

Mineral Industry Surveys

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MOLYBDENUM IN JUNE 2020

Domestic production of molybdenum in concentrate in June 2020 was essentially unchanged compared with the output of the previous month (revised) but was 42% more than that of June 2019. Total production during the first 6 months of 2020 was 34% more than total production during the same period in 2019 (fig. 1, table 1).

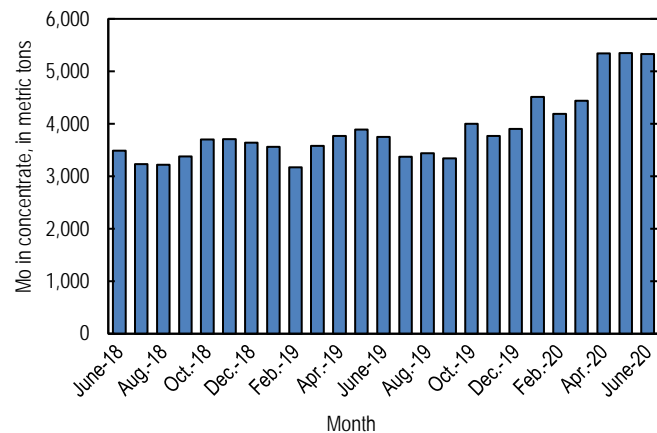


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from June 2018 through June 2020 (may include revisions to previously published data).

According to CRU Group (2020), the June 2020 monthly average price range for U.S. ferromolybdenum (FeMo) was \$8.878 to \$9.561 per pound of molybdenum content, compared with \$9.200 to \$9.856 per pound in May 2020. FeMo monthly averages in Europe ranged from \$18.744 to \$19.500 per kilogram (\$8.502 to \$8.845 per pound) of molybdenum content in June 2020 compared with \$20.663 to \$21.263 per kilogram

(\$9.373 to \$9.645 per pound) in May 2020. U.S. molybdenum oxide (MoO₃) prices ranged from \$8.317 to \$8.833 per pound of molybdenum content in June 2020 compared with \$8.500 to \$9.000 per pound of molybdenum content in May 2020 (fig. 2).

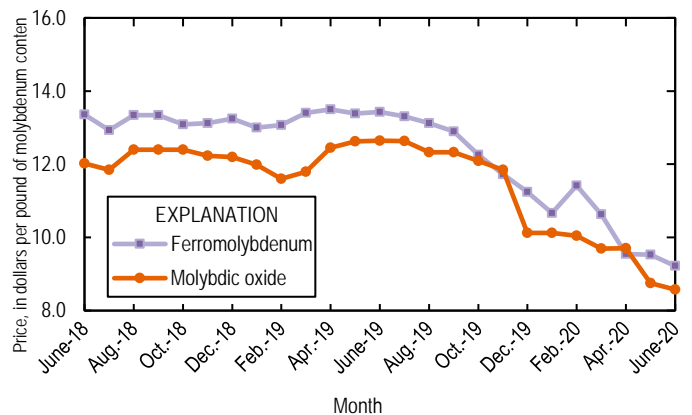


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdenic oxide from June 2018 through June 2020. Source: CRU Group.

Reference Cited

CRU Group, 2020, Molybdenum prices: London, United Kingdom, CRU Group, September 1. (Accessed September 2, 2020, 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}
2019:		
January	3,560	3,560
February	3,170	3,140
March	3,580	3,630
April	3,770	3,750
May	3,890	3,890
June	3,750	3,750
July	3,370	3,370
August	3,440	3,440
September	3,340	3,330
October	4,000	4,010
November	3,770	3,780
December	3,900	3,920
January–December	43,600	43,600
2020:		
January	4,510 ^r	4,480 ^r
February	4,190 ^r	4,200 ^r
March	4,440 ^r	4,440 ^r
April	5,340 ^r	5,380 ^r
May	5,350 ^r	5,370 ^r
June	5,330	5,330
January–June	29,200	29,200

^rRevised.

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

²Includes data from Freeport-McMoRan Inc., 2019–2020. 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 molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2020:						
May:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	7,120	--	--	--	7,120
Stainless and heat-resisting	154,000	47,700	--	(3)	W	201,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	--	W
Total	399,000	131,000	--	(3)	W	531,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	66,500 ^r	66,500 ^r
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	90	W	--	--	--	90
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	171,000	49,000 ^r	425	(3)	342,000 ^r	562,000 ^r
Grand total	570,000	180,000 ^r	425	(3)	418,000 ^r	1,170,000 ^r
Stocks, May 31, 2020	508,000	734,000 ^r	2,740	(6)	(6)	2,120,000 ^r
June:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	9,540	--	--	--	9,540
Stainless and heat-resisting	154,000	47,700	--	(3)	W	201,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	18	18
Total	399,000	134,000	--	(3)	18	533,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	61,900	61,900
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	110	W	--	--	--	110
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	168,000	47,800	425	(3)	329,000	545,000
Grand total	567,000	182,000	425	(3)	400,000	1,150,000
Stocks, June 30, 2020	505,000	733,000	2,740	(6)	(6)	2,120,000

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

²Data are rounded to no more than three significant digits; may not add to totals shown. Includes U.S. Geological Survey estimates.

