

Mineral Industry Surveys

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MOLYBDENUM IN DECEMBER 2011

Domestic production of molybdenum (Mo) in concentrate in December 2011 was slightly more than that of the previous month and about 25% less than December 2010 production. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 8,150 metric tons (t) at the beginning of 2011 and about 8,900 t at the end of December 2011.

According to Ryan's Notes, the December monthly average price range for U.S. ferromolybdenum (FeMo) was \$15.617 to \$15.989 per pound of molybdenum content, compared with \$14.869 to \$15.238 in November. European FeMo monthly averages ranged from \$32.050 to \$32.417 per kilogram (kg) of molybdenum content in December compared with \$32.431 to \$32.981 per kg in November. In December, worldwide molybdenum oxide (MoO₃) prices ranged from \$13.311 to \$13.522 per pound compared with \$13.175 to \$13.506 per pound in November.

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 November and December 2011. Export data for October and November 2011 and import data for November 2011 are also included.

Chinese production of molybdenum concentrates increased 13% to 234,428 t in 2011 compared with the same period in 2010, according to the China Non-Ferrous Metals Industry Association. The main production areas were Henan Province with 108,752 t molybdenum concentrate (46%) and Shaanxi Province with 39,560 t molybdenum concentrate (17%) production (Metal-Pages, 2012).

Reference Cited

Metal-Pages, 2012, China Jan-Dec molybdenum concentrates output up 12.7%:
Metal-Pages, February 7. (Accessed May 8, 2012, via <http://www.metal-pages.com/>)

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2010	2011		
	January– December	November	December	January– December ²
Production	59,400	4,310	4,370	62,700
Shipments: ³				
Domestic	14,100	1,380	1,280	18,300
Export	W	W	W	W

W Withheld to avoid disclosing company proprietary data.

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

²May include revisions to prior month(s).

³As reported by producers.

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

(Metric tons, contained molybdenum)

	2010	2011		
	January– December	November	December	January– December ²
Gross production	68,600	W	W	W
Internal consumption ³	W	W	W	W
Gross shipments	51,100	W	4,120	W

W Withheld to avoid disclosing company proprietary data.

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

²May include revisions for prior month(s).

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	Molybdic oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2011:						
November:						
Steel:						
Carbon	34,000	W	--	--	W	34,000
High-strength low-alloy	50,200	8,230	--	--	--	58,500
Stainless and heat-resisting	162,000	59,200	--	(3)	6,510	228,000
Full alloy	265,000	300,000	--	--	W	565,000
Tool	W	W	--	--	--	W
Total	511,000	367,000	--	--	6,510	885,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	(4)	W	--	(4)	88,500 ^r	88,500 ^r
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	189	W	--	--	--	189
Mill products made from metal powder ⁵	-- ^r	--	--	--	W	W
Cemented carbides and related products ⁶	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	(3)	--	--	W
Catalysts	77,300	--	(3)	--	W	77,300
Other chemicals	--	--	--	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	51,800 ^r	59,200 ^r	(3)	--	270,000	381,000 ^r
Grand total	640,000 ^r	427,000	--	--	376,000	1,440,000
Stocks, November 30, 2011	399,000 ^r	319,000	2,160	(7)	(7)	1,630,000
December:						
Steel:						
Carbon	34,100	W	--	--	W	34,100
High-strength low-alloy	54,800	8,230	--	--	--	63,000
Stainless and heat-resisting	166,000	59,400	--	(3)	6,510	232,000
Full alloy	263,000	309,000	--	--	W	572,000
Tool	W	W	--	--	--	W
Total	518,000	377,000	--	--	6,510	901,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	25,900	W	--	(3)	90,000	116,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	55	W	--	--	--	55
Mill products made from metal powder ⁵	--	--	--	--	W	W
Cemented carbides and related products ⁶	--	--	--	--	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	51,800	63,300	--	--	321,000	436,000
Grand total	673,000	440,000	--	--	428,000	1,540,000
Stocks, December 31, 2011	408,000	311,000	2,160	(7)	(7)	1,620,000

See footnotes at end of table.

TABLE 3—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.

⁴Withheld to avoid disclosing company proprietary data; included in "Other and Total."

⁵Includes ingot, wire, rod, and sheet.

⁶Includes construction, mining, oil and gas, metalworking machinery.

