

Mineral Industry Surveys

For information, contact:

Michael J. Magyar, Molybdenum Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4964, Fax: (703) 648-7757
E-mail: mmagyar@usgs.gov

Barbara J. McNair (Data)
Telephone: (703) 648-7952
Fax: (703) 648-7975
E-mail: bmcnair@usgs.gov

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

MOLYBDENUM IN AUGUST 2003

Domestic production of molybdenum in concentrate in August 2003 was about 71% more than that of the previous month and was about 6% more than that of August 2002, according to the U.S. Geological Survey. Year-to-date production of molybdenum in concentrate from January through August was about 2% more than during the same period in 2002. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 8,250 metric tons (t) at the beginning of 2003 and 5,481 t at the end of August.

According to Ryan's Notes (2003b), the August monthly averages for U.S. ferromolybdenum (FeMo) prices ranged from \$6.200 to \$6.400 per pound of molybdenum content, as compared with \$5.731 to \$5.925 in July. European FeMo monthly averages ranged from \$14.000 to \$14.322 per kilogram of molybdenum content in August as compared with \$12.563 to \$13.000 in July. In August, worldwide molybdenum oxide prices ranged from \$5.467 to \$5.689 per pound versus \$5.138 to \$5.369 in July.

Molybdenum oxide prices firmed by the end of August. U.S. Dealer Oxide prices ranged from \$5.80 to \$6.00 per pound in the last week of August. European FeMo prices were booked at \$14.20 to \$14.40 per kilogram through an online tender and Chinese material was offered at just over \$13.60 per kilogram. Traders expect molybdenum oxide prices to hold, as there is little material available to supply the few customers that need material. (Ryan's Notes, 2003a).

Montana Resources announced on August 18 that it would restart its Continental copper and molybdenum mine in Butte, Montana. Although the Montana resumption of production was

probably more related to lower power costs, the restart was announced as copper prices reached their highest level (80 cents per pound) since April 2001. Montana Resources planned to be fully staffed by mid-October and at full production by November 17. The mine was shut in July 2000 after its power contract expired, exposing it to very high power costs. Molybdenum output was expected to be 3,600-4,500 t per year (8-10 million pounds per year) (Platts Metals Week, 2003b).

China's Jinduicheng Molybdenum Mining Corp. (JDC) will decrease its molybdenum concentrate output by 18%-20% in the second half of 2003 owing to low ore grades and maintenance shutdowns. Output in September should be about 400 t, about half of normal production. JDC produced about 20,000 t of molybdenum concentrate in 2002. Officials said JDC was unlikely to offer any FeMo or molybdenum oxide on the spot market in September, as output would be needed to fulfill long-term contracts. JDC also used more molybdenum concentrate to produce chemicals and metal products in keeping with its market focus on value-added products (Platts Metals Week, 2003a).

References Cited

- Platts Metals Week, 2003a, JDC to lower moly concs output: Platts Metals Week, v. 74, no. 31, August 4, p. 1.
- Platts Metals Week, 2003b, Montana mine restart small but signals market change: Platts Metals Week, v. 74, no. 34, August 25, p. 2.
- Ryan's Notes, 2003a, Montana Resources to restart mine: Ryan's Notes, v. 9, no. 34, August 25, p. 2.
- Ryan's Notes, 2003b, [untitled]: Ryan's Notes, v. 9, no. 35, September 1, p. 4.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2002	2003		Year to date
	January-December	July	August	
Production	32,400	1,920	3,280	21,500
Shipments: ²				
Domestic	21,200	989	1,920	12,700
Export	11,100	1,170	1,280	8,650

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)

	2002	2003		Year to date
	January-December	July	August	
Gross production	31,300	4,240	4,160	27,300
Internal consumption ²	20,700	2,740	2,870	19,600
Gross shipments	27,500	2,860	3,160	20,000

