

Mineral Industry Surveys

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MOLYBDENUM IN SEPTEMBER 2012

Domestic production of molybdenum (Mo) in concentrate in September 2012 was 9% more than the output of the previous month and about 11% less than that of September 2011. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 8,900 metric tons (t) at the beginning of 2012 and about 9,970 t at the end of September.

According to Ryan's Notes, the September monthly average price range for U.S. ferromolybdenum (FeMo) was \$13.725 to \$13.963 per pound of molybdenum content, compared with \$13.806 to \$14.056 in August. European FeMo monthly averages ranged from \$29.900 to \$30.450 per kilogram (kg) of molybdenum content in September compared with \$28.044 to \$28.622 per kg in August. In September, worldwide molybdenum oxide (MoO₃) prices ranged from \$11.650 to \$11.950 per pound compared with \$11.122 to \$11.372 per pound in August.

China produced 137,130 t of molybdenum in concentrate in the first eight months of 2012, a 7% increase from the same period in 2011. August production was 16,880 t of molybdenum

in concentrate, an increase of 13% from August 2011 production. Some sources have pointed out that actual production may be even higher than reported production, as many mines in China do not report to the country's official statistics system (Ryan's Notes, 2012).

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 2012. Export data for August and September 2012 and import data for September 2012 are also included.

Reference Cited

Ryan's Notes, 2012, Ferroalloy notes: Ryan's Notes, v. 18, no. 38, September 24, p. 4.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2011		2012		
	January– December	January– September	August	September	January– September
Production	63,700	49,900 ^r	4,100	4,480	42,400
Shipments: ²					
Domestic	W	14,200 ^r	1,520	1,490	13,400
Export	W	W	W	W	W

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

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

²As reported by producers.

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

(Metric tons, contained molybdenum)

	2011		2012		
	January– December	January– September	August	September	January– September
Gross production	W	W	W	W	W
Internal consumption ²	W	W	W	W	W
Gross shipments	W	W	4,000 ^r	W	37,900

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

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

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
2012:						
August:						
Steel:						
Carbon	34,300 ^r	W	--	--	W	34,300 ^r
High-strength low-alloy	W	7,320	--	--	--	7,320
Stainless and heat-resisting	165,000	58,000	--	(3)	6,510	229,000
Full alloy	248,000	252,000	--	--	W	499,000
Tool	W	W	--	--	--	W
Total	447,000 ^r	317,000	--	--	6,510	770,000 ^r
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	(4)	(4)	--	(4)	95,500	95,500
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	215	W	--	--	--	215
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	94,400	25,600 ^r	218	--	273,000	393,000 ^r
Grand total	618,000	343,000 ^r	218	--	385,000	1,350,000 ^r
Stocks, August 31, 2012	419,000 ^r	302,000 ^r	1,940	(7)	(7)	1,620,000 ^r
September:						
Steel:						
Carbon	33,500	W	--	--	W	33,500
High-strength low-alloy	W	7,320	--	--	--	7,320
Stainless and heat-resisting	169,000	57,900	--	(3)	6,510	234,000
Full alloy	244,000	249,000	--	--	W	492,000
Tool	W	W	--	--	--	W
Total	446,000	314,000	--	--	6,510	767,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	(4)	(4)	--	(4)	103,000	103,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	215	W	--	--	--	215
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	94,000	53,400	(3)	--	290,000	437,000
Grand total	618,000	367,000	--	--	409,000	1,390,000
Stocks, September 30, 2012	399,000	306,000	2,020	(7)	(7)	1,600,000

See footnote 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.

