

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 MARCH 2010

Domestic production of molybdenum (Mo) in concentrate in March 2010 was 21% more than the output of the previous month and 54% more than that of March 2009, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 6,070 metric tons (t) at the beginning of 2010 and about 5,870 t at the end of March.

According to Ryan's Notes, the March 2010 monthly average price range for U.S. ferromolybdenum (FeMo) was \$20.167 to \$21.111 per pound (lb) of molybdenum content, compared with \$18.000 to \$18.375 per lb in February 2010. European FeMo monthly averages ranged from \$41.056 to \$42.167 per kilogram (kg) of molybdenum content in March compared with \$37.813 to \$38.688 per kg in February. In March, worldwide molybdenum oxide (MoO₃) prices ranged from \$16.772 to \$17.467 per lb compared with \$16.031 to \$16.556 per lb in February.

Quadra Mining Ltd. (Vancouver, British Columbia, Canada) announced a 50-50 joint venture agreement with State Grid International Development Ltd., China's largest utility company. The joint venture will develop and operate the Sierra

Gorda copper-molybdenum project and Franke Mine in Chile. A definitive signing of the joint venture was expected to take place by mid-May, though Chinese regulatory approval might delay the signing until October. Quadra expected the Sierra Gorda project in Chile's Atacama Desert to produce 15,000 t of molybdenum per year over the first 8 years of what was projected to be at least a 25-year mine life (Quadra Mining Ltd., 2010).

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 February and March 2010. Export data for January and February and import data for February 2010 are also included.

Reference Cited

Quadra Mining Ltd., 2010, Quadra Mining signs memorandum of understanding to create a strategic partnership with State Grid International Development Ltd.: Quadra Mining Ltd. news release, March 8, 3 p. (Accessed May 21, 2010, via <http://www.quadramining.com/s/News.asp>.)

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2009		2010		
	January- December ^p	January- March ^r	February	March	January- March ²
Production	47,700	10,900 ^r	4,310	5,190	14,300
Shipments: ³					
Domestic	12,200	3,010 ^r	936	1,190	3,210
Export	12,800	2,430	W	W	W

^pPreliminary. ^rRevised. W Withheld to avoid disclosing company proprietary data.

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

²May include revisions for prior months.

³As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM
PRODUCTS¹

(Metric tons, contained molybdenum)

	2009		2010		
	January- December ^p	January- March ^r	February	March	January- March ²
Gross production	59,900	13,100	4,610	5,750	15,000
Internal consumption ³	26,200	5,230	1,510	W	5,880
Gross shipments	43,300	9,410	3,810	4,060	11,800

^pPreliminary. ^rRevised. W Withheld to avoid disclosing company proprietary data.

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

²May include revisions for prior months.

³Includes 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	Molybdic oxides	Ferro molybdenum ²	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
February:						
Steel:						
Carbon	31,500	W	--	--	W	31,500
High-strength low-alloy	W ^r	8,000	--	--	--	8,000 ^r
Stainless and heat-resisting	189,000	66,200	--	W	6,510	262,000
Full alloy	245,000	197,000	--	--	W ^r	442,000 ^r
Tool	W	W	--	--	--	W
Total	466,000 ^r	271,000	--	W	6,510 ^r	743,000 ^r
Cast irons (gray, malleable, and ductile iron)	W	W ^r	--	--	W ^r	W ^r
Superalloys	42,300	W	--	W	82,300	125,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	146	W ^r	--	--	--	146 ^r
Mill products made from metal powder ³	--	--	--	--	W ^r	W ^r
Cemented carbides and related products ⁴	--	--	--	--	6 ^r	6 ^r
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	W ^r	W ^r
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	108,000 ^r	50,700 ^r	72,600	76,200	210,000 ^r	518,000 ^r
Grand total	693,000	322,000	72,600	76,200	310,000	1,470,000
Stocks, February 28, 2010	326,000	296,000	2,220	91,700	850,000	1,570,000
March:						
Steel:						
Carbon	31,500	W	--	--	W	31,500
High-strength low-alloy	W	8,000	--	--	--	8,000
Stainless and heat-resisting	203,000	62,200	--	W	6,510	272,000
Full alloy	245,000	201,000	--	--	W	446,000
Tool	W	W	--	--	--	W
Total	480,000	271,000	--	W	6,510	758,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	51,200	W	--	W	83,400	135,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	107	W	--	--	--	107
Mill products made from metal powder ³	--	--	--	--	W	W
Cemented carbides and related products ⁴	--	--	--	--	6	6
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	111,000	51,300	72,600	70,000	227,000	531,000
Grand total	719,000	323,000	72,600	70,000	327,000	1,510,000
Stocks, March 31, 2010	289,000	298,000	2,200	35,200	849,000	1,470,000

^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.

