

Mineral Industry Surveys

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MOLYBDENUM IN JUNE 2013

Domestic production of molybdenum (Mo) in concentrate in June 2013 was about 7% more than the output of the previous month but about 18% more than that of June 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 10,300 t at the end of June.

According to Ryan's Notes, the June monthly average price range for U.S. ferromolybdenum (FeMo) was \$12.025 to \$12.263 per pound of molybdenum content, compared with \$12.122 to \$12.267 in May. European FeMo monthly averages ranged from \$26.213 to \$26.588 per kilogram (kg) of molybdenum content in June compared with \$26.900 to \$27.378 per kg in May. In June, worldwide molybdenum oxide (MoO₃) prices ranged from \$10.569 to \$10.700 per pound compared with \$10.889 to \$11.028 per pound in May.

The startup of Kennecott Utah Copper Corp.'s molybdenum autoclave project was expected to be delayed owing to its parent company Rio Tinto plc's efforts to pay down its debt and maintain its credit rating. This was expected to decrease Rio Tinto's cash flow. Kennecott announced layoffs and early retirement incentives for employees in an effort to conserve cash (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 May and June 2013. Export data for May and June 2013 and import data for June 2013 are also included.

Reference Cited

Ryan's Notes, 2013, Ferroalloy notes: Ryan's Notes, v. 19, no.14, June 10, p. 2.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2012 ^p		2013		
	January– December	January– June	May	June	January– June ²
Production	60,100	28,900	4,830 ^r	5,150	30,800
Shipments: ³					
Domestic	19,700	9,070 ^r	W	W	10,000
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.

²May include revisions to previously published data.

³As 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:						
May:						
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	245,000	258,000	--	--	W	503,000
Tool	W	W	--	--	--	W
Total	404,000	316,000	--	--	--	720,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	19,200	W	--	(3)	86,000	105,000
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	131,000	55,100 ^r	93	(3)	328,000 ^r	514,000 ^r
Grand total	632,000	371,000 ^r	93	--	425,000 ^r	1,430,000
Stocks, May 31, 2013	479,000	278,000 ^r	2,410	(6)	(6)	1,640,000
June:						
Steel:						
Carbon	W	W	--	--	W	W
High-strength low-alloy	W	7,380	--	--	--	7,380
Stainless and heat-resisting	167,000	52,300	--	(3)	W	219,000
Full alloy	244,000	W	--	--	W	244,000
Tool	W	W	--	--	--	W
Total	411,000	59,700	--	--	--	471,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	W	W	--	(3)	84,300	84,300
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	351	W	--	--	--	351
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	144,000	300,000	93	(3)	335,000	779,000
Grand total	633,000	359,000	93	--	430,000	1,420,000
Stocks, June 30, 2013	467,000	277,000	2,410	(6)	(6)	1,620,000

^rRevised. 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	June	January– June	May	June	January– June
Australia	--	--	--	--	172,000	172,000
Austria	166,000	11,200	76,400	12,000	--	31,800
Belgium	6,190,000	534,000	3,630,000	208,000	202,000	1,440,000
Brazil	378,000	63,800	210,000	83,000	74,200	349,000
Canada	2,220,000	256,000	1,230,000	173,000	183,000	1,030,000
China	2,130,000	291,000	1,350,000	11,300	54,800	488,000
Colombia	7,190	7,190	7,190	--	--	--
Germany	71,900	12,200	36,500	37,500	12,000	172,000
Hungary	997	--	997	--	--	--
India	660,000	29,600	239,000	150,000	60,400	683,000
Japan	3,780,000	386,000	1,730,000	441,000	378,000	2,070,000
Korea, Republic of	420,000	29,600	187,000	89,800	59,500	480,000
Mexico	7,590,000	643,000	4,060,000	596,000	796,000	4,480,000
Netherlands	13,000,000	835,000	6,420,000	1,470,000	1,520,000	9,800,000
Peru	8,110	181	724	--	363	18,500
Philippines	8,170	--	8,170	2,180	--	2,180
South Africa	382,000	--	180,000	--	57,000	114,000
Taiwan	6,040	--	5,700	--	6,770	19,800
Thailand	30,000	--	22,700	22,100	--	37,000
United Kingdom	6,450,000	326,000	2,420,000	47,900	47,500	1,450,000
Vietnam	18,300	2,970	10,900	14,800	12,500	42,100
Total	43,500,000	3,430,000	21,800,000	3,360,000	3,630,000	22,900,000

-- 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	June	January– June	May	June	January– June
Argentina	26,200	--	--	--	--	--
Australia	223	--	223	--	--	--
Brazil	528	--	--	--	--	--
Canada	677,000	59,500	415,000	30,500	41,500	337,000
Colombia	224	--	--	119	--	119
Denmark	495	--	323	--	--	171
Israel	--	--	--	168	--	168
Mexico	188,000	318	20,800	735	23,700	60,400
Netherlands	76,600	13,300	64,600	--	35,100	48,600
Panama	--	--	--	--	--	13,200
Peru	--	--	--	--	--	6,000
Saudi Arabia	26,400	--	--	--	--	--
Total	996,000	73,100	501,000	31,500	100,000	466,000

-- 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			2013					
	Gross weight	Contained molybdenum	Value ² (thousands)	June			January–June		
				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	763,000	463,000	\$5,460	3,400,000	2,050,000	\$26,500
Ore and concentrates other	11,900,000	5,810,000	199,000	1,250,000	620,000	18,700	7,890,000	3,750,000	116,000
Molybdenum chemicals:									
Oxides and hydroxides	532,000	NA	10,600	20,000	--	375	242,000	NA	4,710
Molybdates of ammonium	813,000	460,000	14,900	100,000	56,500	1,560	854,000	484,000	13,600
Molybdates (all others)	41,800	16,300	748	--	--	--	1,000	396	21
Molybdenum orange	355,000	NA	2,910	32,100	--	265	149,000	NA	1,360
Ferromolybdenum	6,450,000	4,320,000	138,000	542,000	362,000	9,920	3,010,000	2,020,000	56,600
Molybdenum powders	408,000	362,000	16,700	23,600	22,000	932	200,000	193,000	7,560
Molybdenum unwrought	744,000	726,000	21,800	26	26	2	396,000	386,000	12,300
Molybdenum waste and scrap	971,000	925,000	31,400	55,900	55,800	1,790	381,000	354,000	12,300
Molybdenum wire	19,600	NA	2,760	1,630	NA	304	9,150	NA	1,490
Molybdenum other	507,000	NA	31,700	11,200	NA	1,140	162,000	NA	10,600
Total	32,900,000	XX	570,000	2,800,000	XX	40,400	16,700,000	XX	263,000

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.