

# Mineral Industry Surveys

---

**For information, contact:**

Désirée E. Polyak, Molybdenum Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4909, Fax: (703) 648-7757  
E-mail: dpolyak@usgs.gov

Raymond I. Eldridge III (Data)  
Telephone: (703) 648-7982  
Fax: (703) 648-7975  
E-mail: reldridge@usgs.gov

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

## MOLYBDENUM IN MAY 2008

Domestic production of molybdenum (Mo) in concentrate in May 2008 was slightly less than the output of the previous month and also slightly less than that of May 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 5,950 t at the end of May.

According to Ryan's Notes (2008b), the May monthly average price range for U.S. ferromolybdenum (FeMo) was \$35.833 to \$36.250 per pound (lb) of molybdenum content, compared with \$36.500 to \$36.750 per lb in April. European FeMo monthly averages ranged from \$77.222 to \$77.894 per kilogram (kg) of molybdenum content in May compared with \$77.344 to \$78.133 per kg in April. In May, worldwide molybdenum oxide (MoO<sub>3</sub>) prices ranged from \$32.189 to \$32.867 per lb compared with \$32.756 to \$33.250 per lb in April.

General Moly Inc. completed a pre-feasibility study for its Liberty Project located in central Nevada. The study anticipated molybdenum production of approximately 19 million pounds

(Mlb) (8,600 t) and copper production of approximately 18 Mlb (8,160 t) annually over the first 5 years. Initial capital expenditures, excluding working capital and bonding requirements, were estimated at \$492 million. Initial production from Liberty was expected to start in 2013 and would add to production of General Moly's Mt. Hope Mine, which was expected to produce up to 38 million pounds per year (17,200 metric tons per year), starting in late 2010 (General Moly Inc., 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 April and May 2008. Export data for March and April 2008 and import data for April 2008 are also included.

### References Cited

- General Moly Inc., 2008, Liberty project—The pre-feasibility study: General Moly Inc., April 29, 2 p. (Accessed May 20, 2009, via <http://www.generalmoly.com>.)  
Ryan's Notes, 2008b, [untitled]: Ryan's Notes, v. 14, no. 22, June 2, p. 10.

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

(Metric tons, contained molybdenum)

	2007		2008		
	January- December	January- May	April	May	January- May
Production	57,000	25,000	4,970	4,950	24,600
Shipments: <sup>2</sup>					
Domestic	40,600	17,800 <sup>r</sup>	4,230	3,470	18,600
Export	16,400	7,280 <sup>r</sup>	732	1,440	6,130

<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- May	April	May	January- May
Gross production	72,800	31,900	6,180	6,380	31,100
Internal consumption <sup>2</sup>	41,700	19,200	3,750	3,590	17,600
Gross shipments	48,700	20,600 <sup>r</sup>	4,410	4,130	21,800

<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	Molybdic oxides	Ferro molybdenum <sup>2</sup>	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2008, April:						
Steel:						
Carbon	30,100	W	--	--	W	30,100
High-strength low-alloy	69,900	8,220	--	--	11,300	89,500
Stainless and heat-resisting	182,000	66,000	--	W	6,510	254,000
Full alloy	253,000	183,000	--	--	1,510	438,000
Tool	W	W	--	--	--	W
Total	535,000	258,000	--	W	19,400	812,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	62,100	W	--	W	78,100	140,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	9,100	--	--	--	9,100
Mill products made from metal powde <sup>3</sup>	--	--	--	--	210,000	210,000
Cemented carbides and related product <sup>4</sup>	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	804	804
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	16,800	27,600	72,800	58,400	16,800	192,000
Grand total	691,000	315,000	72,800	58,400	337,000	1,470,000
Stocks, April 30, 2008	292,000	309,000	4,120	29,000	864,000	1,500,000
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 powde <sup>3</sup>	--	--	--	--	194,000	194,000
Cemented carbides and related product <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

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	January- April	March	April	January- April
Argentina	--	--	38,000	38,000	88,700
Belgium	6,730,000	1,840,000	699,000	733,000	3,120,000
Brazil	119,000	90,800	--	1,290	1,290
Canada	2,580,000	1,200,000	285,000	261,000	1,050,000
Chile	1,270,000	1,000,000	--	--	--
China	71,500	47,800	--	242,000	242,000
Finland	38,000	--	--	--	--
India	119,000	46,900	11,400	--	11,400
Italy	19,000	--	--	--	12,000
Japan	2,230,000	568,000	119,000	99,400	607,000
Korea, Republic of	232,000	24,700	51,600	54,700	214,000
Mexico	4,760,000	1,560,000	343,000	257,000	1,450,000
Netherlands	9,660,000	4,510,000	729,000	1,040,000	3,210,000
Pakistan	75,600	38,800	--	--	--
Switzerland	1,630	--	--	--	--
Taiwan	17,900	413	--	--	--
Thailand	9,620	9,620	--	--	--
United Kingdom	5,800,000	1,820,000	442,000	380,000	1,600,000
Vietnam	4,990	4,130	754	--	3,300
Other	80,800	2,590	20,000	--	33,800
Total	33,800,000	12,800,000	2,740,000	3,110,000	11,600,000

-- 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	January- April	March	April	January- April
Australia	25,000	--	--	--	--
Canada	838,000	262,000	80,700	139,000	418,000
Denmark	394	394	--	--	--
India	1,090	210	143	--	283
Mexico	23,700	10,600	--	--	13,000
Netherlands	145,000	134,000	--	--	98,200
Philippines	735	--	--	--	--
Saudi Arabia	149,000	30,200	--	--	--
South Africa	13,500	--	--	--	--
United Kingdom	24,900	24,900	--	--	--
Total	1,220,000	462,000	80,800	139,000	529,000

-- 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			April 2008			January-April 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	922,000	565,000	\$15,900	3,430,000	2,130,000	\$70,000
Ore and concentrates other	15,000,000	6,960,000	372,000	639,000	346,000	22,000	4,580,000	2,180,000	139,000
Molybdenum chemicals:									
Oxides and hydroxides	211,000	NA	8,020	37,700	NA	1,790	100,000	NA	4,320
Molybdates of ammonium	915,000	515,000	30,400	23,300	13,100	946	188,000	106,000	6,960
Molybdates (all others)	179,000	51,400	2,190	15,800	5,480	188	49,700	17,800	558
Molybdenum orange	600,000	NA	4,040	22,200	NA	179	151,000	NA	1,170
Ferromolybdenum	6,360,000	4,100,000	270,000	240,000	158,000	12,200	1,430,000	950,000	68,800
Molybdenum powders	72,900	60,800	4,990	8,520	6,770	1,030	27,300	23,200	2,380
Molybdenum unwrought	117,000	117,000	7,460	282	282	34	40,700	40,500	2,620
Molybdenum waste and scrap	574,000	554,000	34,800	40,500	39,400	2,480	228,000	216,000	13,400
Molybdenum wire	17,900	NA	2,740	2,860	NA	398	6,830	NA	1,030
Molybdenum other	164,000	NA	20,900	42,700	NA	3,770	123,000	NA	13,100
Total	32,900,000	XX	938,000	1,990,000	XX	60,900	10,400,000	XX	323,000

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.