

Mineral Industry Surveys

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MOLYBDENUM IN APRIL 2013

Domestic production of molybdenum (Mo) in concentrate in April 2013 was slightly less than the output of the previous month and 14% more than that of April 2012. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 8,300 metric tons (t) at the beginning of 2013 and about 9,600 t at the end of April.

According to Ryan's Notes, the April monthly average price range for U.S. ferromolybdenum (FeMo) was \$12.122 to \$12.278 per pound of molybdenum content, compared with \$12.300 to \$12.483 per pound in March. European FeMo monthly averages ranged from \$27.400 to \$27.722 per kilogram of molybdenum content in April compared with \$26.956 to \$27.233 per kilogram in March. In April, worldwide molybdenum oxide (MoO₃) prices ranged from \$11.006 to \$11.139 per pound compared with \$10.933 to \$11.050 per pound in March.

China's exports of MoO₃ decreased to 925 t in the first 2 months of 2013, compared with 2,953 t in the same period in 2012. China's imports of MoO₃ decreased to 1,493 t in the first 2 months of 2013, compared with 2,047 t in the same period in 2012 (Ryan's Notes, 2013).

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 March and April 2013. Export data for March and April 2013 and import data for April 2013 are also included.

Reference Cited

Ryan's Notes, 2013, Ferroalloy notes: Ryan's Notes, v. 19, no. 14, April 8, p. 2.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2012 ^p		2013		
	January– December	January– April	March	April	January– April
Production	60,100 ^r	19,700 ^r	5,390	5,360	20,900
Shipments: ²					
Domestic	19,700 ^r	6,130	1,230	1,360	4,880
Export	W	W	W	W	W

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

¹Data are rounded to no more than three significant digits.

²As reported by producers.

TABLE 2
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS¹

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2013:						
March:						
Steel:						
Carbon	32,600	W	--	--	W	32,600
High-strength low-alloy	W	7,380	--	--	--	7,380
Stainless and heat-resisting	162,000	50,500	--	(3)	W	212,000
Full alloy	243,000	201,000	--	--	W	443,000
Tool	W	W	--	--	--	W
Total	437,000	258,000	--	--	--	695,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	16,300	W	--	(3)	84,900	101,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	252	W	--	--	--	252
Mill products made from metal powder ⁴	--	--	--	--	W	W
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	(3)	--	--	--
Catalysts	77,300	--	(3)	--	W	77,300
Other chemicals	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	93,000	44,600	562	(3)	324,000	462,000
Grand total	623,000	303,000	562	--	420,000	1,350,000
Stocks, March 31, 2013	479,000	280,000	2,400	(6)	(6)	1,640,000
April:						
Steel:						
Carbon	W	W	--	--	W	W
High-strength low-alloy	W	7,380	--	--	--	7,380
Stainless and heat-resisting	160,000	50,400	--	(3)	W	210,000
Full alloy	244,000	203,000	--	--	W	447,000
Tool	W	W	--	--	--	W
Total	404,000	261,000	--	--	--	665,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	22,900	W	--	(3)	86,800	110,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	172	W	--	--	--	172
Mill products made from metal powder ⁴	--	--	--	--	W	W
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	(3)	--	--	--
Catalysts	77,300	--	(3)	--	W	77,300
Other chemicals	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	129,000	47,400	153	(3)	364,000	540,000
Grand total	633,000	308,000	153	--	462,000	1,400,000
Stocks, April 30, 2013	468,000	290,000	2,570	(6)	(6)	1,640,000

See footnotes at end of table.

TABLE 2—Continued
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS¹

W Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified uses: Other" category. -- Zero.

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

²Includes calcium molybdate.

³Withheld to avoid disclosing company proprietary data; included in "Other, Miscellaneous and unspecified uses: Other" category.

⁴Includes ingot, wire, rod, and sheet.

⁵Includes construction, mining, oil and gas, metalworking machinery.

⁶Withheld to avoid disclosing company proprietary data; included in "Total."

