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 2009

Domestic production of molybdenum (Mo) in concentrate in May 2009 was 19% less than the revised output of the previous month and 28% less than that of May 2008, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 5,610 metric tons (t) at the beginning of 2009 and about 7,350 t at the end of May.

According to Ryan's Notes (2009), the May monthly average price range for U.S. ferromolybdenum (FeMo) was $9.461 to $9.733 per pound (lb) of molybdenum content, compared with $8.806 to $8.938 per lb in April. European FeMo monthly averages ranged from $22.233 to $23.011 per kilogram (kg) of molybdenum content in May compared with $19.531 to $20.113 per kg in April. In May, worldwide molybdenum oxide (MoO_3) prices ranged from $9.178 to $9.617 per lb compared with $7.800 to $8.106 per lb in April.

The combined value of FeMo and MoO_3 exports from Chile fell 79.4% to $69 million in April 2009 compared with $335.4 million in April 2008, according to the country's Central Bank. According to the Chilean Copper Commission, Chilean molybdenum production was expected to reach 40,000 t in 2009, an increase of 18.7% from that of 2008 (Metal-Pages Ltd., 2009).

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 2009. Export data for March and April 2009 and import data for April 2009 are also included.

References Cited

Metal-Pages Ltd., 2009, Chile molybdenum exports down 79.4% in April: Metal-Pages Ltd., May 19. (Accessed November 6, 2009, via http://www.metal-pages.com/.)
Ryan's Notes, 2009, [untitled]: Ryan's Notes, v. 15, no. 22, June 1, p. 10.

TABLE 1

U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS[1]

(Metric tons, contained molybdenum)

	2008		2009		
	January-December	January-May	April	May	January-May
Production	57,000 r	24,600	4,400 r	3,580	19,100
Shipments: [2]					
Domestic	35,000 r	18,600	1,100 r	1,030	5,140
Export	12,900	6,130	1,250	941	4,610

[r]Revised.

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

[2]As reported by producers.

TABLE 2

U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS[1]

(Metric tons, contained molybdenum)

	2008		2009		
	January-December[r]	January-May	April[r]	May	January-May
Gross production	72,900	31,100	4,420	4,830	22,400
Internal consumption[2]	39,700	17,600	2,220	2,300	9,740
Gross shipments	51,300	21,800	2,810	3,760	16,000

[r]Revised.

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

[2]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[1]

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb-denum[2]	Ammonium and sodium molybdate	Molyb-denum scrap[r]	Other	Total
2009, April:						
Steel:						
Carbon	30,400	W	--	--	W	30,400
High-strength low-alloy	41,200	8,000	--	--	11,300	60,500
Stainless and heat-resisting	168,000	64,000	--	W	6,510	239,000
Full alloy	242,000	209,000	--	--	1,510	453,000
Tool	W	W	--	--	--	W
Total	482,000	281,000	--	W	19,400	782,000
Cast irons (gray, malleable, and ductile iron)	W	22,200	--	--	763	23,000
Superalloys	31,300	W	--	W	68,600	99,900
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	2,420	--	--	--	2,420
Mill products made from metal powder[3]	6,660	--	--	--	182,000	189,000
Cemented carbides and related products[4]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	83	83
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	66,800	27,500	72,600	47,400	16,800	231,000
Grand total	664,000	333,000	72,600	47,400	299,000	1,420,000
Stocks, April 30, 2009	317,000	311,000	2,100 r	130,000	850,000	1,610,000 r
2009, May:						
Steel:						
Carbon	40,800	W	--	--	W	40,800
High-strength low-alloy	41,200	8,920	--	--	11,300	61,400
Stainless and heat-resisting	173,000	65,100	--	W	6,510	244,000
Full alloy	243,000	181,000	--	--	1,510	426,000
Tool	W	W	--	--	--	W
Total	498,000	255,000	--	W	19,400	773,000
Cast irons (gray, malleable, and ductile iron)	W	22,200	--	--	763	23,000
Superalloys	43,800	W	--	W	69,300	113,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	375	--	--	--	375
Mill products made from metal powder[3]	13,300	--	--	--	181,000	195,000
Cemented carbides and related products[4]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	204	204
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	66,800	34,000	72,600	60,100	16,800	250,000
Grand total	699,000	312,000	72,600	60,100	299,000	1,440,000
Stocks, May 31, 2009	318,000	300,000	2,100	103,000	848,000	1,570,000

[r]Revised. W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

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

[2]Includes calcium molybdate.

