

# Mineral Industry Surveys

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## MOLYBDENUM IN JANUARY 2008

Domestic production of molybdenum (Mo) in concentrate in January 2008 was about 8% more than the output of the previous month and about 16% less than that of January 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 5,670 t at the end of January.

According to Ryan's Notes (2008), the January 2008 monthly average price range for U.S. ferromolybdenum (FeMo) was \$35.188 to \$35.531 per pound (lb) of molybdenum content, compared with \$31.821 to \$34.929 per lb in December 2007. European FeMo monthly averages ranged from \$77.750 to \$78.875 per kilogram (kg) of molybdenum content in January compared with \$74.400 to \$74.929 per kg in December. In January, worldwide molybdenum oxide (MoO<sub>3</sub>) prices ranged from \$32.938 to \$33.338 per lb versus \$32.300 to \$32.786 per lb in December.

Moly Mines Limited (Australia) announced plans of a strategic alliance with Chilean molybdenum producer Molymet

for its 20-million-ton-per-year Spinifex Ridge molybdenum mining project. Molybdenum concentrates from the Spinifex Ridge Mine were expected to be roasted by Molymet, or processed into FeMo, for at least 5 years, according to the company (Metal Pages, 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 December 2007 and January 2008. Export data for November and December 2007 and import data for December 2007 are also included.

### References Cited

- Metal Pages, 2008, Emerging Australian producer upbeat on moly market: Metal Pages, January 11. (Accessed April 17, 2009, via <http://www.metal-pages.com/news>.)  
Ryan's Notes, 2008, [untitled]: Ryan's Notes, v. 14, no. 5, February 4, p. 13.

TABLE 1  
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS<sup>4</sup>

(Metric tons, contained molybdenum)

	2007			2008
	January- December <sup>p</sup>	January	December	January
Production	57,000	5,530	4,300	4,660
Shipments: <sup>2</sup>				
Domestic	40,600	3,610 <sup>r</sup>	3,120	3,410
Export	16,400	2,110 <sup>r</sup>	1,220	1,300

<sup>p</sup>Preliminary. <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 <sup>p</sup>	January	December	January
Gross production	72,800	6,250 <sup>r</sup>	5,500	6,390
Internal consumption <sup>2</sup>	41,700	3,980	2,960	3,150
Gross shipments	48,700	4,790	3,350	4,700

<sup>p</sup>Preliminary. <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
2007, December:						
Steel:						
Carbon	30,200	W	--	--	W	30,200
High-strength low-alloy	61,800	8,750	--	--	11,300	81,900
Stainless and heat-resisting	170,000	63,800	--	W	6,510	240,000
Full alloy	232,000	300,000	--	--	1,510	533,000
Tool	37,400	W	--	--	--	37,400
Total	532,000	372,000	--	W	19,400	923,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	46,100	W	--	W	76,900	123,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	10	2,880	--	--	--	2,890
Mill products made from metal powder <sup>3</sup>	--	--	--	--	193,000	193,000
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	--	--	--	--	519	519
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,400	11,400
Other	1,090	28,700	72,800	43,200	16,800	163,000
Grand total	656,000	425,000	72,800	43,200	318,000	1,520,000
Stocks, December 31, 2007	556,000	294,000	4,100	23,100	859,000	1,740,000
2008, January:						
Steel:						
Carbon	31,000	W	--	--	W	31,000
High-strength low-alloy	65,400	7,720	--	--	11,300	84,500
Stainless and heat-resisting	171,000	64,400	--	W	6,510	242,000
Full alloy	244,000	323,000	--	--	1,510	568,000
Tool	15,300	W	--	--	--	15,300
Total	527,000	395,000	--	W	19,400	941,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	75,500	W	--	W	78,800	154,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	127	6,510	--	--	--	6,640
Mill products made from metal powder <sup>3</sup>	--	--	--	--	209,000	209,000
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	--	--	--	--	646	646
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,400	11,400
Other	1,090	27,900	72,900	74,400	16,800	193,000
Grand total	681,000	450,000	72,900	74,400	337,000	1,610,000
Stocks, January 31, 2008	310,000	321,000	4,060	6,280	852,000	1,490,000