TABLE 3
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2012			2013		
	January– December	April	January– April	March	April	January– April
Austria	166,000	11,200	44,800	--	--	19,800
Belgium	6,190,000	652,000	2,600,000	420,000	573,000	1,030,000
Brazil	378,000	69,500	88,400	56,000	124,000	192,000
Canada	2,220,000	154,000	771,000	184,000	205,000	670,000
China	2,130,000	77,800	878,000	79,100	99,300	422,000
Colombia	7,190	--	--	--	--	--
Germany	71,900	--	24,300	48,600	24,900	123,000
Hungary	997	997	997	--	--	--
India	660,000	62,800	208,000	120,000	50,800	473,000
Japan	3,780,000	302,000	996,000	220,000	469,000	1,250,000
Korea, Republic of	420,000	13,400	126,000	100,000	117,000	330,000
Mexico	7,590,000	650,000	2,740,000	708,000	789,000	3,090,000
Netherlands	13,000,000	1,430,000	4,430,000	1,900,000	2,240,000	6,810,000
Peru	8,110	--	543	181	--	18,200
Philippines	8,170	--	8,170	--	--	--
South Africa	382,000	180,000	180,000	--	--	57,000
Taiwan	6,040	--	1,000	7,460	5,600	13,100
Thailand	30,000	--	15,400	7,440	7,440	14,900
United Kingdom	6,450,000	490,000	1,700,000	352,000	229,000	1,350,000
Vietnam	18,300	102	2,000	--	--	14,900
Total	43,500,000	4,100,000	14,800,000	4,200,000	4,930,000	15,900,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2012			2013		
	January– December	April	January– April	March	April	January– April
Argentina	26,200	--	--	--	--	--
Australia	223	--	223	--	--	--
Brazil	528	--	--	--	--	--
Canada	677,000	51,100	273,000	52,700	94,600	265,000
Colombia	224	--	--	--	--	--
Denmark	495	--	150	--	171	171
Mexico	188,000	318	20,500	--	28,800	36,000
Netherlands	76,600	13,700	37,700	--	--	13,300
Panama	--	--	--	--	13,200	13,200
Peru	--	--	--	--	--	6,000
Saudi Arabia	26,400	--	--	--	--	--
Total	996,000	65,100	332,000	52,700	137,000	334,000

-- 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. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS¹

(Kilograms, unless otherwise specified)

Material	January–December 2012			April 2013			January–April 2013		
	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	10,100,000	6,170,000	\$100,000	772,000	454,000	\$4,640	2,010,000	1,210,000	\$17,300
Ore and concentrates other	11,900,000	5,810,000	199,000	1,500,000	696,000	18,700	4,790,000	2,290,000	71,100
Molybdenum chemicals:									
Oxides and hydroxides	532,000	NA	10,600	21,900	NA	428	222,000	NA	4,330
Molybdates of ammonium	813,000	460,000	14,900	163,000	93,300	2,580	563,000	320,000	9,060
Molybdates (all others)	41,800	16,300	748	--	--	--	1,000	396	21
Molybdenum orange	355,000	NA	2,910	21,200	NA	210	101,000	NA	928
Ferromolybdenum	6,450,000	4,320,000	138,000	845,000	570,000	16,100	1,900,000	1,280,000	36,300
Molybdenum powders	408,000	362,000	16,700	42,600	39,800	1,670	146,000	141,000	5,510
Molybdenum unwrought	744,000	726,000	21,800	49,600	48,400	1,320	286,000	283,000	9,210
Molybdenum waste and scrap	971,000	925,000	31,400	47,100	46,700	1,540	240,000	231,000	7,940
Molybdenum wire	19,600	NA	2,760	1,490	NA	255	5,610	NA	933
Molybdenum other	507,000	NA	31,700	81,700	NA	3,990	126,000	NA	7,710
Total	32,900,000	XX	570,000	3,540,000	XX	51,400	10,400,000	XX	170,000

NA Not available. XX Not applicable. -- Zero.

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

²Customs value.

Source: U.S. Census Bureau.