[3]Includes ingot, wire, rod, and sheet.

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

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY[1]

(Kilograms, contained molybdenum)

	2008			2009		
Country	January-December	April	January-April	March	April	January-April
Argentina	210,000	38,000	88,700	--	--	--
Belgium	6,910,000	733,000	3,120,000	234,000	433,000	1,370,000
Brazil	9,700	1,290	1,290	--	7,130	7,130
Canada	2,030,000	261,000	1,050,000	77,100	49,100	275,000
Chile	316,000	--	--	59,400	111,000	171,000
China	365,000	242,000	242,000	207,000	92,500	663,000
India	32,700	--	11,400	30,000	20,500	53,700
Italy	12,000	--	12,000	--	--	--
Japan	2,220,000	99,400	607,000	64,600	60,800	210,000
Korea, Republic of	694,000	54,700	214,000	32,100	52,000	149,000
Mexico	4,470,000	257,000	1,450,000	273,000	477,000	1,480,000
Netherlands	9,960,000	1,040,000	3,210,000	546,000	762,000	2,530,000
Niger	17,400	--	--	--	--	--
South Africa	11,400	--	--	--	--	--
United Kingdom	5,080,000	380,000	1,600,000	259,000	191,000	941,000
Vietnam	341,000	--	3,300	2,010	80,400	94,700
Other[2]	35,000	--	33,800	236	--	995
Total	32,700,000	3,110,000	11,600,000	1,780,000	2,340,000	7,940,000

-- Zero.

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

[2]Includes 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 COUNTRY[1]

(Kilograms, contained molybdenum)

Country	2008 January-December	2008 April	2008 January-April	2009 March	2009 April	2009 January-April
Argentina	--	--	--	--	--	1,400
Australia	174	--	--	--	--	--
Belgium	--	--	--	--	--	13,500
Canada	933,000	139,000	418,000	29,900	46,100	125,000
Colombia	1,090	--	--	--	--	551
Denmark	454	--	--	--	--	--
India	1,150	--	283	--	--	--
Israel	--	--	--	95	--	95
Korea, Republic of	14,000	--	--	--	--	--
Mexico	58,600	--	13,000	250	326	6,450
Netherlands	280,000	--	98,200	--	--	--
Peru	--	--	--	--	--	3,180
Philippines	700	--	--	--	--	--
South Africa	68	--	--	--	--	--
United Arab Emirates	--	--	--	--	--	3,260
Total	1,290,000	139,000	529,000	30,300	46,500	154,000

-- Zero.

[1]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[1]

(Kilograms, unless otherwise specified)

Material	January-December 2008			April 2009			January-April 2009		
	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	9,950,000	6,060,000	$249,000	583,000	343,000	$4,630	2,190,000	1,350,000	$20,000
Ore and concentrates other	9,140,000	4,170,000	263,000	615,000	319,000	5,000	3,230,000	1,480,000	28,400
Molybdenum chemicals:									
Oxides and hydroxides	335,000	NA	12,900	2,070	NA	16	147,000	NA	2,210
Molybdates of ammonium	360,000	203,000	14,100	79,900	45,000	920	211,000	118,000	3,280
Molybdates (all others)	91,600	31,500	1,180	225	218	11	6,140	3,090	341
Molybdenum orange	373,000	NA	3,110	24,600	NA	191	66,000	NA	520
Ferromolybdenum	3,460,000	2,320,000	166,000	101,000	67,600	1,380	1,760,000	1,170,000	25,000
Molybdenum powders	76,000	64,100	7,070	65	64	6	6,540	3,010	625
Molybdenum unwrought	256,000	255,000	15,800	200	200	14	3,770	3,740	175
Molybdenum waste and scrap	588,000	546,000	30,900	38,200	37,800	1,070	187,000	185,000	5,940
Molybdenum wire	19,800	NA	3,060	553	NA	134	5,710	NA	719
Molybdenum other	483,000	NA	48,700	9,360	NA	1,030	76,900	NA	5,740
Total	25,100,000	XX	814,000	1,450,000	XX	14,400	7,890,000	XX	92,900

NA Not available. XX Not applicable.

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

[2]Customs value.

Source: U.S. Census Bureau.