

# Mineral Industry Surveys

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## MOLYBDENUM IN AUGUST 2012

Domestic production of molybdenum (Mo) in concentrate in August 2012 was 17% less than the output of the previous month and 17% less than that of August 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 9,400 t at the end of August.

According to Ryan's Notes, the August monthly average price range for U.S. ferromolybdenum (FeMo) was from \$13.806 to \$14.056 per pound of molybdenum content, compared with \$14.767 to \$14.983 in July. European FeMo monthly averages ranged from \$28.044 to \$28.622 per kilogram (kg) of molybdenum content in August compared with \$29.989 to \$30.478 per kg in July. In August, worldwide molybdenum oxide (MoO<sub>3</sub>) prices ranged from \$11.122 to \$11.372 per pound compared with \$12.378 to \$12.567 per pound in July.

World consumption of molybdenum in the first quarter of 2012 was 58,700 t of Mo, compared with 58,800 t of Mo in the first quarter of 2011, according to statistics from the International Molybdenum Association (2012). China was the leading consuming country, using 19,000 t of Mo in the first

quarter of 2012, 12% less than the 21,700 t of Mo consumed in the fourth quarter of 2011. U.S. molybdenum consumption increased 12% in the first quarter of 2012 to 7,000 t of Mo compared with 6,200 t of Mo in the fourth quarter of 2011.

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

### Reference Cited

International Molybdenum Association, 2012, Quarterly molybdenum production and use in equilibrium: London, United Kingdom, International Molybdenum Association, August 20. (Accessed November 27, 2012, at [http://www.imoa.info/media\\_centre/press\\_releases.php?objectID=20&lang=en](http://www.imoa.info/media_centre/press_releases.php?objectID=20&lang=en).)

TABLE 1  
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS<sup>1</sup>

(Metric tons, contained molybdenum)

	2011 <sup>P</sup>		2012		
	January– December	January– August	July	August	January– August
Production	63,700	44,800	4,940	4,100	38,000
Shipments: <sup>2</sup>					
Domestic	18,300	12,600	1,400	1,520	12,000
Export	W	W	W	W	W

<sup>P</sup>Preliminary. W Withheld to avoid disclosing company proprietary data.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>As reported by producers.

TABLE 2  
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM  
PRODUCTS<sup>1</sup>

(Metric tons, contained molybdenum)

	2011 <sup>P</sup>		2012		
	January– December	January– August	July	August	January– August
Gross production	W	W	W	W	W
Internal consumption <sup>2</sup>	W	W	W	W	W
Gross shipments	W	W	4,040 <sup>r</sup>	4,000	33,800

<sup>r</sup>Revised. <sup>P</sup>Preliminary. W Withheld to avoid disclosing company proprietary data.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3  
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS<sup>1</sup>

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb- denum <sup>2</sup>	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2012:						
July:						
Steel:						
Carbon	34,400	W	--	--	W	34,400
High-strength low-alloy	W	7,320	--	--	--	7,320
Stainless and heat-resisting	163,000 <sup>r</sup>	57,700 <sup>r</sup>	--	(3)	6,510	227,000 <sup>r</sup>
Full alloy	247,000	236,000	--	--	W	483,000
Tool	W	W	--	--	--	W
Total	445,000 <sup>r</sup>	301,000 <sup>r</sup>	--	--	6,510	752,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	(4)	(4)	--	(4)	95,800 <sup>r</sup>	95,800 <sup>r</sup>
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	90	W	--	--	--	90
Mill products made from metal powder <sup>5</sup>	--	--	--	--	W	W
Cemented carbides and related products <sup>6</sup>	--	--	--	--	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	95,200	61,100 <sup>r</sup>	218	--	293,000	449,000 <sup>r</sup>
Grand total	617,000 <sup>r</sup>	362,000 <sup>r</sup>	218	--	406,000 <sup>r</sup>	1,390,000
Stocks, July 31, 2012	434,000 <sup>r</sup>	328,000 <sup>r</sup>	1,940	(7)	(7)	1,660,000 <sup>r</sup>
August:						
Steel:						
Carbon	33,500	W	--	--	W	33,500
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	446,000	317,000	--	--	6,510	769,000
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 <sup>5</sup>	--	--	--	--	W	W
Cemented carbides and related products <sup>6</sup>	--	--	--	--	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	57,500	218	--	273,000	425,000
Grand total	618,000	374,000	218	--	385,000	1,380,000
Stocks, August 31, 2012	425,000	320,000	1,940	(7)	(7)	1,650,000

See footnote at end of table.

TABLE 3—Continued  
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS<sup>1</sup>

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<sup>1</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified uses: Other" category. -- Zero.

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

<sup>2</sup>Includes calcium molybdate.

<sup>3</sup>Withheld to avoid disclosing company proprietary data; included in "Other, Miscellaneous and unspecified uses: Other" category.

<sup>4</sup>Withheld to avoid disclosing company proprietary data.

<sup>5</sup>Includes ingot, wire, rod, and sheet.

