

Mineral Industry Surveys

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MOLYBDENUM IN MARCH 2013

Domestic production of molybdenum (Mo) in concentrate in March 2013 was 12% more than the output of the previous month and 3% less than that of March 2012. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 8,400 metric tons (t) at the beginning of 2013 and about 10,300 t at the end of March.

According to Ryan's Notes, the March 2012 monthly average price range for U.S. ferromolybdenum (FeMo) was \$12.300 to \$12.483 per pound of molybdenum content, compared with \$12.738 to \$12.944 per pound in February 2013. European FeMo monthly averages ranged from \$26.956 to \$27.233 per kilogram of molybdenum content in March compared with \$27.594 to \$27.931 per kilogram in February. In March, worldwide molybdenum oxide (MoO₃) prices ranged from 10.933 to \$11.050 per pound compared with \$11.300 to \$11.425 per pound in February.

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

Japan's imports of MoO₃ decreased 8% to 35,151 t in 2012 compared with 38,144 t in 2011 according to the Ministry of Economy, Trade and Industry. Japan's FeMo imports decreased 21% to 1,886 t in 2012 compared with 2,392 t in 2011. Japan's FeMo production decreased 11% to 4,280 t in the first 11 months of 2012 compared with 4,800 t in the same 2011 period (Ryan's Notes, 2013).

Reference Cited

Ryan's Notes, 2013, Moly weak worldwide: Ryan's Notes, v. 19, no. 6, February 11, p. 1–2.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2012 ^p		2013		
	January– December	January– March	February	March	January– March
Production	56,100	15,000	4,110 ^r	4,610	13,200
Shipments: ²					
Domestic	17,900	4,630	1,210 ^r	1,230	3,510
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:						
February:						
Steel:						
Carbon	31,900	W	--	--	W	31,900
High-strength low-alloy	W	8,150	--	--	--	8,150
Stainless and heat-resisting	165,000 ^r	50,600 ^r	--	(3)	W	215,000 ^r
Full alloy	244,000	215,000 ^r	--	--	W	459,000 ^r
Tool	W	W	--	--	--	W
Total	441,000 ^r	274,000 ^r	--	--	--	715,000 ^r
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	27,500	W	--	(3)	91,100 ^r	119,000 ^r
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	243 ^r	W	--	--	--	243 ^r
Mill products made from metal powder ⁴	W	--	--	--	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 ^r	47,500 ^r	562	(3)	371,000 ^r	512,000 ^r
Grand total	639,000 ^r	321,000 ^r	562	--	473,000 ^r	1,430,000
Stocks, February 28, 2013	421,000 ^r	300,000 ^r	2,400	(6)	(6)	1,610,000 ^r
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

See footnotes at end of table.

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

¹Revised. 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	March	January– March	February	March	January– March
Austria	166,000	11,200	33,600	8,630	--	19,800
Belgium	6,190,000	779,000	1,950,000	34,800	420,000	455,000
Brazil	378,000	12,100	18,900	12,000	56,000	68,000
Canada	2,220,000	288,000	617,000	128,000	184,000	465,000
China	2,130,000	272,000	800,000	133,000	79,100	323,000
Colombia	7,190	--	--	--	--	--
Germany	71,900	12,100	24,300	37,200	48,600	98,000
Hungary	997	--	--	--	--	--
India	660,000	49,000	145,000	69,200	120,000	422,000
Japan	3,780,000	313,000	694,000	292,000	220,000	784,000
Korea, Republic of	420,000	38,600	113,000	70,300	100,000	213,000
Mexico	7,590,000	640,000	2,090,000	674,000	708,000	2,300,000
Netherlands	13,000,000	1,350,000	3,000,000	1,310,000	1,900,000	4,570,000
Peru	8,110	--	543	--	181	18,200
Philippines	8,170	8,170	8,170	--	--	--
South Africa	382,000	--	--	20,000	--	57,000
Taiwan	6,040	--	1,000	--	7,460	7,460
Thailand	30,000	--	15,400	--	7,440	7,440
United Kingdom	6,450,000	511,000	1,210,000	301,000	352,000	1,120,000
Vietnam	18,300	--	1,900	7,820	--	14,900
Total	43,500,000	4,280,000	10,700,000	3,100,000	4,200,000	11,000,000

-- 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	March	January– March	February	March	January– March
Argentina	26,200	--	--	--	--	--
Australia	223	--	223	--	--	--
Brazil	528	--	--	--	--	--
Canada	677,000	96,600	222,000	31,200	52,700	171,000
Colombia	224	--	--	--	--	--
Denmark	495	150	150	--	--	--
Mexico	188,000	6,680	20,200	7,220	--	7,220
Netherlands	76,600	12,000	24,000	--	--	13,300
Peru	--	--	--	--	--	6,000
Saudi Arabia	26,400	--	--	--	--	--
Total	996,000	115,000	267,000	38,400	52,700	197,000

-- 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			March 2013			January–March 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	565,000	348,000	\$6,000	1,240,000	760,000	\$12,600
Ore and concentrates other	11,900,000	5,810,000	199,000	1,200,000	530,000	16,700	3,290,000	1,600,000	52,400
Molybdenum chemicals:									
Oxides and hydroxides	532,000	NA	10,600	80,000	NA	1,590	200,000	NA	3,910
Molybdates of ammonium	813,000	460,000	14,900	220,000	124,000	3,580	400,000	227,000	6,480
Molybdates (all others)	41,800	16,300	748	--	--	--	1,000	396	21
Molybdenum orange	355,000	NA	2,910	23,800	NA	224	79,600	NA	718
Ferromolybdenum	6,450,000	4,320,000	138,000	129,000	85,900	2,550	1,050,000	706,000	20,200
Molybdenum powders	408,000	362,000	16,700	43,600	43,300	1,550	103,000	101,000	3,850
Molybdenum unwrought	744,000	726,000	21,800	104,000	104,000	3,570	236,000	235,000	7,890
Molybdenum waste and scrap	971,000	925,000	31,400	98,100	92,600	3,080	193,000	184,000	6,400
Molybdenum wire	19,600	NA	2,760	961	NA	177	4,120	NA	677
Molybdenum other	507,000	NA	31,700	10,300	NA	1,130	44,600	NA	3,720
Total	32,900,000	XX	570,000	2,470,000	XX	40,200	6,840,000	XX	119,000

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.