

# Mineral Industry Surveys

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## MOLYBDENUM IN OCTOBER 2008

Domestic production of molybdenum (Mo) in concentrate in October 2008 was about 33% less than the output of the previous month and about 9% less than that of October 2007, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 5,770 metric tons (t) at the beginning of 2008 and about 6,260 t at the end of October.

According to Ryan's Notes (2008), the October monthly average price range for U.S. ferromolybdenum (FeMo) was from \$29.389 to \$30.778 per pound of molybdenum content, compared with \$35.306 to \$35.717 in September. European FeMo monthly averages ranged from \$57.667 to \$59.556 per kilogram (kg) of molybdenum content in October compared with \$76.889 to \$77.778 per kg in September. In October, worldwide molybdenum oxide (MoO<sub>3</sub>) prices ranged from \$25.694 to \$27.667 per pound compared with \$32.694 to \$33.172 per pound in September.

Moly Mines Ltd. (Australia) reported that permitting required to commence construction and mining at its Spinifex Ridge molybdenum project in the Pilbara Region of Western Australia

had been completed. However, the 15-month construction schedule was only to proceed once full project funding had been completed. Full funding was targeted for the first half of 2009, with a revised initial production date of July 2010 (Metal-Pages Ltd., 2008).

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 September and October 2008. Export data for August and September 2008 and import data for September 2008 are also included.

### References Cited

- Metal-Pages Ltd., 2008, Revised start up date for Moly Mines Spinifex Ridge project: Metal-Pages Ltd., November 3. (Accessed April 16, 2009 via <http://www.metal-pages.com/>.)  
Ryan's Notes, 2008, [untitled]: Ryan's Notes, v. 14, no. 44, November 3, p. 10.

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

(Metric tons, contained molybdenum)

	2007		2008		
	January- December	January- October	September	October	January- October
Production	57,000	47,400	5,500	3,710	47,900
Shipments: <sup>2</sup>					
Domestic	40,600	33,900	4,140	3,140	37,000
Export	16,400	13,800	1,460	785	11,000

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

<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)

	2007		2008		
	January- December	January- October	September	October	January- October
Gross production	72,800	61,400	5,550	6,310	62,100
Internal consumption <sup>2</sup>	41,700	35,600	2,840	3,680	34,200
Gross shipments	48,700	41,400	4,340	4,020	43,400

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

<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 molybdenum <sup>2</sup>	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2008, September:						
Steel:						
Carbon	48,700	W	--	--	W	48,700
High-strength low-alloy	69,000	12,400	--	--	11,300	92,700
Stainless and heat-resisting	220,000	73,100	--	W	6,510	300,000
Full alloy	247,000	287,000	--	--	1,510	535,000
Tool	W	W	--	--	--	W
Total	584,000	372,000	--	W	19,400	976,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	60,300	W	--	W	88,100	148,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	3,880	--	--	--	3,880
Mill products made from metal powder <sup>3</sup>	13,300	--	--	--	182,000	196,000
Cemented carbides and related products <sup>4</sup>	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	572	572
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	16,500	43,300	72,600	74,300	16,800	224,000 <sup>r</sup>
Grand total	752,000	440,000	72,600	74,300	319,000	1,660,000
Stocks, September 30, 2008	338,000	328,000	2,150	845	855,000	1,520,000
2008, October:						
Steel:						
Carbon	32,300	W	--	--	W	32,300
High-strength low-alloy	45,400	7,840	--	--	11,300	64,600
Stainless and heat-resisting	155,000	62,200	--	W	6,510	224,000
Full alloy	249,000	335,000	--	--	1,510	586,000
Tool	W	W	--	--	--	W
Total	482,000	405,000	--	W	19,400	907,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	58,900	W	--	W	82,800	142,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	4,330	--	--	--	4,330
Mill products made from metal powder <sup>3</sup>	--	--	--	--	187,000	187,000
Cemented carbides and related products <sup>4</sup>	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	642	642
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	66,900	28,500	73,700	114,000	16,800	300,000
Grand total	685,000	459,000	73,700	114,000	319,000	1,650,000
Stocks, October 31, 2008	305,000	326,000	2,150	7,100	858,000	1,500,000

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" 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>Includes ingot, wire, rod, and sheet.

