

Mineral Industry Surveys

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MOLYBDENUM IN SEPTEMBER 2010

Domestic production of molybdenum (Mo) in concentrate in September 2010 was about 7% less than the output of the previous month and about 6% more than that of September 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 6,900 t at the end of September.

According to Ryan's Notes, the September monthly average price range for U.S. ferromolybdenum (FeMo) was \$17.975 to \$18.463 per pound of molybdenum content, compared with \$16.789 to \$17.189 in August. European FeMo monthly averages ranged from \$39.519 to \$40.094 per kilogram (kg) of molybdenum content in September compared with \$38.861 to \$39.600 per kg in August. In September, worldwide molybdenum oxide (MoO₃) prices ranged from \$15.375 to \$15.850 per pound compared with \$15.328 to \$15.633 per pound in August.

Moly Mines Ltd. (Perth, Australia) announced that mining activities were expected to start in August at its Spinifex Ridge molybdenum project in the Pilbara region of Western Australia. In April, Hanlong Mining Investment Pty. Ltd. became Moly Mines' controlling shareholder (55%), following the settlement of a \$200 million equity and debt funding package (Moly Mines Ltd., 2010, p. 1). According to the company, site construction work had commenced and work on the Utah Point export facility was on schedule. The facility was expected to receive

Spinifex Ridge ore at the end of October (Engineering and Mining Journal, 2010).

Moly Mines had initially planned to develop and operate a mining operation at Spinifex Ridge that would produce 20 million metric tons per year (Mt/yr) of molybdenum ore, based on a 24-year mine life. However, a dramatic fall in molybdenum prices in late 2008 led the company to revise its plans for a smaller 10-Mt/yr of ore operation, with a possibility of future expansion (Engineering and Mining Journal, 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 August and September 2010. Export data for July and August 2010 and import data for August 2010 are also included.

References Cited

- Engineering and Mining Journal, 2010, Mining startup anticipated at Spinifex Ridge Moly Project: Engineering and Mining Journal, v. 211, no. 7, September 14, p. 18.
- Moly Mines Ltd., 2010, Spinifex Ridge molybdenum project—Annual environmental compliance report: Perth, Australia, Moly Mines Ltd., August 27, 15 p. (Accessed November 24, 2010, at http://www.molymines.com/public/documents/6/13/Part%20IV%20Compliance%20Report%20_2010.pdf.)

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2009		2010		
	January- December ^p	January- September	August	September	January- September ²
Production	47,700	35,900	4,940	4,590	42,700
Shipments: ³					
Domestic	12,200	9,320	1,370	1,170	10,300
Export	12,800	9,080	W	W	W

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

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

²May include revisions to 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- September	August	September	January- September ²
Gross production	59,900	43,600	6,720 ^r	6,280	53,200
Internal consumption ³	26,200	19,100	W	W	W
Gross shipments	43,300	32,600	4,560 ^r	4,640	38,600

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

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

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	Molybdc oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2010:						
August:						
Steel:						
Carbon	W	W	--	--	W	W
High-strength low-alloy	58,400	7,320	--	--	--	65,700
Stainless and heat-resisting	162,000	63,800	--	W	6,510	232,000
Full alloy	247,000	288,000	--	--	W	535,000
Tool	W	W	--	--	--	W
Total	468,000	359,000	--	W	6,510	833,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	W	W	--	W	70,200	70,200
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	69	W	--	--	--	69
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	132,000	51,600	72,600	56,300	221,000	533,000
Grand total	677,000	411,000	72,600	56,300	308,000	1,520,000
Stocks, August 31, 2010	316,000	299,000	2,200	(5)	(5)	1,510,000
September:						
Steel:						
Carbon	32,200	W	--	--	W	32,200
High-strength low-alloy	47,500	7,780	--	--	--	55,300
Stainless and heat-resisting	154,000	61,900	--	W	6,510	222,000
Full alloy	249,000	258,000	--	--	W	506,000
Tool	W	W	--	--	--	W
Total	482,000	327,000	--	W	6,510	816,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	44,500	W	--	38,200	82,200	165,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	345	W	--	--	--	345
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

See footnotes at end of table.

TABLE 3—Continued
 U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS¹

(Kilograms, contained molybdenum)

End use	Molybdc oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2010:						
September—Continued:						
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	66,700	52,500	72,600	1,840	222,000	416,000
Grand total	671,000	380,000	72,600	40,000	322,000	1,480,000
Stocks, September 30, 2010	310,000	297,000	3,150	(5)	(5)	1,480,000

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.

⁵Withheld to avoid disclosing company proprietary data; included in "Total."