<sup>6</sup>Includes construction, mining, oil and gas, metalworking machinery.

<sup>7</sup>Withheld to avoid disclosing company proprietary data; included in "Total."

TABLE 4  
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES  
(including roasted concentrate), BY COUNTRY<sup>1</sup>

(Kilograms, contained molybdenum)

Country	2011			2012		
	January– December	August	January– August	July	August	January– August
Australia	800	--	800	--	--	--
Austria	278,000	--	267,000	11,200	21,500	109,000
Azerbaijan	9,370	--	--	--	--	--
Belgium	6,620,000	--	4,560,000	554,000	651,000	4,840,000
Brazil	374,000	31,900	315,000	37,000	18,600	266,000
Canada	1,400,000	68,000	1,110,000	236,000	271,000	1,740,000
Chile	3,220,000	891,000	3,220,000	--	--	--
China	2,570,000	210,000	1,930,000	57,700	167,000	1,580,000
Colombia	--	--	--	--	--	7,190
Czech Republic	31	--	--	--	--	--
El Salvador	881	--	881	--	--	--
Finland	283,000	23,300	214,000	--	--	--
France	121,000	--	121,000	--	--	--
Germany	133,000	811	120,000	--	--	36,500
Hungary	--	--	--	--	--	997
India	901,000	35,500	721,000	36,400	24,200	299,000
Italy	37,300	--	37,300	--	--	--
Japan	4,150,000	334,000	2,730,000	275,000	288,000	2,290,000
Korea, Republic of	1,460,000	143,000	1,210,000	40,800	65,600	294,000
Luxembourg	24,800	--	24,800	--	--	--
Mexico	7,270,000	580,000	4,860,000	765,000	495,000	5,320,000
Netherlands	11,500,000	810,000	7,260,000	1,220,000	686,000	8,330,000
Peru	--	--	--	--	--	724
Philippines	--	--	--	--	--	8,170
South Africa	--	--	--	12,000	--	192,000
Spain	330	--	330	--	--	--
Sweden	145,000	12,200	122,000	--	--	--
Taiwan	40,500	--	40,500	--	334	6,040
Thailand	7,260	--	7,260	7,260	--	29,900
United Arab Emirates	12,600	--	12,600	--	--	--
United Kingdom	6,210,000	475,000	4,510,000	682,000	443,000	3,550,000
Venezuela	838	838	838	--	--	--
Vietnam	301,000	147,000	168,000	--	--	10,900
Total	47,100,000	3,760,000	33,600,000	3,940,000	3,130,000	28,900,000

-- Zero.

<sup>1</sup>Data 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 COUNTRY<sup>1</sup>

(Kilograms, contained molybdenum)

Country	2011			2012		
	January– December	August	January– August	July	August	January– August
Australia	497	--	241	--	--	223
Canada	871,000	55,100	585,000	32,100	67,000	514,000
Colombia	119	--	--	--	--	--
Denmark	501	--	330	--	--	323
Mexico	47,800	6,410	17,200	121	3,800	24,700
Netherlands	293,000	12,500	203,000	12,000	--	76,600
Turkey	116,000	13,400	102,000	--	--	--
Total	1,330,000	87,400	908,000	44,200	70,800	615,000

-- Zero.

<sup>1</sup>Data 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 PRODUCTS<sup>1</sup>

(Kilograms, unless otherwise specified)

Material	January–December 2011			2012					
	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)	August			January–August		
				Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)
Ore and concentrates roasted	11,700,000	7,080,000	\$136,000	811,000	500,000	\$6,960	7,570,000	4,610,000	\$79,100
Ore and concentrates other	18,700,000	7,570,000	323,000	1,340,000	631,000	22,600	8,300,000	4,070,000	147,000
Molybdenum chemicals:									
Oxides and hydroxides	146,000	NA	3,820	20,000	NA	322	311,000	NA	6,190
Molybdates of ammonium	982,000	578,000	21,400	60,000	33,800	1,120	444,000	250,000	8,730
Molybdates (all others)	22,300	9,840	1,120	--	--	--	38,600	15,100	565
Molybdenum orange	328,000	NA	2,790	23,700	NA	229	292,000	NA	2,310
Ferromolybdenum	4,800,000	3,210,000	119,000	290,000	196,000	6,200	4,480,000	2,990,000	100,000
Molybdenum powders	281,000	264,000	13,600	33,800	28,400	1,360	283,000	245,000	11,700
Molybdenum unwrought	566,000	545,000	20,800	71,600	70,700	2,160	646,000	629,000	18,900
Molybdenum waste and scrap	748,000	700,000	27,400	80,900	76,100	2,790	664,000	625,000	21,500
Molybdenum wire	21,300	NA	3,230	1,940	NA	258	13,100	NA	1,860
Molybdenum other	903,000	NA	63,200	59,400	NA	3,030	376,000	NA	22,700
Total	39,200,000	XX	736,000	2,790,000	XX	47,000	23,400,000	XX	421,000

NA Not available. XX Not applicable.

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

<sup>2</sup>Customs value.

Source: U.S. Census Bureau.