

Mineral Industry Surveys

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MOLYBDENUM IN NOVEMBER 2009

Domestic production of molybdenum (Mo) in concentrate in November 2009 was about 14% less than the output of the previous month and slightly greater than that of the revised November 2008 output, 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 6,430 t at the end of November.

According to Ryan's Notes (2009), the November monthly average price range for U.S. ferromolybdenum (FeMo) was from \$12.686 to \$13.500 per pound of molybdenum content, compared with \$13.994 to \$14.372 in October. European FeMo monthly averages ranged from \$26.714 to \$27.714 per kilogram (kg) of molybdenum content in November compared with \$27.178 to \$28.367 per kg in October. In November, worldwide molybdenum oxide (MoO₃) prices ranged from \$11.057 to

\$11.429 per pound compared with \$12.278 to \$12.572 per pound in October.

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 October and November 2009. Export data for September and October 2009 and import data for October 2009 are also included.

Reference Cited

Ryan's Notes, 2009, [untitled]: Ryan's Notes, v. 15, no. 47, December 1, p. 10.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2008		2009		
	January- December	January- November	October	November	January- November
Production	57,000	52,600 ^r	4,370	3,760	44,000
Shipments: ²					
Domestic	35,000	33,600 ^r	963	1,010	11,300
Export	12,900	11,900	1,350	1,210	11,600

^rRevised.

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	January- November ^r	October	November	January- November
Gross production	72,900	68,300	5,860	5,160	54,600
Internal consumption ²	39,700	37,800	2,590	2,420	24,100
Gross shipments	51,300	47,300	3,390	3,290	39,300

^rRevised.

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, 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
2009, October:						
Steel:						
Carbon	33,300 ^r	W	--	--	W	33,300 ^r
High-strength low-alloy	41,200	8,000	--	--	11,300	60,500
Stainless and heat-resisting	166,000	63,400	--	W	6,510	236,000
Full alloy	244,000	188,000	--	--	1,510	434,000
Tool	W	W	--	--	--	W
Total	484,000 ^r	259,000	--	W	19,400	763,000 ^r
Cast irons (gray, malleable, and ductile iron)	W	22,200	--	--	763	23,000
Superalloys	33,100 ^r	W	--	W	79,300	112,000 ^r
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	--	2,070	--	--	--	2,070
Mill products made from metal powder ³	--	--	--	--	177,000	177,000
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	66,700	27,200	72,600	48,100 ^r	16,800	231,000 ^r
Grand total	661,000 ^r	311,000	72,600	48,100 ^r	304,000	1,400,000 ^r
Stocks, October 31, 2009	335,000 ^r	288,000	1,970	44,700 ^r	850,000	1,520,000 ^r
2009, November:						
Steel:						
Carbon	32,400	W	--	--	W	32,400
High-strength low-alloy	41,200	8,000	--	--	11,300	60,500
Stainless and heat-resisting	169,000	63,500	--	W	6,510	239,000
Full alloy	244,000	190,000	--	--	1,510	436,000
Tool	W	W	--	--	--	W
Total	487,000	262,000	--	W	19,400	768,000
Cast irons (gray, malleable, and ductile iron)	W	22,200	--	--	763	23,000
Superalloys	37,500	W	--	W	76,700	114,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	176	1,450	--	--	--	1,620
Mill products made from metal powder ³	6,660	--	--	--	172,000	179,000
Cemented carbides and related products ⁴	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	214	214
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	66,700	26,000	72,600	47,900	16,800	230,000
Grand total	675,000	312,000	72,600	47,900	297,000	1,400,000
Stocks, November 30, 2009	307,000	293,000	2,070	38,400	851,000	1,490,000

