

# Mineral Industry Surveys

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## MOLYBDENUM IN JUNE 2006

Domestic production of molybdenum in concentrate in June 2006 was about 6% less than that of the previous month and about the same as that of June 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 5,830 t at the end of June.

According to Ryan's Notes (2006), the June monthly average prices for U.S. ferromolybdenum (FeMo) ranged from \$27.000 to \$27.611 per pound of molybdenum content, compared with \$26.611 to \$27.333 in May. European FeMo monthly averages ranged from \$58.567 to \$59.400 per kilogram (kg) of molybdenum content in June compared with \$59.000 to \$60.222 per kg in May. In June, worldwide molybdenum oxide (MoO<sub>3</sub>) prices ranged from \$25.000 to \$25.556 per pound versus \$25.389 to \$26.044 per pound in May.

Minera Escondida Ltd., Santiago, Chile, announced it was considering building a molybdenum recovery plant at the Escondida Mine in northern Chile and halted development of a

similar plant at its Puerto Coloso, Chile, facility. The \$12 million Puerto Coloso plant could have produced about 20 metric tons per day of 50% molybdenum concentrate by the end of 2006. The change was based on a longer term plan for molybdenum production at the mine, rather than at the Puerto Coloso facility, where copper concentrate was dried before shipment (Platts Metals Week, 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 May and June 2006. Trade data for April and May 2006 are also included.

### References Cited

Platts Metals Week, 2006, Chile's Escondida may build moly plant: Platts Metals Week, v. 77, no. 24, June 12, p. 13.  
Ryan's Notes, 2006, [untitled]: Ryan's Notes, v. 12, no. 26, July 3, p. 10.

TABLE 1  
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS<sup>1</sup>

(Metric tons, contained molybdenum)

	2005		2006		
	January- December <sup>p</sup>	January- June	May <sup>r</sup>	June	January- June
Production	57,900	27,300	5,130	4,800	30,000
Shipments: <sup>2</sup>					
Domestic	38,200	18,000	3,520	3,410	20,400
Export	19,400	9,370	1,580	1,550	10,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>As reported by producers.

TABLE 2  
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM  
PRODUCTS<sup>1</sup>

(Metric tons, contained molybdenum)

	2005		2006		
	January- December <sup>p</sup>	January- June	May	June	January- June
Gross production	78,500	39,500	7,020	7,090	40,800
Internal consumption <sup>2</sup>	48,700	25,100	4,340	4,440	25,200
Gross shipments	46,700	24,000	4,720 <sup>r</sup>	4,410	26,800

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3  
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS<sup>1</sup>

(Kilograms, contained molybdenum)

End use	Molybdc oxides	Ferro molyb- denum <sup>2</sup>	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
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	157,000 <sup>r</sup>	62,800 <sup>r</sup>	--	W	6,510	227,000 <sup>r</sup>
Full alloy	176,000 <sup>r</sup>	246,000 <sup>r</sup>	--	--	1,510	424,000 <sup>r</sup>
Tool	60,600	W	--	--	--	60,600
Total	443,000 <sup>r</sup>	318,000 <sup>r</sup>	--	W	19,400	781,000 <sup>r</sup>
Cast irons (gray, malleable, and ductile iron)	W	7,820 <sup>r</sup>	--	--	763	8,580 <sup>r</sup>
Superalloys	77,400 <sup>r</sup>	W	--	(3)	138,000 <sup>r</sup>	215,000 <sup>r</sup>
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 <sup>4</sup>	--	--	--	--	215,000	215,000
Cemented carbides and related products <sup>5</sup>	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	787 <sup>r</sup>	787 <sup>r</sup>
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,900 <sup>r</sup>	10,900 <sup>r</sup>
Other	1,090	33,000	75,100 <sup>r</sup>	1,840	16,800	128,000 <sup>r</sup>
Grand total	599,000 <sup>r</sup>	362,000 <sup>r</sup>	75,100 <sup>r</sup>	1,840	402,000 <sup>r</sup>	1,440,000
Stocks, May 31, 2006 <sup>f</sup>	420,000	226,000	3,600	16,800	850,000	1,520,000
2006, June:						
Steel:						
Carbon	12,900	W	--	--	W	12,900
High-strength low-alloy	36,100	8,930	--	--	11,300	56,400
Stainless and heat-resisting	175,000	64,600	--	W	6,510	246,000
Full alloy	173,000	246,000	--	--	1,510	420,000
Tool	49,600	W	--	--	--	49,600
Total	447,000	319,000	--	W	19,400	785,000
Cast irons (gray, malleable, and ductile iron)	W	8,500	--	--	763	9,260
Superalloys	77,100	W	--	(3)	133,000	210,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	73	3,170	--	--	--	3,240
Mill products made from metal powder <sup>4</sup>	--	--	--	--	189,000	189,000
Cemented carbides and related products <sup>5</sup>	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	777	777
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,100	11,100
Other	2,900	30,900	75,100	1,840	16,800	128,000
Grand total	604,000	362,000	75,100	1,840	371,000	1,410,000
Stocks, June 30, 2006	535,000	221,000	3,600	23,600	851,000	1,630,000

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

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

<sup>2</sup>Includes calcium molybdate.

