

Mineral Industry Surveys

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MOLYBDENUM IN AUGUST 2019

Domestic production of molybdenum in concentrate in August 2019 was slightly more than the output of the previous month and 19% more than that of August 2018 (fig. 1, table 1).

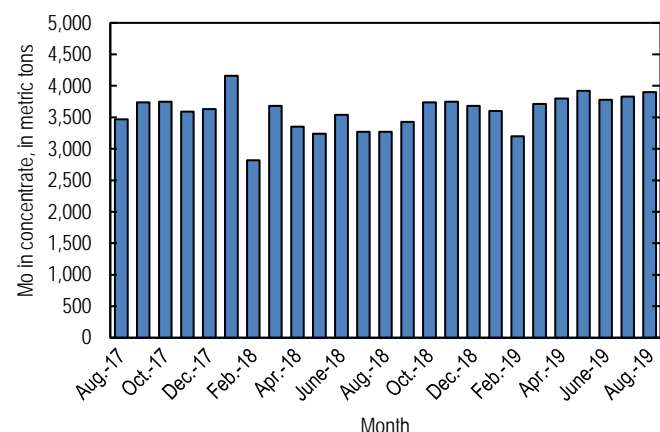


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from August 2017 through August 2019 (may include revisions to previously published data).

According to CRU Group (2019), the August 2019 monthly average price range for U.S. ferromolybdenum (FeMo) was \$12.822 to \$13.422 per pound of molybdenum content, compared with \$13.083 to \$13.533 per pound in July 2019. FeMo monthly averages in Europe ranged from \$27.317 to \$27.933 per kilogram of molybdenum content in August 2019 compared with \$27.417 to \$27.917 per kilogram in July 2019. U.S. molybdenum oxide (MoO₃) prices ranged from \$12.150 to

\$12.500 per pound in August 2019 compared with \$12.461 to \$12.811 per pound in July 2019 (fig. 2).

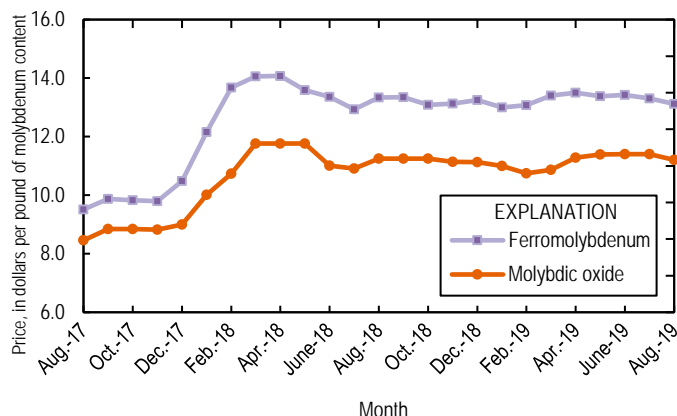


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdenic oxide from August 2017 through August 2019. Source: CRU Group.

Reference Cited

CRU Group, 2019, Molybdenum prices: CRU Group, August 30. (Accessed October 29, 2019, via <http://www.crugroup.com/>)

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TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE
STATISTICS^{1,2}

(Metric tons, contained molybdenum)

Period	Production	Shipments ^{3,4}
2018:		
January	4,160	4,180
February	2,820	2,800
March	3,680	3,690
April	3,350	3,310
May	3,240	3,240
June	3,540	3,630
July	3,270	3,280
August	3,270	3,220
September	3,430	3,310
October	3,740	3,730
November	3,750	3,730
December	3,680	3,720
January–December	41,900	41,800
2019:		
January	3,600	3,590
February	3,200	3,170
March	3,710	3,750
April	3,800	3,800
May	3,920	3,930
June	3,780	3,790
July	3,830	3,830
August	3,900	3,900
January–August	29,700	29,800

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

²Includes data from Freeport-McMoRan Copper & Gold Inc., 2018–2019. Adjusted by USGS to reflect estimated monthly data.

³As reported by producers.

⁴Shipments include sales to domestic customers, sales for export, and transfers to other company plants.

TABLE 2
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
2019:						
July:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	176,000	50,100	--	(3)	W	227,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	--	W
Total	422,000	141,000	--	(3)	W	563,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	W	--	(3)	63,100	63,100
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	130	W	--	--	--	130
Mill products made from metal powder ⁴	--	--	--	--	W	W
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	(3)	--	--	(3)
Catalysts	W	--	(3)	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	9,440	9,440
Other	197,000	61,000	425	(3)	334,000	592,000
Grand total	619,000	202,000	425	(3)	406,000	1,230,000
Stocks, July 31, 2019	527,000	263,000	2,780	(6)	(6)	1,680,000
August:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	189,000	49,500	--	(3)	W	238,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	--	W
Total	435,000	140,000	--	(3)	W	575,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	W	--	(3)	62,200	62,200
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	116	W	--	--	--	116
Mill products made from metal powder ⁴	--	--	--	--	W	W
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	(3)	--	--	(3)
Catalysts	W	--	(3)	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	9,440	9,440
Other	199,000	63,800	425	(3)	334,000	597,000
Grand total	634,000	204,000	425	(3)	405,000	1,240,000
Stocks, August 31, 2019	521,000	262,000	2,780	(6)	(6)	1,670,000

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. Includes U.S. Geological Survey estimates.

