

Mineral Industry Surveys

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MOLYBDENUM IN AUGUST 2020

Domestic production of molybdenum in concentrate in August 2020 was slightly less compared with the revised output of the previous month but was 22% more than that of August 2019. Total production during the first 8 months of 2020 was 32% more than total production during the same period in 2019 (fig. 1, table 1).

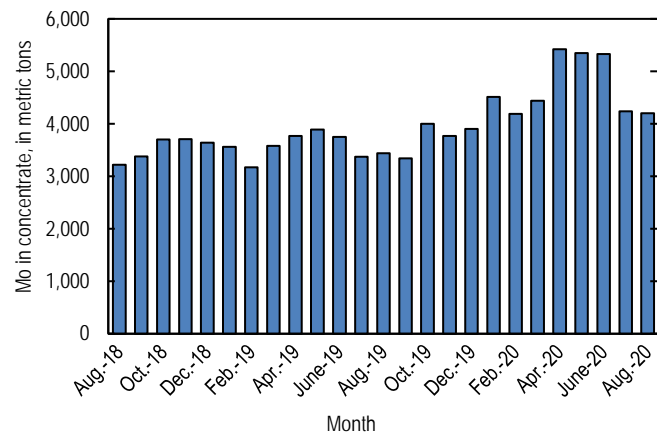


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from August 2018 through August 2020 (may include revisions to previously published data).

According to CRU Group (2020), the August 2020 monthly average price range for U.S. ferromolybdenum (FeMo) was \$8.275 to \$8.756 per pound of molybdenum content, compared with \$8.217 to \$8.667 per pound in July 2020. FeMo monthly averages in Europe ranged from \$17.95 to \$18.400 per kilogram (\$8.142 to \$8.346 per pound) of molybdenum content in August 2020 compared with \$18.167 to \$18.661 per kilogram (\$8.240

to \$8.464 per pound) in July 2020. U.S. molybdenum oxide (MoO₃) prices ranged from \$7.950 to \$8.500 per pound of molybdenum content in both July and August 2020 (fig. 2).

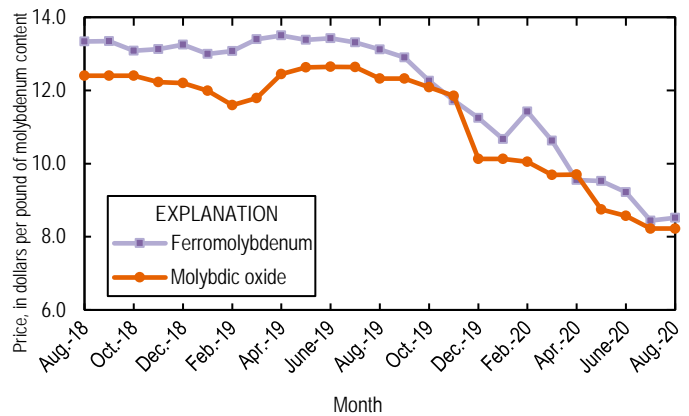


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdenic oxide from August 2018 through August 2020. Source: CRU Group.

Reference Cited

CRU Group, 2020, Molybdenum prices: London, United Kingdom, CRU Group, November 2. (Accessed November 30, 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	4,480
February	4,190	4,200
March	4,440	4,440
April	5,420 ^r	5,450 ^r
May	5,350	5,370
June	5,330	5,330
July	4,240 ^r	4,240 ^r
August	4,200	4,180
January–August	37,700	37,700

^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 molybdenum ²	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2020:						
July:						
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	--	--	--	W
Total	399,000	134,000	--	(3)	--	533,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	62,400	62,400
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	189	W	--	--	--	189
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	183,000	51,500	425	(3)	329,000	564,000
Grand total	583,000	185,000	425	(3)	401,000	1,170,000
Stocks, July 31, 2020	498,000	765,000	2,830	(6)	(6)	2,140,000
August ⁶ :						
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	--	--	--	W
Total	399,000	134,000	--	(3)	--	533,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	62,800	62,800
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	181	W	--	--	--	181
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	190,000	52,500	425	(3)	329,000	572,000
Grand total	590,000	186,000	425	(3)	401,000	1,180,000
Stocks, August 31, 2020	495,000	763,000	2,830	(6)	(6)	2,120,000

