

Mineral Industry Surveys

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MOLYBDENUM IN JANUARY 2009

Domestic production of molybdenum (Mo) in concentrate in January 2009 was about 9% less than the output of the previous month and about 24% less than that of January 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 7,340 t at the end of January.

According to Ryan's Notes (2009b), the January 2009 monthly average price range for U.S. ferromolybdenum (FeMo) was \$10.425 to \$10.813 per pound (lb) of molybdenum content, compared with \$11.400 to \$12.000 per lb in December 2008. European FeMo monthly averages ranged from \$23.300 to \$23.913 per kilogram (kg) of molybdenum content in January compared with \$24.206 to \$24.938 per kg in December 2008. In January, worldwide molybdenum oxide (MoO₃) prices ranged from \$9.213 to \$9.600 per lb compared with \$9.644 to \$10.056 per lb in December 2008.

Adanac Molybdenum Corp. (Surrey, British Columbia, Canada) announced that it applied for bankruptcy protection on December 19, 2008. As part of its efforts to restructure, Adanac was expected to demobilize its Ruby Creek site, eliminate or substantially decrease any extraneous services, reduce the number of employees by 70%, and substantially reduce

contracting efforts (Ryan's Notes, 2009a). Adanac had initially calculated that the Ruby Creek deposit contained 212.9 million metric tons of 0.063% Mo at a 0.04% cut-off. Adanac announced that it would recalculate the mineral resource using additional drilling information, which was expected to increase the mineral resource estimate (Adanac Molybdenum Corp., 2009, p. 2).

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 December 2008 and January 2009. Export data for November and December 2008 and import data for December 2008 are also included.

References Cited

- Adanac Molybdenum Corp., 2009, Ruby Creek project—Exploration update: Adanac Molybdenum Corp., January 20, 14 p. (Accessed August 18, 2009, at http://www.adanacmoly.com/_resources/news/2009-01-20ExplorationUpdateJan2009_final.pdf.)
- Ryan's Notes, 2009a, Ferroalloy notes: Ryan's Notes, v. 15, no. 4, January 26, p. 7.
- Ryan's Notes, 2009b, [untitled]: Ryan's Notes, v. 15, no. 5, February 4, p. 12.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2008			2009
	January- December ^p	January	December	January
Production	55,800	4,660	3,910	3,550
Shipments: ²				
Domestic	41,100	3,410	2,080	2,140
Export	12,900	1,300	1,050	600

^pPreliminary.

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

²As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM
PRODUCTS¹

(Metric tons, contained molybdenum)

	2008			2009
	January- December ^p	January	December	January
Gross production	72,800 ^r	6,390	5,180 ^r	4,970
Internal consumption ²	39,400	3,150	2,310	2,160
Gross shipments	51,200 ^r	4,700	3,990 ^r	3,270

^rRevised. ^pPreliminary.

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

²Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate,

TABLE 3
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
2008, December:						
Steel:						
Carbon	30,600	W	--	--	W	30,600
High-strength low-alloy	39,100	7,840	--	--	11,300	58,300
Stainless and heat-resisting	148,000	61,600	--	W	6,510	216,000
Full alloy	249,000	307,000	--	--	1,510	557,000
Tool	W	W	--	--	--	W
Total	466,000	376,000	--	W	19,400	862,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	47,800	W	--	W	76,900	125,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	382	--	--	2,870	3,250
Mill products made from metal powder ³	--	--	--	--	172,000	172,000
Cemented carbides and related products ⁴	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	236	236
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	66,800	28,200	72,600	81,500	16,800	266,000
Grand total	658,000	425,000	72,600	81,500	300,000	1,540,000
Stocks, December 31, 2008	312,000	301,000	2,150	20,200	877,000	1,510,000
2009, January:						
Steel:						
Carbon	30,200	W	--	--	W	30,200
High-strength low-alloy	39,100	7,840	--	--	11,300	58,300
Stainless and heat-resisting	184,000	65,400	--	W	6,510	256,000
Full alloy	241,000	288,000	--	--	1,510	531,000
Tool	W	W	--	--	--	W
Total	495,000	361,000	--	W	19,400	875,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	47,900	W	--	W	72,900	121,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	4,320	--	--	--	4,320
Mill products made from metal powder ³	13,300	--	--	--	172,000	186,000
Cemented carbides and related products ⁴	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	239	239
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	66,800	28,200	72,600	87,000	16,800	271,000
Grand total	700,000	414,000	72,600	87,000	293,000	1,570,000
Stocks, January 31, 2009	306,000	319,000	2,150	10,500	857,000	1,490,000

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.