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	2006		2007		January- December
	January- December	December	November	December	
Australia	88,800	--	--	--	800
Belgium	7,490,000	521,000	335,000	958,000	6,730,000
Brazil	113,000	--	--	8,760	119,000
Canada	2,680,000	201,000	236,000	148,000	2,580,000
Chile	259,000	--	--	--	1,270,000
China	405,000	43,100	--	16	71,500
Finland	--	--	38,000	--	38,000
India	82,800	1,440	1,670	--	119,000
Italy	--	--	19,000	--	19,000
Japan	2,260,000	108,000	236,000	144,000	2,230,000
Korea, Republic of	45,000	--	85,000	51,900	232,000
Mexico	6,070,000	377,000	407,000	336,000	4,760,000
Netherlands	10,300,000	1,240,000	554,000	818,000	9,660,000
Pakistan	--	--	--	--	75,600
Sweden	20,000	--	--	--	--
Switzerland	25,200	--	--	--	1,630
Taiwan	53,400	--	--	--	17,900
Thailand	9,740	--	--	--	9,620
United Kingdom	7,280,000	578,000	523,000	346,000	5,800,000
Vietnam	14,100	--	--	857	4,990
Other	9,420	--	868	29,800	80,000
Total	37,200,000	3,070,000	2,440,000	2,840,000	33,800,000

-- 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	2006		2007		January- December
	January- December	December	November	December	
Argentina	14,500	--	--	--	--
Australia	24,500	349	--	--	25,000
Brazil	37,700	--	--	--	--
Canada	1,760,000	21,000	52,100	128,000	838,000
Denmark	57	--	--	--	394
India	667	300	132	--	1,090
Japan	60	--	--	--	--
Mexico	143,000	603	3,230	--	23,700
Netherlands	14,000	--	--	--	145,000
Philippines	--	--	--	--	735
Saudi Arabia	--	--	55,900	--	149,000
Singapore	1,630	--	--	--	--
South Africa	--	--	--	--	13,500
Switzerland	12,000	--	--	--	--
United Kingdom	--	--	--	--	24,900
Total	2,010,000	22,200	111,000	128,000	1,220,000

-- 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 2006			December 2007			January-December 2007		
	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	9,570,000	5,900,000	\$167,000	694,000	429,000	\$11,900	8,680,000	5,430,000	\$181,000
Ore and concentrates other	10,900,000	5,000,000	227,000	1,010,000	409,000	21,900	15,000,000	6,960,000	372,000
Molybdenum chemicals:									
Oxides and hydroxides	629,000	NA	24,300	22,300	NA	1,170	211,000	NA	8,020
Molybdates of ammonium	1,430,000	844,000	34,100	120,000	67,500	4,290	915,000	515,000	30,400
Molybdates (all others)	241,000	72,700	2,810	27,700	1,040	304	179,000	51,400	2,190
Molybdenum orange	822,000	NA	5,110	54,600	NA	449	600,000	NA	4,040
Ferromolybdenum	4,810,000	3,060,000	165,000	337,000	221,000	14,600	6,360,000	4,100,000	270,000
Molybdenum powders	367,000	270,000	17,600	7,420	6,150	474	72,900	60,800	4,990
Molybdenum unwrought	191,000	191,000	10,800	11,300	11,300	775	117,000	117,000	7,460
Molybdenum waste and scrap	452,000	445,000	27,800	115,000	113,000	7,630	574,000	554,000	34,800
Molybdenum wire	18,600	NA	2,550	1,810	NA	292	17,900	NA	2,740
Molybdenum other	130,000	NA	17,000	24,900	NA	2,930	164,000	NA	20,900
Total	29,600,000	XX	701,000	2,430,000	XX	66,600	32,900,000	XX	938,000

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.