⁶Estimated. 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	2019			2020		
	January– December	August	January– August	July	August	January– August
Belgium	6,630,000	521,000 [†]	4,070,000	680,000	956,000	6,360,000
Brazil	15,900	--	14,400	--	4,550	12,100
Cambodia	--	--	--	--	--	1,440
Canada	1,110,000	74,300	685,000	78,500	65,500	770,000
Chile	218,000	--	218,000	252,000	210,000	694,000
China	529,000	108,000	362,000	83,300	800,000	1,670,000
Colombia	339	--	339	--	--	--
Estonia	--	--	--	--	--	305,000
Germany	1,090	--	1,090	--	--	285
India	205,000	54,100	128,000	63,800	53,200	327,000
Japan	3,970,000	345,000	2,680,000	251,000	210,000	2,250,000
Korea, Republic of	3,030,000	286,000	1,850,000	363,000	207,000	3,290,000
Mexico	3,050,000	123,000	1,940,000	384,000	324,000	2,630,000
Netherlands	35,900,000	1,890,000	24,300,000	2,880,000	2,300,000	16,900,000
Sri Lanka	1,630	--	--	--	--	--
Taiwan	23,300	--	23,300	--	--	--
Thailand	1,380,000	--	164,000	2,430	--	714,000
Turkey	--	--	--	--	--	986
United Kingdom	7,550,000	774,000	5,000,000	36,100	544,000	3,200,000
Vietnam	434,000	60,300	261,000	8,610	42,800	238,000
Total	64,100,000	4,240,000	41,700,000	5,090,000	5,710,000	39,300,000

[†]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	August	January– August	July	August	January– August
Australia	1,610	--	1,610	--	--	697
Canada	243,000	35,500	159,000	21,100	12,200	239,000
China	1,210	--	1,210	--	--	--
Denmark	903	--	903	--	--	948
Mexico	306,000	20,000	222,000	--	--	131,000
United Kingdom	420	--	--	--	--	--
Total	552,000	55,500	385,000	21,100	12,200	372,000

-- 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)	August			January–August		
				Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates, roasted	6,490,000	4,050,000	\$89,800	557,000	337,000	\$5,610	4,990,000	3,050,000	\$56,400
Ore and concentrates, other	34,400,000	16,500,000	440,000	1,500,000	691,000	13,800	16,200,000	7,640,000	161,000
Molybdenum chemicals:									
Oxides and hydroxides	4,290,000	NA	89,300	360,000	NA	4,720	2,490,000	NA	39,700
Molybdates of ammonium	1,400,000	789,000	24,200	82,600	46,500	1,050	624,000	351,000	8,870
Molybdates (all others)	216,000	85,600	2,880	5,100	2,020	59	73,100	29,000	759
Molybdenum orange	234,000	NA	1,350	9,990	NA	120	87,600	NA	791
Ferromolybdenum	10,400,000	6,990,000	196,000	577,000	405,000	7,360	4,750,000	3,210,000	70,800
Molybdenum powders	238,000	221,000	8,520	15,300	11,900	441	187,000	172,000	6,270
Molybdenum unwrought	595,000	593,000	19,300	7,920	7,840	253	362,000	360,000	10,600
Molybdenum waste and scrap	1,900,000	1,750,000	59,700	48,900	44,200	1,150	876,000	851,000	25,300
Molybdenum wire	18,400	NA	2,150	3,010	NA	202	12,100	NA	1,240
Molybdenum other	193,000	NA	18,300	13,500	NA	1,140	126,000	NA	11,000
Total	60,300,000	XX	951,000	3,180,000	XX	35,900	30,800,000	XX	392,000

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.