<sup>4</sup>Includes construction, mining, oil and gas, metalworking machinery.

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

(Kilograms, contained molybdenum)

Country	2007			2008		
	January- December	September	January- September	August	September	January- September
Argentina	--	--	--	--	19,000	153,000
Belgium	6,730,000	696,000	4,980,000	453,000	611,000	5,530,000
Brazil	119,000	--	100,000	--	--	1,290
Canada	2,580,000	144,000	1,990,000	221,000	165,000	1,770,000
Chile	1,270,000	--	1,270,000	--	24,100	274,000
China	71,500	--	71,400	--	--	242,000
Finland	38,000	--	--	--	--	--
India	119,000	11,500	117,000	--	--	22,200
Italy	19,000	--	--	--	--	12,000
Japan	2,230,000	251,000	1,600,000	178,000	146,000	1,540,000
Korea, Republic of	232,000	32,300	57,000	31,900	62,300	579,000
Mexico	4,760,000	396,000	3,740,000	441,000	575,000	3,450,000
Netherlands	9,660,000	352,000	7,200,000	786,000	462,000	6,910,000
Pakistan	75,600	--	75,600	--	--	--
Switzerland	1,630	--	1,630	--	--	--
Taiwan	17,900	--	17,900	--	--	--
Thailand	9,620	--	9,620	--	--	--
United Kingdom	5,800,000	585,000	4,310,000	345,000	247,000	3,410,000
Vietnam	4,990	--	4,130	5,940	2,940	41,000
Other	80,800	25,100	49,100	--	536	34,300
Total	33,800,000	2,490,000	25,600,000	2,460,000	2,310,000	24,000,000

-- Zero.

Source: U.S. Census Bureau.

TABLE 5  
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY<sup>1</sup>

(Kilograms, contained molybdenum)

Country	2007			2008		
	January- December	September	January- September	August	September	January- September
Australia	25,000	--	25,000	--	--	--
Canada	838,000	96,100	610,000	39,100	87,100	807,000
Colombia	--	--	--	--	186	186
Denmark	394	--	394	--	--	454
India	1,090	--	953	--	--	843
Korea, Republic of	--	--	--	14,000	--	14,000
Mexico	23,700	--	20,500	18,100	--	37,800
Netherlands	145,000	--	145,000	28,000	14,000	210,000
Philippines	735	--	--	--	--	700
Saudi Arabia	149,000	47,900	93,400	--	--	--
South Africa	13,500	--	13,500	--	--	68
United Kingdom	24,900	--	24,900	--	--	--
Total	1,220,000	144,000	934,000	99,200	101,000	1,070,000

-- 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 2007			September 2008			January-September 2008		
	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)
Ore and concentrates roasted	8,680,000	5,430,000	\$181,000	1,280,000	745,000	\$43,400	7,810,000	4,760,000	\$209,000
Ore and concentrates other	15,000,000	6,960,000	372,000	584,000	282,000	19,300	7,450,000	3,430,000	219,000
Molybdenum chemicals:									
Oxides and hydroxides	211,000	NA	8,020	34,700	NA	1,100	205,000	NA	8,140
Molybdates of ammonium	915,000	515,000	30,400	20,000	10,300	840	269,000	152,000	10,400
Molybdates (all others)	179,000	51,400	2,190	5,680	1,780	67	84,700	29,000	940
Molybdenum orange	600,000	NA	4,040	28,400	NA	242	300,000	NA	2,460
Ferromolybdenum	6,360,000	4,100,000	270,000	418,000	278,000	20,800	2,910,000	1,950,000	142,000
Molybdenum powders	72,900	60,800	4,990	11,000	9,400	953	59,400	50,100	5,270
Molybdenum unwrought	117,000	117,000	7,460	44,000	43,900	2,910	209,000	208,000	13,600
Molybdenum waste and scrap	574,000	554,000	34,800	91,000	84,400	3,400	527,000	487,000	26,700
Molybdenum wire	17,900	NA	2,740	1,740	NA	252	14,700	NA	2,440
Molybdenum other	164,000	NA	20,900	54,500	NA	5,610	352,000	NA	35,900
Total	32,900,000	XX	938,000	2,580,000	XX	98,800	20,200,000	XX	676,000

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.