^rRevised. 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	2008			2009		
	January- December	October	January- October	September	October	January- October
Argentina	210,000	19,000	172,000	--	--	--
Austria	1,090	--	1,090	--	--	--
Belgium	6,910,000	666,000	6,200,000	726,000	641,000	5,520,000
Brazil	9,700	8,410	9,700	--	--	49,100
Canada	2,030,000	173,000	1,940,000	139,000	122,000	953,000
Chile	316,000	42,900	316,000	--	--	212,000
China	365,000	--	242,000	566,000	543,000	5,210,000
India	32,700	10,500	32,700	--	--	139,000
Italy	12,000	--	12,000	--	--	--
Japan	2,220,000	197,000	1,740,000	97,500	78,500	726,000
Kenya	--	--	--	--	--	23,200
Korea, Republic of	694,000	30,300	609,000	32,600	53,600	732,000
Latvia	20,000	--	20,000	--	--	--
Mexico	4,470,000	274,000	3,730,000	--	--	2,120,000
Netherlands	9,960,000	1,470,000	8,380,000	1,030,000	340,000	5,700,000
Netherlands Antilles	10,500	--	10,500	--	--	--
Niger	17,400	17,400	17,400	--	--	--
South Africa	11,400	--	--	51,300	59,600	431,000
Spain	1,270	--	1,270	--	--	--
Sweden	--	--	--	1,140	--	1,140
Taiwan	--	--	--	17,100	--	20,000
Thailand	--	--	--	9,620	--	9,620
United Arab Emirates	--	--	--	--	--	5,910
United Kingdom	5,080,000	695,000	4,110,000	229,000	85,600	2,200,000
Venezuela	1,520	116	1,520	--	--	1,580
Vietnam	341,000	284,000	325,000	50,300	5,010	205,000
Other ²	567	--	--	--	--	159
Total	32,700,000	3,890,000	27,900,000	2,950,000	1,930,000	24,300,000

-- Zero.

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

²Includes countries with year-to-date or full year 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	2008			2009		
	January- December	October	January- October	September	October	January- October
Argentina	--	--	--	--	--	13,200
Australia	174	174	174	--	--	--
Belgium	--	--	--	--	--	13,500
Canada	933,000	93,500	900,000	91,700	77,100	460,000
China	--	--	--	--	--	25,300
Colombia	1,090	--	186	--	--	1,280
Denmark	454	--	454	--	200	200
India	1,150	302	1,150	--	--	65,300
Israel	--	--	--	--	--	95
Korea, Republic of	14,000	--	14,000	--	--	26,800
Mexico	58,600	3,980	41,800	900	16,200	52,400
Netherlands	280,000	--	210,000	12,200	--	24,000
Peru	--	--	--	--	--	3,180
Philippines	700	--	700	270	--	1,210
South Africa	68	--	68	--	--	--
Taiwan	--	--	--	--	--	12,500
United Arab Emirates	--	--	--	--	--	3,260
Total	1,290,000	97,900	1,170,000	105,000	93,500	702,000

-- 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 2008			October 2009			January-October 2009		
	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	9,950,000	6,060,000	\$249,000	1,100,000	671,000	\$21,400	6,670,000	4,120,000	\$74,100
Ore and concentrates other	9,140,000	4,170,000	263,000	123,000	63,900	2,030	4,810,000	2,310,000	45,700
Molybdenum chemicals:									
Oxides and hydroxides	335,000	NA	12,900	19,400	NA	176	206,000	NA	3,250
Molybdates of ammonium	360,000	203,000	14,100	181,000	102,000	3,280	1,070,000	602,000	18,300
Molybdates (all others)	91,600	31,500	1,180	966	798	35	23,100	11,000	844
Molybdenum orange	373,000	NA	3,110	32,200	NA	262	225,000	NA	1,830
Ferromolybdenum	3,460,000	2,320,000	166,000	176,000	121,000	4,130	2,470,000	1,640,000	39,600
Molybdenum powders	76,000	64,100	7,070	10,000	10,000	479	24,800	20,800	1,520
Molybdenum unwrought	256,000	255,000	15,800	20,000	20,000	483	87,000	77,700	2,390
Molybdenum waste and scrap	588,000	546,000	30,900	42,800	42,800	1,620	409,000	403,000	12,700
Molybdenum wire	19,800	NA	3,060	1,770	NA	329	11,700	NA	1,610
Molybdenum other	483,000	NA	48,700	10,200	NA	969	232,000	NA	15,200
Total	25,100,000	XX	814,000	1,720,000	XX	35,200	16,200,000	XX	217,000

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.