

# Mineral Industry Surveys

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## MOLYBDENUM IN JUNE 2008

Domestic production of molybdenum (Mo) in concentrate in June 2008 was about 22% less than the output of the previous month and about 24% less than that of June 2007, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 5,770 metric tons (t) at the beginning of 2008 and about 5,690 t at the end of June.

According to Ryan's Notes (2008), the June monthly average price range for U.S. ferromolybdenum (FeMo) was from \$35.406 to \$35.906 per pound of molybdenum content, compared with \$35.833 to \$36.250 in May. European FeMo monthly averages ranged from \$78.750 to \$79.288 per kilogram (kg) of molybdenum content in June compared with \$77.222 to \$77.894 per kg in May. In June, worldwide molybdenum oxide (MoO<sub>3</sub>) prices ranged from \$32.963 to \$33.475 per pound compared with \$32.189 to \$32.867 per pound in May.

Moly Mines Limited (Australia) announced the signing of a 10-year offtake agreement with ThyssenKrupp Metallurgie GmbH (Germany) for all molybdenum production from the Spinifex Ridge molybdenum project in the Pilbara Region of

Western Australia. At the planned molybdenum production rate of 24 million pounds per year and based on current molybdenum prices, the value of the agreement was expected to be approximately \$7 billion. The project was on track for construction completion and commissioning in the second half of 2009 (Moly Mines Limited, 2008).

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, U.S. consumption by end use, and consumer stocks of molybdenum material in May and June 2008. Export data for April and May 2008 and import data for May 2008 are also included.

### References Cited

Ryan's Notes, 2008, [untitled]: Ryan's Notes, v. 14, no. 27, July 7, p. 10.  
Moly Mines Limited, 2008, Moly Mines finalises offtake agreement for 100% of Spinifex Ridge production: Perth, Australia, Moly Mines Limited, June 24, 2 p. (Accessed June 23, 2009 at [http://www.molymines.com/public/documents/4/5/080624\\_OfftakeAnnouncement1.pdf](http://www.molymines.com/public/documents/4/5/080624_OfftakeAnnouncement1.pdf).)

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

(Metric tons, contained molybdenum)

	2007		2008		
	January- December	January- June <sup>r</sup>	May	June	January- June
Production	57,000	30,000	4,950	3,880	28,500
Shipments: <sup>2</sup>					
Domestic	40,600	21,000	3,470	3,280	21,900
Export	16,400	8,990	1,440	637	6,770

<sup>r</sup>Revised.

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

<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)

	2007		2008		
	January- December	January- June	May	June	January- June
Gross production	72,800	38,100 <sup>r</sup>	6,380	6,120	37,200
Internal consumption <sup>2</sup>	41,700	22,800 <sup>r</sup>	3,590	2,950	20,600
Gross shipments	48,700	24,500	4,130	4,440	26,300

<sup>r</sup>Revised.

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

<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
2008, May:						
Steel:						
Carbon	30,700	W	--	--	W	30,700
High-strength low-alloy	67,200	9,070	--	--	11,300	87,600
Stainless and heat-resisting	158,000	65,100	--	W	6,510	230,000
Full alloy	252,000	340,000	--	--	1,510	594,000
Tool	W	W	--	--	--	W
Total	508,000	415,000	--	W	19,400	942,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	72,800	W	--	W	88,300	161,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	5,570	--	--	--	5,570
Mill products made from metal powder <sup>3</sup>	--	--	--	--	194,000	194,000
Cemented carbides and related products <sup>4</sup>	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	501	501
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	16,500	34,100	73,500	73,600	16,800	214,000
Grand total	675,000	475,000	73,500	73,600	331,000	1,630,000
Stocks, May 31, 2008	352,000	308,000	3,390	9,700	859,000	1,530,000
2008, June:						
Steel:						
Carbon	30,700	W	--	--	W	30,700
High-strength low-alloy	70,800	9,070	--	--	11,300	91,300
Stainless and heat-resisting	172,000	64,600	--	W	6,510	243,000
Full alloy	246,000	333,000	--	--	1,510	581,000
Tool	W	W	--	--	--	W
Total	520,000	407,000	--	W	19,400	946,000
Cast irons (gray, malleable, and ductile iron)	W	20,800	--	--	763	21,500
Superalloys	62,600	W	--	W	90,300	153,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	5,460	--	--	--	5,460
Mill products made from metal powder <sup>3</sup>	--	--	--	--	176,000	176,000
Cemented carbides and related products <sup>4</sup>	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	827	827
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	16,500	32,700	72,800	78,700	16,800	217,000
Grand total	676,000	466,000	72,800	78,700	315,000	1,610,000
Stocks, June 30, 2008	307,000	343,000	3,370	5,080	845,000	1,500,000

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>Includes ingot, wire, rod, and sheet.