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	Molybdc oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2003, July:						
Steel:						
Carbon	12,700	W	--	--	W	12,700
High-strength low-alloy	28,800	15,000	--	--	--	43,800
Stainless and heat-resisting	163,000	63,400	--	--	7,180	234,000
Full alloy	101,000	162,000	--	--	1,890	265,000
Tool	61,300	W	--	--	W	61,300
Total	367,000	240,000	--	--	9,070	617,000
Cast irons (gray, malleable, and ductile iron)	W	14,200 ^r	--	--	763	15,000
Superalloys	37,800 ^r	W	--	(3)	118,000 ^r	156,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	112	2,560	--	--	2,610	5,280
Mill products made from metal powder ⁴	--	--	--	--	122,000	122,000
Cemented carbides and related products ⁵	--	--	--	--	--	--
Chemical and ceramic uses:						
Pigments	--	--	W	--	W	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	17,900 ^r	17,900
Other	1,090 ^r	35,300	76,800	--	18,300	132,000
Grand total	484,000 ^r	293,000	76,800	--	290,000 ^r	1,140,000
Stocks, July 31, 2003	364,000	170,000	4,040	24,800	857,000	1,420,000
2003, August:						
Steel:						
Carbon	10,700	W	--	--	W	10,700
High-strength low-alloy	27,000	8,270	--	--	--	35,300
Stainless and heat-resisting	157,000	62,200	--	--	7,180	226,000
Full alloy	106,000	170,000	--	--	1,860	278,000
Tool	47,300	W	--	--	W	47,300
Total	349,000	240,000	--	--	9,040	598,000
Cast irons (gray, malleable, and ductile iron)	W	14,800	--	--	763	15,500
Superalloys	74,700	W	--	(3)	95,000	170,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	304	2,690	--	--	2,610	5,610
Mill products made from metal powder ⁴	--	--	--	--	87,400	87,400
Cemented carbides and related products ⁵	--	--	--	--	--	--
Chemical and ceramic uses:						
Pigments	--	--	W	--	W	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	17,900	17,900
Other	1,090	36,800	76,300	--	18,600	133,000
Grand total	502,000	295,000	76,300	--	231,000	1,100,000
Stocks, August 31, 2003	368,000	175,000	3,970	17,900	849,000	1,410,000

^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, metal working machinery.

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2002	2003		Year to date
	January-December	June	July	
Australia	46,900	--	11,400	35,400
Belgium	4,380,000	275,000	518,000	2,030,000
Brazil	32,600	708	3,300	28,100
Canada	1,080,000	132,000	144,000	762,000
Chile	16,200	--	--	14,200
China	56,700	2,360	534	2,900
Germany	64,400	--	--	1,440
India	141,000	--	--	11,300
Italy	47,900	--	--	15,200
Japan	1,130,000	68,100	203,000	1,160,000
Korea, Republic of	70,600	6,290	7,040	44,500
Mexico	484,000	232,000	714,000	2,670,000
Netherlands	7,330,000	856,000	1,030,000	5,370,000
Spain	41,200	--	--	--
Sweden	35,000	5,150	--	25,700
Taiwan	12,600	--	--	9,590
United Kingdom	4,330,000	455,000	578,000	3,250,000
Other	153,000	13,300	2,090	88,800
Total	19,500,000	2,050,000	3,210,000	15,500,000

-- 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	2002	2003		Year to date
	January-December	June	July	
Australia	--	--	--	546
Canada	597,000	44,700	33,900	240,000
Chile	240	--	--	--
Denmark	5,110	--	--	--
Japan	--	--	--	61
Mexico	51,400	--	--	7,590
Netherlands	--	--	--	25,500
Switzerland	21,800	--	--	--
Taiwan	274	--	--	--
Total	676,000	44,700	33,900	273,000

-- 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 2002			July 2003		
	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)
Ore and concentrates roasted	7,030,000	4,370,000	\$33,500	523,000	331,000	\$3,370
Ore and concentrates other	664,000	340,000	3,450	161,000	75,900	910
Molybdenum chemicals:						
Oxides and hydroxides	1,200,000	NA	7,660	90,000	NA	795
Molydates of ammonium	1,740,000	1,010,000	11,200	103,000	58,100	707
Molydates (all others)	435,000	88,600	1,630	22,500	9,070	89
Molybdenum orange	1,300,000	NA	5,490	98,600	NA	464
Ferromolybdenum	5,570,000	3,590,000	31,400	460,000	294,000	3,260
Molybdenum powders	39,500	31,700	1,110	2,060	1,510	82
Molybdenum unwrought	43,500	43,200	542	15,200	15,100	191
Molybdenum waste and scrap	697,000	617,000	6,910	90,600	82,900	1,150
Molybdenum wire	14,600	NA	697	696	NA	51
Molybdenum other	84,800	NA	7,240	7,640	NA	559
Total	18,800,000	10,100,000	111,000	1,580,000	868,000	11,600

NA Not available. -- Zero.

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

Source: U.S. Census Bureau.