

Mineral Industry Surveys

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MOLYBDENUM IN JULY 2019

Domestic production of molybdenum in concentrate in July 2019 was slightly more than the output of the previous month and 17% more than that of July 2018 (fig. 1, table 1).

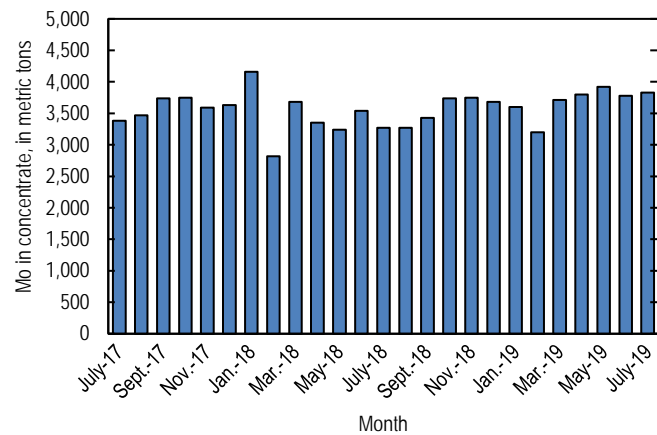


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from July 2017 through July 2019 (may include revisions to previously published data).

According to CRU Group (2019), the July 2019 monthly average price range for U.S. ferromolybdenum (FeMo) was \$13.083 to \$13.533 per pound of molybdenum content, compared with \$13.244 to \$13.613 per pound in June 2019. FeMo monthly averages in Europe ranged from \$27.417 to \$27.917 per kilogram of molybdenum content in July 2019 compared with \$28.288 to \$28.788 per kilogram in June 2019. U.S. molybdenum oxide (MoO₃) prices ranged from \$12.461 to

\$12.811 per pound in July 2019 compared with \$12.438 to \$12.850 per pound in June 2019 (fig. 2).

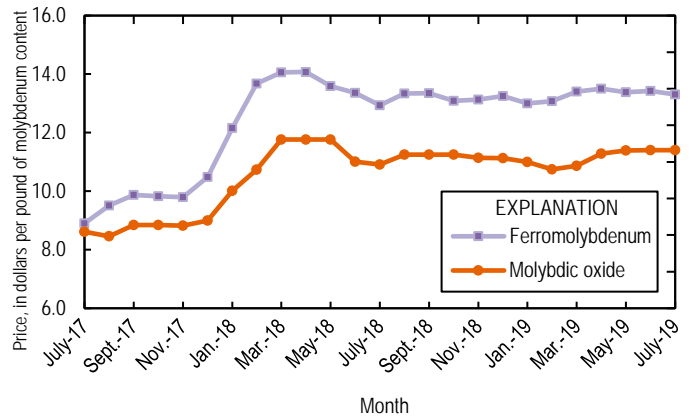


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdenic oxide from July 2017 through July 2019. Source: CRU Group.

Reference Cited

CRU Group, 2019, Molybdenum prices: CRU Group, August 30. (Accessed September 24, 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
January–July	25,800	25,900

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	Molybdic oxides	Ferro molybdenum ²	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2019:						
June:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	183,000	47,900	--	(3)	W	231,000
Full alloy	246,000	81,200	--	--	W	327,000
Tool	W	W	--	--	--	W
Total	429,000	143,000	--	(3)	W	572,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	W	--	(3)	62,600	62,600
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	--	W	--	--	--	W
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	207,000	53,200	425	(3)	334,000	594,000
Grand total	636,000	197,000	425	(3)	406,000	1,240,000
Stocks, June 30, 2019	498,000	321,000	2,810	(6)	(6)	1,710,000
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

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	July	January– July	June	July	January– July
Belgium	5,070,000	359,000	2,880,000	686,000	261,000	3,610,000
Brazil	27,400	23,200	25,400	1,070	--	14,400
Canada	1,390,000	196,000 [†]	934,000 [†]	73,800	106,000	616,000
Chile	1,410,000	153,000	580,000	--	--	218,000
China	1,030,000	69,900	695,000	3,720	36,000	258,000
Colombia	--	--	--	--	--	339
Germany	--	--	--	--	--	1,090
India	603,000	44,600	237,000	11,300	11,200	74,000
Israel	262	--	--	--	--	--
Japan	3,920,000	313,000	2,180,000 [†]	289,000	329,000	2,280,000
Korea, Republic of	538,000	87,200 [†]	258,000 [†]	154,000	444,000	1,660,000
Malaysia	227	--	--	--	--	--
Mexico	1,880,000	95,400	938,000	125,000	486,000	1,820,000
Netherlands	21,100,000	1,890,000 [†]	10,900,000 [†]	3,290,000	2,180,000	22,400,000
Russia	98,100	--	98,100	--	--	--
Sweden	123,000	--	--	--	--	--
Taiwan	--	--	--	--	--	23,300
Thailand	60,000	--	59,700 [†]	58,800	25,500	164,000
United Kingdom	6,710,000	751,000	3,930,000	162,000	901,000	4,220,000
Vietnam	848,000	86,000	639,000	39,300	38,900	201,000
Total	44,800,000	4,070,000 [†]	24,300,000	4,890,000	4,820,000	37,500,000

[†]Revised. -- 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	July	January– June	June	July	January– July
Australia	2,530	--	1,650	--	735	1,610
Canada	426,000	35,600	266,000	11,100	16,000	66,300
China	--	--	--	--	--	1,210
Colombia	225	--	225	--	--	--
Denmark	837	--	837	--	--	903
Israel	249	--	--	--	--	--
Mexico	513,000	205,000	470,000	19,200	60,000	202,000
Total	943,000	240,000	739,000	30,300	76,700	272,000

-- 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)	July			January–July		
				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	250,000	157,000	\$3,230	3,950,000	2,460,000	\$57,300
Ore and concentrates other	38,200,000	18,500,000	481,000	2,520,000	1,270,000	33,000	21,700,000	10,500,000	285,000
Molybdenum chemicals:									
Oxides and hydroxides	3,460,000	NA	69,500	530,000	NA	11,300	2,800,000	NA	58,900
Molybdates of ammonium	1,750,000	985,000	29,800	61,300	34,500	1,110	855,000	481,000	15,100
Molybdates (all others)	384,000	154,000	5,000	41,600	16,600	605	122,000	48,300	1,740
Molybdenum orange	683,000	NA	2,630	14,000	NA	109	170,000	NA	927
Ferromolybdenum	11,900,000	8,010,000	223,000	1,040,000	692,000	20,200	7,320,000	4,910,000	140,000
Molybdenum powders	410,000	386,000	15,000	4,530	4,350	235	140,000	133,000	5,590
Molybdenum unwrought	722,000	721,000	21,000	7,980	79,500	2,770	351,000	350,000	11,200
Molybdenum waste and scrap	1,700,000	1,580,000	48,900	268,000	232,000	8,400	1,130,000	1,030,000	34,700
Molybdenum wire	31,100	NA	3,030	952	NA	190	10,400	NA	1,310
Molybdenum other	177,000	NA	17,500	21,200	NA	1,860	123,000	NA	10,900
Total	66,400,000	XX	1,020,000	4,750,000	XX	83,000	38,600,000	XX	623,000

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.