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

(Kilograms, contained molybdenum)

Country	2007		2008		
	January- December	December	November	December	January- December
Argentina	--	--	19,000	19,000	210,000
Belgium	6,730,000	958,000	330,000	383,000	6,910,000
Brazil	119,000	8,760	--	--	9,700
Canada	2,580,000	148,000	38,500	55,200	2,030,000
Chile	1,270,000	--	--	--	316,000
China	71,500	16	--	123,000	365,000
Finland	38,000	--	--	--	--
India	119,000	--	--	--	32,700
Italy	19,000	--	--	--	12,000
Japan	2,230,000	144,000	238,000	241,000	2,220,000
Korea, Republic of	232,000	51,900	32,800	51,900	694,000
Mexico	4,760,000	336,000	339,000	408,000	4,470,000
Netherlands	9,660,000	818,000	758,000	820,000	9,960,000
Niger	--	--	--	--	17,400
Pakistan	75,600	--	--	--	--
South Africa	--	--	--	11,400	11,400
Switzerland	1,630	--	--	--	--
Taiwan	17,900	--	--	--	--
Thailand	9,620	--	--	--	--
United Kingdom	5,800,000	346,000	495,000	474,000	5,080,000
Vietnam	4,990	857	5,290	9,980	341,000
Other ²	80,800	29,800	--	567	35,000
Total	33,800,000	2,840,000	2,260,000	2,600,000	32,700,000

-- Zero.

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

²Includes countries with year-to-date quantities of less than 1,000 kilograms.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2007		2008		
	January- December	December	November	December	January- December
Australia	25,000	--	--	--	174
Canada	838,000	128,000	18,600	13,900	933,000
Colombia	--	--	904	--	1,090
Denmark	394	--	--	--	454
India	1,090	--	---	--	1,150
Korea, Republic of	--	--	--	--	14,000
Mexico	23,700	--	6,610	10,200	58,600
Netherlands	145,000	--	70,100	--	280,000
Philippines	735	--	--	--	700
Saudi Arabia	149,000	--	--	--	--
South Africa	13,500	--	--	--	68
United Kingdom	24,900	--	--	--	--
Total	1,220,000	128,000	96,200	24,100	1,290,000

-- 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 2007			December 2008			January-December 2008		
	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	8,680,000	5,430,000	\$181,000	203,000	117,000	\$1,920	9,950,000	6,060,000	\$249,000
Ore and concentrates other	15,000,000	6,960,000	372,000	441,000	196,000	8,760	9,140,000	4,170,000	263,000
Molybdenum chemicals:									
Oxides and hydroxides	211,000	NA	8,020	49,700	NA	1,790	335,000	NA	12,900
Molybdates of ammonium	915,000	515,000	30,400	20,000	11,200	732	360,000	203,000	14,100
Molybdates (all others)	179,000	51,400	2,190	2,510	1,250	160	91,600	31,500	1,180
Molybdenum orange	600,000	NA	4,040	6,240	NA	67	373,000	NA	3,110
Ferromolybdenum	6,360,000	4,100,000	270,000	71,900	45,700	1,580	3,460,000	2,320,000	166,000
Molybdenum powders	72,900	60,800	4,990	2,920	2,330	123	76,000	64,100	7,070
Molybdenum unwrought	117,000	117,000	7,460	40,000	40,000	1,710	256,000	255,000	15,800
Molybdenum waste and scrap	574,000	554,000	34,800	11,100	11,000	815	588,000	546,000	30,900
Molybdenum wire	17,900	NA	2,740	2,640	NA	234	19,800	NA	3,060
Molybdenum other	164,000	NA	20,900	23,100	NA	2,590	483,000	NA	48,700
Total	32,900,000	XX	938,000	874,000	XX	20,500	25,100,000	XX	814,000

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.