<sup>3</sup>Included in "Other" of the "Superalloys" category.

<sup>4</sup>Includes ingot, wire, rod, and sheet.

<sup>5</sup>Includes construction, mining, oil and gas, metalworking machinery.

TABLE 4  
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES  
(including roasted concentrate), BY COUNTRY<sup>1</sup>

(Kilograms, contained molybdenum)

Country	2005		2006		
	January- December	January- May	April	May	January- May
Australia	110,000	91,400	--	--	7,350
Austria	3,230	2,590	--	--	--
Belgium	9,430,000	2,020,000	629,000	495,000	3,680,000
Brazil	66,700	7,250	16,900	--	16,900
Canada	3,840,000	1,770,000	335,000	237,000	1,300,000
Chile	177,000	111,000	22,300	23,000	91,800
China	4,390,000	1,750,000	--	8,570	398,000
Costa Rica	3,810	3,190	--	--	--
India	41,100	34,400	--	--	2,170
Italy	35,100	35,100	--	--	--
Japan	2,050,000	636,000	194,000	251,000	945,000
Korea, Republic of	11,700	5,770	--	--	11,000
Mexico	3,130,000	1,000,000	464,000	522,000	2,220,000
Netherlands	15,000,000	6,730,000	862,000	861,000	4,410,000
Taiwan	3,600	3,600	--	--	608
United Kingdom	7,310,000	3,140,000	629,000	688,000	3,420,000
Other	767,000	314,000	--	--	38,300
Total	46,400,000	17,700,000	3,150,000	3,090,000	16,500,000

-- Zero.

<sup>1</sup>Data 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 COUNTRY<sup>1</sup>

(Kilograms, contained molybdenum)

Country	2005		2006		
	January- December	January- May	April	May	January- May
Argentina	--	--	14,500	--	14,500
Austria	11,400	--	--	--	--
Brazil	17,200	14,800	12,300	--	37,300
Canada	1,930,000	846,000	120,000	492,000	996,000
Denmark	--	--	57	--	57
India	--	--	--	--	166
Indonesia	5,930	5,930	--	--	--
Japan	--	--	60	--	60
Mexico	88,700	4,530	17,800	39,200	106,000
Netherlands	33,300	33,300	--	--	--
Switzerland	--	--	--	--	12,000
Total	2,090,000	905,000	164,000	531,000	1,170,000

-- Zero.

<sup>1</sup>Data 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 PRODUCTS<sup>1</sup>

(Kilograms, unless otherwise specified)

Material	January-December 2005			May 2006			January-May 2006		
	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)
Ore and concentrates roasted	8,570,000	5,380,000	\$306,000	930,000	575,000	\$14,200	4,840,000	2,970,000	\$75,700
Ore and concentrates other	13,800,000	6,480,000	440,000	1,420,000	653,000	23,800	4,910,000	2,290,000	103,000
Molybdenum chemicals:									
Oxides and hydroxides	1,240,000	NA	42,500	58,400	NA	2,120	345,000	NA	13,000
Molybdates of ammonium	4,220,000	2,730,000	53,600	130,000	73,200	3,550	786,000	475,000	16,800
Molybdates (all others)	101,000	24,800	1,250	3,890	1,040	49	82,700	14,600	919
Molybdenum orange	983,000	NA	4,780	60,200	NA	377	314,000	NA	2,060
Ferromolybdenum	6,340,000	4,040,000	278,000	572,000	362,000	19,300	2,370,000	1,500,000	76,900
Molybdenum powders	92,900	78,500	7,740	5,220	3,850	345	29,900	25,400	2,820
Molybdenum unwrought	99,000	98,800	5,750	4	4	6	85,100	84,900	4,620
Molybdenum waste and scrap	503,000	480,000	35,600	55,400	53,000	2,970	213,000	210,000	13,500
Molybdenum wire	21,300	NA	3,160	1,300	NA	247	6,170	NA	912
Molybdenum other	163,000	NA	20,700	7,940	NA	1,270	77,000	NA	8,200
Total	36,200,000	19,300,000	1,200,000	3,250,000	1,720,000	68,200	14,100,000	7,570,000	318,000

NA Not available.

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

<sup>2</sup>Customs value.

Source: U.S. Census Bureau.