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

(Kilograms, contained molybdenum)

Country	2009			2010		
	January- December	August	January- August	July	August	January- August
Australia	159	--	159	--	--	--
Austria	--	--	--	36,700	12,400	62,900
Belgium	7,060,000	1,270,000	4,150,000	1,200,000	1,040,000	6,440,000
Brazil	49,100	--	49,100	26,600	12,900	156,000
Canada	1,070,000	189,000	692,000	64,300	107,000	723,000
Chile	212,000	--	212,000	--	--	--
China	6,680,000	1,120,000	4,110,000	373,000	442,000	3,710,000
France	--	--	--	--	--	4,410
Germany	--	--	--	24,900	36,400	143,000
Hong Kong	38,900	--	--	--	--	--
India	144,000	26,100	139,000	100,000	118,000	501,000
Japan	912,000	98,100	550,000	232,000	246,000	1,400,000
Kenya	23,200	--	23,200	--	--	--
Korea, Republic of	884,000	181,000	645,000	49,100	81,700	519,000
Mexico	2,870,000	11,800	2,120,000	465,000	311,000	3,310,000
Netherlands	6,510,000	393,000	4,330,000	835,000	596,000	5,680,000
New Caledonia	--	--	--	--	--	1,050
Poland	--	--	--	--	--	194
Slovenia	--	--	--	--	12,200	24,600
South Africa	431,000	--	320,000	99,000	100,000	403,000
Spain	--	--	--	--	--	24,600
Sweden	1,140	--	--	--	--	--
Taiwan	20,000	--	2,960	25,400	1,100	26,500
Thailand	9,620	--	--	--	--	19,200
United Arab Emirates	5,910	--	5,910	5,570	25,000	55,100
United Kingdom	2,440,000	517,000	1,890,000	432,000 [†]	415,000	3,050,000
Venezuela	1,580	--	1,580	--	--	940
Vietnam	229,000	30,400	150,000	20,600	--	51,400
Total	29,600,000	3,840,000	19,400,000	3,990,000 [†]	3,560,000	26,300,000

[†]Revised. -- 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. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2009			2010		
	January- December	August	January- August	July	August	January- August
Argentina	13,200	--	13,200	--	13,300	13,300
Australia	--	--	--	--	--	628
Belgium	13,500	--	13,500	--	--	--
Canada	581,000	42,900	291,000	77,100	62,100	476,000
China	25,300	--	25,300	--	--	--
Colombia	1,280	--	1,280	--	--	620
Denmark	200	--	--	--	--	172
India	65,300	123	65,300	--	--	10,900
Israel	95	--	95	--	--	--
Korea, Republic of	26,800	--	26,800	--	11,200	11,200
Mexico	55,200	525	35,300	--	4,100	9,620
Netherlands	24,000	11,800	11,800	12,700	26,500	52,000
Peru	3,180	--	3,180	--	--	--
Philippines	1,210	--	942	--	--	939
Singapore	--	--	--	--	--	7,380
Taiwan	12,500	--	12,500	--	--	--
Turkey	--	--	--	--	103	103
United Arab Emirates	3,260	--	3,260	--	--	--
Total	827,000	55,400	503,000	89,900	117,000	582,000

-- 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			August 2010			January-August 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	801,000	495,000	\$8,890	7,340,000	4,520,000	\$82,200
Ore and concentrates other	5,590,000	2,720,000	54,900	879,000	423,000	11,700	8,020,000	3,820,000	117,000
Molybdenum chemicals:									
Oxides and hydroxides	209,000	NA	3,330	9,240	NA	185	374,000	NA	8,520
Molybdates of ammonium	1,140,000	642,000	19,400	112,000	63,200	1,900	1,220,000	688,000	21,900
Molybdates (all others)	30,300	14,500	1,090	7,490	3,390	214	52,100	18,900	1,270
Molybdenum orange	269,000	NA	2,170	24,100	NA	159	269,000	NA	2,030
Ferromolybdenum	3,040,000	2,030,000	50,100	447,000	299,000	10,000	3,660,000	2,450,000	87,400
Molybdenum powders	60,000	52,500	2,870	16,900	16,700	816	147,000	139,000	6,420
Molybdenum unwrought	107,000	97,800	2,880	60,100	60,000	2,020	173,000	173,000	5,440
Molybdenum waste and scrap	482,000	473,000	15,300	160,000	154,000	5,980	540,000	521,000	21,000
Molybdenum wire	15,100	NA	2,120	1,190	NA	168	12,000	NA	1,930
Molybdenum other	306,000	NA	19,800	28,700	NA	2,840	402,000	NA	23,500
Total	19,000,000	XX	269,000	2,550,000	XX	44,900	22,200,000	XX	378,000

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.