³Includes calcium molybdate.

⁴Withheld to avoid disclosing company proprietary data; included in "Other, Miscellaneous and unspecified uses: Other" category.

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

(Kilograms, contained molybdenum)

Country or locality	2019			2020		
	January– December	June	January– June	May	June	January– June
Belgium	6,630,000 [†]	686,000	3,350,000	609,000	936,000	4,730,000
Brazil	15,900	1,070	14,400	--	--	7,590
Cambodia	--	--	--	--	--	1,440
Canada	1,110,000 [†]	73,800	505,000	56,400	66,100	626,000
Chile	218,000	--	218,000	142,000	--	232,000
China	529,000 [†]	--	218,000	430,000	16,700	786,000
Colombia	339	--	339	--	--	--
Estonia	--	--	--	--	--	305,000
Germany	1,090	--	1,090	--	--	285
India	205,000	11,300	62,800	448	44,900	210,000
Japan	3,970,000 [†]	301,000 [†]	2,000,000	218,000	276,000	1,790,000
Korea, Republic of	3,030,000 [†]	158,000	1,220,000	281,000	409,000	2,720,000
Mexico	3,050,000	125,000	1,330,000	106,000	349,000	1,920,000
Netherlands	35,900,000	3,290,000	20,200,000	1,560,000	1,410,000	11,700,000
Sri Lanka	1,630	--	--	--	--	--
Taiwan	23,300	--	23,300	--	--	--
Thailand	1,380,000	58,800	139,000	57,800	80,900	712,000
Turkey	--	--	--	623	--	986
United Kingdom	7,550,000	162,000	3,320,000	72,400	18,900	2,620,000
Vietnam	434,000	39,300	162,000	76,600	16,200	186,000
Total	64,100,000 [†]	4,900,000 [†]	32,800,000	3,610,000	3,630,000	28,500,000

[†]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	2019			2020		
	January– December	June	January– June	May	June	January– June
Australia	1,610	--	871	--	--	697
Canada	243,000	11,100	107,000	40,400	32,100	206,000
China	1,210	--	1,210	--	--	--
Denmark	903	--	903	--	474	948
Mexico	306,000	19,200	142,000	--	9,070	131,000
United Kingdom	420	--	--	--	--	--
Total	552,000	30,300	253,000	40,400	41,600	339,000

-- 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 2019			2020					
	Gross weight	Contained molybdenum	Value ² (thousands)	June			January–June		
				Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates, roasted	6,470,000	4,050,000 [†]	\$89,800 [†]	80,000	50,200	\$1,060	4,240,000	2,590,000	\$48,700
Ore and concentrates, other	34,400,000	16,500,000 [†]	440,000	2,270,000	1,080,000	20,200	13,500,000	6,400,000	137,000
Molybdenum chemicals:			2,880						
Oxides and hydroxides	4,290,000	NA	18,300	177,000	NA	2,710	1,920,000	NA	31,700
Molybdates of ammonium	1,400,000	789,000	24,200	97,000	54,600	1,320	478,000	269,000	6,940
Molybdates (all others)	221,000	85,600 [†]	2,880 [†]	3,030	1,200	52	68,000	27,000	700
Molybdenum orange	234,000	NA	1,350	6,680	NA	62	69,200	NA	576
Ferromolybdenum	10,400,000	6,990,000	196,000	45,000	26,800	586	3,870,000	2,590,000	59,200
Molybdenum powders	238,000	221,000	8,520	15,900	14,600	506	169,000	159,000	5,720
Molybdenum unwrought	595,000	593,000	19,300	15,000	15,000	444	310,000	309,000	9,160
Molybdenum waste and scrap	1,890,000	1,750,000 [†]	59,500	99,300	99,000	2,550	729,000	709,000	21,500
Molybdenum wire	18,400	NA	2,150	2,020	NA	213	8,430	NA	964
Molybdenum other	193,000	NA	18,300	21,600	NA	2,080	89,800	NA	8,190
Total	60,300,000	XX	883,000 [†]	2,840,000	XX	31,800	25,500,000	XX	330,000

[†]Revised. [†]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.