³Includes ingot, wire, rod, and sheet.

⁴Includes construction, mining, oil and gas, metalworking machinery.

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

(Kilograms, contained molybdenum)

Country	2009			2010		
	January- December	February	January- February	January	February	January- February
Austria	--	--	--	10,100	--	10,100
Belgium	7,060,000	538,000	699,000	851,000	288,000	1,140,000
Brazil	49,100	--	--	--	21,100	21,100
Canada	1,070,000	79,300	149,000	53,900	79,400	133,000
Chile	212,000	--	--	--	--	--
China	6,680,000	363,000	363,000	636,000	457,000	1,090,000
France	--	--	--	--	4,230	4,230
Hong Kong	38,900	--	--	--	--	--
India	144,000	--	3,150	--	30,400	30,400
Japan	912,000	35,600	84,600	133,000	104,000	237,000
Kenya	23,200	--	--	--	--	--
Korea, Republic of	884,000	32,600	64,400	72,700	33,100	106,000
Mexico	2,870,000	480,000	729,000	334,000	462,000	796,000
Netherlands	6,510,000	554,000	1,220,000	479,000	760,000	1,240,000
South Africa	431,000	--	--	--	--	--
Sweden	1,140	--	--	--	--	--
Taiwan	20,000	--	--	--	--	--
Thailand	9,620	--	--	--	--	--
United Arab Emirates	5,910	--	--	--	--	--
United Kingdom	2,440,000	345,000	491,000	323,000	446,000	769,000
Venezuela	1,580	300	600	940	--	940
Vietnam	229,000	--	12,300	--	429	429
Other ²	159	159 ^r	159 ^r	--	--	--
Total	29,600,000	2,430,000	3,820,000	2,890,000	2,690,000	5,580,000

^rRevised. -- Zero.

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

²Includes countries with year-to-date or full year quantities of less than 1,000 kilograms.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2009			2010		
	January- December	February	January- February	January	February	January- February
Argentina	13,200	1,400	1,400	--	--	--
Belgium	13,500	--	13,500	--	--	--
Canada	581,000	16,900	49,300	43,100	60,400	104,000
China	25,300	--	--	--	--	--
Colombia	1,280	--	551	--	620	620
Denmark	200	--	--	--	--	--
India	65,300	--	--	--	--	--
Israel	95	--	--	--	--	--
Korea, Republic of	26,800	--	--	--	--	--
Mexico	55,200	713	5,870	2,800	--	2,800
Netherlands	24,000	--	--	--	--	--
Peru	3,180	3,180	3,180	--	--	--
Philippines	1,210	--	--	--	--	--
Taiwan	12,500	--	--	--	--	--
United Arab Emirates	3,260	--	3,260	--	--	--
Total	827,000	22,200	77,100	45,900	61,000	107,000

-- 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 2009			February 2010			January-February 2010		
	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	7,780,000	4,800,000	\$94,800	789,000	490,000	\$7,530	1,510,000	932,000	\$14,300
Ore and concentrates other	5,590,000	2,720,000	54,900	535,000	269,000	6,260	1,260,000	640,000	14,600
Molybdenum chemicals:									
Oxides and hydroxides	209,000	NA	3,330	40,000	NA	765	60,000	NA	1,080
Molybdates of ammonium	1,140,000	642,000	19,400	96,200	54,200	1,440	196,000	111,000	2,930
Molybdates (all others)	30,300	14,500	1,090	9,900	1,520	69	14,400	3,460	251
Molybdenum orange	269,000	NA	2,170	7,140	NA	67	31,100	NA	255
Ferromolybdenum	3,040,000	2,030,000	50,100	533,000	359,000	11,200	719,000	486,000	14,600
Molybdenum powders	60,000	52,500	2,870	11,100	10,900	464	15,300	14,200	621
Molybdenum unwrought	107,000	97,800	2,880	5,140	5,110	186	6,050	6,010	246
Molybdenum waste and scrap	482,000	473,000	15,300	61,700	61,400	2,040	82,200	80,800	2,710
Molybdenum wire	15,100	NA	2,120	2,310	NA	265	3,770	NA	511
Molybdenum other	306,000	NA	19,800	90,200	NA	4,010	144,000	NA	6,400
Total	19,000,000	10,800,000	269,000	2,180,000	XX	34,300	4,040,000	XX	58,600

NA Not available. XX Not applicable.

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

²Customs value.

Source: U.S. Census Bureau.