²Includes calcium molybdate.

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

⁴Includes ingot, wire, rod, and sheet.

⁵Includes construction, mining, oil and gas, metalworking machinery.

⁶Withheld to avoid disclosing company proprietary data; included in "Total."

TABLE 3
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY OR LOCALITY¹

(Kilograms, contained molybdenum)

Country or locality	2018			2019		
	January– December	August	January– August	July	August	January– August
Belgium	5,070,000	411,000	3,300,000	261,000	521,000	4,130,000
Brazil	27,400	1,230	26,600	--	--	14,400
Canada	1,390,000	101,000 ^r	1,040,000 ^r	106,000	74,300	691,000
Chile	1,410,000	99,000	679,000	--	--	218,000
China	1,030,000	117,000	812,000	36,000	108,000	366,000
Colombia	--	--	--	--	--	339
Germany	--	--	--	--	--	1,090
India	603,000	73,700	311,000	11,200	54,100	128,000
Israel	262	262	262	--	--	--
Japan	3,920,000	375,000	2,560,000 ^r	329,000	365,000	2,650,000
Korea, Republic of	538,000	70,100 ^r	328,000 ^r	444,000	280,000	1,940,000
Malaysia	227	227	227	--	--	--
Mexico	1,880,000	166,000	1,100,000	486,000	123,000	1,940,000
Netherlands	21,100,000	1,090,000 ^r	11,900,000 ^r	2,180,000	1,890,000	24,300,000
Russia	98,100	--	98,100	--	--	--
Sweden	123,000	--	--	--	--	--
Taiwan	--	--	--	--	--	23,300
Thailand	60,000	--	59,700 ^r	25,500	--	164,000
United Kingdom	6,710,000	521,000	4,450,000	901,000	774,000	5,000,000
Vietnam	848,000	51,600	691,000	38,900	60,300	261,000
Total	44,800,000	3,070,000 ^r	27,400,000	4,820,000	4,250,000	41,800,000

^rRevised. -- Zero.

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

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY OR LOCALITY¹

(Kilograms, contained molybdenum)

Country or locality	2018			2019		
	January– December	August	January– August	July	August	January– August
Australia	2,530	--	1,650	735	--	1,610
Canada	426,000	28,000	294,000	16,000	35,500	102,000
China	--	--	--	--	--	1,210
Colombia	225	--	225	--	--	--
Denmark	837	--	837	--	--	903
Israel	249	--	--	--	--	--
Mexico	513,000	40,500	511,000	60,000	20,000	222,000
Total	943,000	68,500	807,000	76,700	55,500	328,000

-- 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. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS¹

(Kilograms, unless otherwise specified)

Material	January–December 2018			2019					
	Gross weight	Contained molybdenum	Value ² (thousands)	August			January–August		
				Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	7,030,000	4,330,000	\$102,000	365,000	228,000	\$4,940	4,310,000	2,680,000	\$62,200
Ore and concentrates other	38,200,000	18,500,000	481,000	2,590,000	1,210,000	34,200	24,300,000	11,700,000	319,000
Molybdenum chemicals:									
Oxides and hydroxides	3,460,000	NA	69,500	375,000	NA	7,790	3,170,000	NA	66,700
Molybdates of ammonium	1,750,000	985,000	29,800	99,900	56,300	1,760	955,000	538,000	16,900
Molybdates (all others)	384,000	154,000	5,000	39,500	15,700	500	161,000	64,000	2,240
Molybdenum orange	683,000	NA	2,630	11,600	NA	110	181,000	NA	1,040
Ferromolybdenum	11,900,000	8,010,000	223,000	389,000	262,000	7,520	7,710,000	5,170,000	148,000
Molybdenum powders	410,000	386,000	15,000	20,200	18,900	757	160,000	152,000	6,350
Molybdenum unwrought	722,000	721,000	21,000	60,100	59,900	2,130	411,000	410,000	13,300
Molybdenum waste and scrap	1,700,000	1,580,000	48,900	247,000	238,000	8,490	1,370,000	1,270,000	43,200
Molybdenum wire	31,100	NA	3,030	673	NA	50	11,000	NA	1,360
Molybdenum other	177,000	NA	17,500	15,500	NA	1,730	138,000	NA	12,600
Total	66,400,000	XX	1,020,000	4,210,000	XX	70,000	42,900,000	XX	693,000

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.