,000

-- 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	2005		2006		
	January- December	January- April	March	April	January- April
Argentina	--	--	--	14,500	14,500
Austria	11,400	--	--	--	--
Brazil	17,200	7,430	25,000	12,300	37,300
Canada	1,930,000	522,000	220,000	120,000	504,000
Denmark	--	--	--	57	57
India	--	--	--	--	166
Indonesia	5,930	5,930	--	--	--
Japan	--	--	--	60	60
Mexico	88,700	4,530	14,500	17,800	67,100
Netherlands	33,300	33,300	--	--	--
Switzerland	--	--	--	--	12,000
Total	2,090,000	573,000	260,000	164,000	636,000

-- 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 2005			April 2006			January-April 2006		
	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	8,570,000	5,380,000	\$306,000	933,000	588,000	\$13,800	3,910,000	2,400,000	\$61,500
Ore and concentrates other	13,800,000	6,480,000	440,000	384,000	198,000	9,130	3,490,000	1,630,000	79,200
Molybdenum chemicals:									
Oxides and hydroxides	1,240,000	NA	42,500	59,700	NA	2,140	286,000	NA	10,900
Molybdates of ammonium	4,220,000	2,730,000	53,600	122,000	67,200	3,870	656,000	401,000	13,300
Molybdates (all others)	101,000	24,800	1,250	13,300	3,120	142	78,800	13,600	870
Molybdenum orange	983,000	NA	4,780	59,800	NA	338	253,000	NA	1,680
Ferromolybdenum	6,340,000	4,040,000	278,000	373,000	232,000	12,200	1,800,000	1,140,000	57,600
Molybdenum powders	92,900	78,500	7,740	3,870	3,870	452	24,700	21,600	2,480
Molybdenum unwrought	99,000	98,800	5,750	27,500	27,400	1,440	85,100	84,900	4,610
Molybdenum waste and scrap	503,000	480,000	35,600	21,400	21,300	1,100	157,000	157,000	10,500
Molybdenum wire	21,300	NA	3,160	801	NA	106	4,870	NA	665
Molybdenum other	163,000	NA	20,700	24,700	NA	2,250	69,000	NA	6,930
Total	36,200,000	19,300,000	1,200,000	2,020,000	1,140,000	47,000	10,800,000	5,850,000	250,000

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.