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	2011			2012		
	January– December	September	January– September	August	September	January– September
Australia	800	--	800	--	--	--
Austria	278,000	--	267,000	21,500	11,200	120,000
Azerbaijan	9,370	--	--	--	--	--
Belgium	6,620,000	269,000	4,830,000	651,000	658,000	5,490,000
Brazil	374,000	19,500	335,000	18,600	93,000	359,000
Canada	1,400,000	46,300	1,160,000	271,000	125,000	1,870,000
Chile	3,220,000	--	3,220,000	--	--	--
China	2,570,000	183,000	2,120,000	167,000	144,000	1,720,000
Colombia	--	--	--	--	--	7,190
Czech Republic	31	--	--	--	--	--
El Salvador	881	--	881	--	--	--
Finland	283,000	23,200	237,000	--	--	--
France	121,000	--	121,000	--	--	--
Germany	133,000	435	120,000	--	11,300	47,800
Hungary	--	--	--	--	--	997
India	901,000	35,100	756,000	24,200	36,000	335,000
Italy	37,300	--	37,300	--	--	--
Japan	4,150,000	441,000	3,170,000	288,000	235,000	2,530,000
Korea, Republic of	1,460,000	53,500	1,270,000	65,600	30,300	324,000
Luxembourg	24,800	--	24,800	--	--	--
Mexico	7,270,000	693,000	5,560,000	495,000	638,000	5,950,000
Netherlands	11,500,000	953,000	8,210,000	686,000	1,150,000	9,480,000
Peru	--	--	--	--	--	724
Philippines	--	--	--	--	--	8,170
South Africa	--	--	--	--	--	192,000
Spain	330	--	330	--	--	--
Sweden	145,000	11,700	133,000	--	--	--
Taiwan	40,500	--	40,500	344	--	6,040
Thailand	7,260	--	7,260	--	--	29,900
United Arab Emirates	12,600	--	12,600	--	--	--
United Kingdom	6,210,000	273,000	4,790,000	443,000	678,000	4,220,000
Venezuela	838	--	838	--	--	--
Vietnam	301,000	110,000	278,000	--	2,290	13,200
Total	47,100,000	3,110,000	36,700,000	3,130,000	3,810,000	32,700,000

-- 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	2011			2012		
	January– December	September	January– September	August	September	January– September
Argentina	--	--	--	--	26,200	26,200
Australia	497	--	241	--	--	223
Canada	871,000	105,000	690,000	67,000	38,900	552,000
Colombia	119	--	--	--	--	--
Denmark	501	--	330	--	--	323
Mexico	47,800	12,300	29,500	3,800	81,200	106,000
Netherlands	293,000	26,200	229,000	--	--	76,600
Turkey	116,000	13,400	116,000	--	--	--
Total	1,330,000	157,000	1,060,000	70,800	146,000	762,000

-- 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 2011			2012					
	Gross weight	Contained molybdenum	Value ² (thousands)	September			January–September		
				Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	11,700,000	7,080,000	\$136,000	737,000	451,000	\$5,920	8,310,000	5,060,000	\$85,000
Ore and concentrates other	18,700,000	7,570,000	323,000	1,130,000	571,000	17,700	9,430,000	4,640,000	165,000
Molybdenum chemicals:									
Oxides and hydroxides	146,000	NA	3,820	60,200	NA	1,280	371,000	NA	7,470
Molybdates of ammonium	982,000	578,000	21,400	80,300	45,300	1,340	524,000	295,000	10,100
Molybdates (all others)	22,300	9,840	1,120	500	87	13	39,100	15,200	578
Molybdenum orange	328,000	NA	2,790	9,480	NA	101	302,000	NA	2,410
Ferromolybdenum	4,800,000	3,210,000	119,000	483,000	322,000	9,540	4,960,000	3,310,000	110,000
Molybdenum powders	281,000	264,000	13,600	33,100	30,200	1,260	316,000	275,000	13,000
Molybdenum unwrought	566,000	545,000	20,800	48,700	47,200	1,340	694,000	676,000	20,300
Molybdenum waste and scrap	748,000	700,000	27,400	67,200	66,700	2,420	731,000	691,000	23,900
Molybdenum wire	21,300	NA	3,230	1,270	NA	227	14,300	NA	2,080
Molybdenum other	903,000	NA	63,200	18,600	NA	1,490	394,000	NA	24,200
Total	39,200,000	XX	736,000	2,670,000	XX	42,700	26,100,000	XX	463,000

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.