<sup>4</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	2007			2008		
	January- December	May	January- May	April	May	January- May
Belgium	6,730,000	740,000	2,580,000	733,000	212,000	3,330,000
Brazil	119,000	--	90,800	1,290	--	1,290
Canada	2,580,000	188,000	1,390,000	261,000	81,400	1,130,000
Chile	1,270,000	--	1,000,000	--	174,000	174,000
China	71,500	23,600	71,400	242,000	--	242,000
Finland	38,000	--	--	--	--	--
India	119,000	23,300	70,300	--	10,800	22,200
Italy	19,000	--	--	--	--	12,000
Japan	2,230,000	120,000	687,000	99,400	168,000	775,000
Korea, Republic of	232,000	--	24,700	54,700	88,200	302,000
Mexico	4,760,000	541,000	2,100,000	257,000	373,000	1,820,000
Netherlands	9,660,000	677,000	5,180,000	1,040,000	790,000	4,000,000
Pakistan	75,600	36,800	75,600	--	--	--
Switzerland	1,630	1,630	1,630	--	--	--
Taiwan	17,900	--	413	--	--	--
Thailand	9,620	--	9,620	--	--	--
United Kingdom	5,800,000	376,000	2,200,000	380,000	611,000	2,210,000
Vietnam	4,990	--	4,130	--	--	3,300
Other	80,800	698	4,920	38,000	13,200	136,000
Total	33,800,000	2,730,000	15,500,000	3,110,000	2,520,000	14,200,000

-- 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	2007			2008		
	January- December	May	January- May	April	May	January- May
Australia	25,000	11,200	11,200	--	--	--
Canada	838,000	47,700	310,000	139,000	103,000	521,000
Denmark	394	--	394	--	--	--
India	1,090	--	210	--	280	563
Mexico	23,700	8,560	19,100	--	--	13,000
Netherlands	145,000	11,100	145,000	--	--	98,200
Philippines	735	--	--	--	--	--
Saudi Arabia	149,000	15,200	45,500	--	--	--
South Africa	13,500	13,500	13,500	--	--	--
United Kingdom	24,900	--	24,900	--	--	--
Total	1,220,000	107,000	569,000	139,000	103,000	633,000

-- 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 2007			May 2008			January-May 2008		
	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	8,680,000	5,430,000	\$181,000	522,000	319,000	\$19,600	3,960,000	2,450,000	\$89,600
Ore and concentrates other	15,000,000	6,960,000	372,000	1,110,000	439,000	24,200	5,690,000	2,620,000	163,000
Molybdenum chemicals:									
Oxides and hydroxides	211,000	NA	8,020	18,000	NA	742	118,000	NA	5,060
Molybdates of ammonium	915,000	515,000	30,400	20,000	11,300	822	208,000	117,000	7,790
Molybdates (all others)	179,000	51,400	2,190	18,200	6,490	195	68,000	24,300	754
Molybdenum orange	600,000	NA	4,040	34,200	NA	276	186,000	NA	1,450
Ferromolybdenum	6,360,000	4,100,000	270,000	306,000	208,000	15,600	1,740,000	1,160,000	84,400
Molybdenum powders	72,900	60,800	4,990	NA	NA	NA	27,300	23,200	2,380
Molybdenum unwrought	117,000	117,000	7,460	20,000	20,000	1,280	60,700	60,500	3,910
Molybdenum waste and scrap	574,000	554,000	34,800	68,300	67,200	2,770	296,000	283,000	16,100
Molybdenum wire	17,900	NA	2,740	918	NA	279	7,750	NA	1,310
Molybdenum other	164,000	NA	20,900	49,200	NA	4,850	172,000	NA	17,900
Total	32,900,000	XX	938,000	2,170,000	XX	70,600	12,500,000	XX	394,000

NA Not available. XX Not applicable.

<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.