⁷Withheld 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	2010			2011		
	January– December	November	January– November	October	November	January– November
Argentina	17,200	3,950	17,200	--	--	--
Australia	--	--	--	--	--	800
Austria	440,000	124,000	272,000	--	--	267,000
Azerbaijan	--	--	--	9,370	--	9,370
Belgium	9,610,000	732,000	8,690,000	719,000	606,000	6,150,000
Brazil	310,000	21,000	232,000	7,640	6,550	349,000
Canada	1,150,000	165,000	1,050,000	37,500	60,600	1,250,000
Chile	--	--	--	--	--	3,220,000
China	5,280,000	384,000	4,880,000	112,000	178,000	2,410,000
Czech Republic	--	--	--	31	--	31
El Salvador	--	--	--	--	--	881
Finland	--	--	--	11,400	34,700	283,000
France	16,600	--	4,410	--	--	121,000
Germany	143,000	--	143,000	--	--	120,000
Hong Kong	1,140	--	--	--	--	--
India	924,000	138,000	784,000	34,300	62,700	853,000
Italy	13,200	--	13,200	--	--	37,300
Japan	2,630,000	308,000	2,370,000	387,000	302,000	3,860,000
Korea, Republic of	805,000	44,100	750,000	70,900	55,400	1,390,000
Luxembourg	11,500	11,500	11,500	--	--	24,800
Mexico	5,040,000	513,000	4,530,000	473,000	661,000	6,690,000
Netherlands	8,210,000	675,000	7,750,000	1,330,000	1,210,000	10,800,000
New Caledonia	1,050	--	1,050	--	--	--
Panama	2,360	2,360	2,360	--	--	--
Poland	194	--	194	--	--	--
Slovenia	24,600	--	24,600	--	--	--
South Africa	520,000	--	520,000	--	--	--
Spain	24,600	--	24,600	--	--	330
Sweden	12,100	--	151	11,600	--	145,000
Taiwan	67,900	7,590	34,100	--	--	40,500
Thailand	19,200	--	19,200	--	--	7,260
United Arab Emirates	154,000	12,000	129,000	--	--	12,600
United Kingdom	5,000,000	553,000	4,330,000	491,000	431,000	5,700,000
Venezuela	940	--	940	--	--	838
Vietnam	149,000	2,390	68,600	1,200	4,550	284,000
Total	40,600,000	3,700,000	36,700,000	3,700,000	3,620,000	44,000,000

-- Zero.

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

Source: U.S. Census Bureau.

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

(Kilograms, contained molybdenum)

Country	2010			2011		
	January– December	November	January– November	October	November	January– November
Argentina	13,300	--	13,300	--	--	--
Australia	628	--	628	--	256	497
Canada	677,000	37,400	627,000	76,300	61,000	827,000
Colombia	1,170	--	1,170	--	--	--
Denmark	372	--	372	171	--	501
India	36,600	6,640	36,600	--	--	--
Japan	12,700	--	--	--	--	--
Korea, Republic of	11,200	--	11,200	--	--	--
Mexico	12,900	3,260	12,900	15,200	3,030	47,800
Netherlands	196,000	26,000	156,000	26,300	13,700	269,000
Philippines	939	--	939	--	--	--
Singapore	14,300	6,890	14,300	--	--	--
Turkey	103	--	103	--	--	116,000
Total	978,000	80,100	874,000	118,000	78,000	1,260,000

-- 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 2010			2011					
	Gross weight	Contained molybdenum	Value ² (thousands)	November			January–November		
				Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	10,300,000	6,340,000	\$112,000	1,210,000	735,000	\$13,400	10,900,000	6,590,000	\$128,000
Ore and concentrates other	13,500,000	6,610,000	202,000	1,290,000	570,000	22,200	16,800,000	6,680,000	295,000
Molybdenum chemicals:									
Oxides and hydroxides	508,000	NA	12,200	--	--	--	126,000	NA	3,370
Molybdates of ammonium	1,590,000	905,000	28,600	67,100	37,900	1,140	922,000	544,000	20,200
Molybdates (all others)	62,600	23,300	1,510	230	109	14	22,300	9,840	1,120
Molybdenum orange	349,000	NA	2,730	14,100	NA	128	277,000	NA	2,460
Ferromolybdenum	5,330,000	3,560,000	130,000	477,000	320,000	10,900	4,260,000	2,840,000	107,000
Molybdenum powders	232,000	221,000	10,100	3,520	3,490	249	269,000	252,000	13,200
Molybdenum unwrought	307,000	301,000	10,200	21,900	21,800	736	526,000	505,000	19,600
Molybdenum waste and scrap	703,000	682,000	26,900	55,300	55,000	2,160	675,000	634,000	25,100
Molybdenum wire	19,300	NA	3,030	2,710	NA	328	19,200	NA	3,010
Molybdenum other	582,000	NA	37,500	90,800	NA	6,030	803,000	NA	57,400
Total	33,500,000	XX	576,000	3,230,000	XX	57,400	35,600,000	XX	675,000

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.