

Mineral Industry Surveys

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MOLYBDENUM IN FEBRUARY 2020

Domestic production of molybdenum in concentrate in February 2020 was 5% less than the output of the previous month and 23% more than that of February 2019 (fig. 1, table 1).

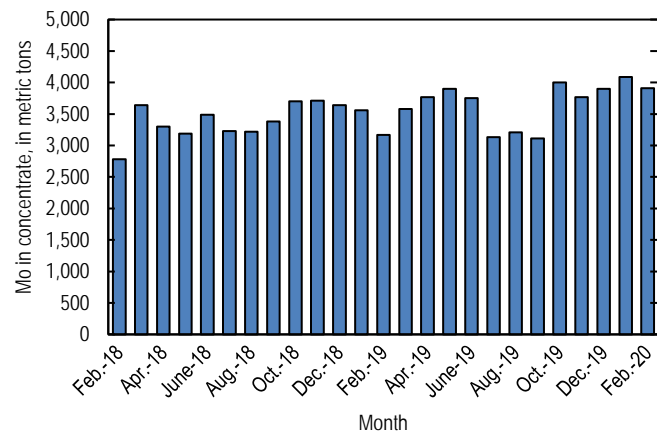


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from February 2018 through February 2020 (may include revisions to previously published data).

According to CRU Group (2020), the February 2020 monthly average price range for U.S. ferromolybdenum (FeMo) was \$11.150 to \$11.688 per pound of molybdenum content, compared with \$10.339 to \$11.000 per pound in January 2020. FeMo monthly averages in Europe ranged from \$24.863 to \$25.531 per kilogram (\$11.278 to \$11.581 per pound) of molybdenum content in February 2020 compared with \$23.128 to \$23.878 per kilogram (\$10.491 to \$10.831 per pound) in January 2020. U.S. molybdenum oxide (MoO₃) prices ranged

from \$9.713 to \$10.381 per pound of molybdenum content in February 2020 compared with \$9.750 to \$10.500 per pound of molybdenum content in January 2020 (fig. 2).

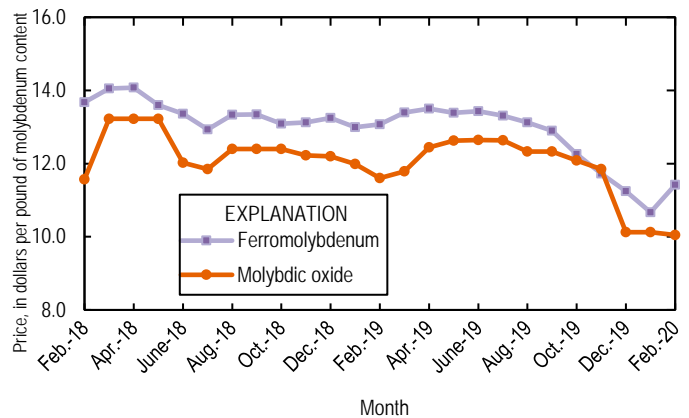


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdenic oxide from February 2018 through February 2020. Source: CRU Group.

Reference Cited

CRU Group, 2020, Molybdenum prices: CRU Group, February 28. (Accessed April 23, 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	3,900	3,900
June	3,750	3,750
July	3,130	3,130
August	3,210	3,200
September	3,110	3,100
October	4,000	4,010
November	3,770	3,780
December	3,900	3,920
January–December	42,900	42,900
2020:		
January	4,090	4,050
February	3,910	3,910
January–February	8,000	7,960

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	Molybdc oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2020:						
January:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	183,000	49,300	--	(3)	W	232,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	--	W
Total	429,000	140,000	--	(3)	W	569,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	63,800	63,800
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	230	W	--	--	--	230
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	213,000	61,500	425	(3)	334,000	609,000
Grand total	642,000	202,000	425	(3)	407,000	1,250,000
Stocks, January 31, 2020	512,000	355,000	2,750	(6)	865,000	1,760,000
February:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	183,000	49,300	--	(3)	W	232,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	68	68
Total	429,000	140,000	--	(3)	68	569,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	62,600	62,600
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	117	W	--	--	--	117
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	195,000	61,500	425	(3)	334,000	591,000
Grand total	624,000	202,000	425	(3)	406,000	1,230,000
Stocks, February 29, 2020	553,000	339,000	2,750	(6)	(6)	1,750,000

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	2019			2020		
	January– December	February	January– February	January	February	January– February
Belgium	6,690,000	292,000	1,140,000	922,000	1,020,000	1,940,000
Brazil	15,900	--	--	--	1,420	1,420
Cambodia	--	--	--	--	1,440	1,440
Canada	1,120,000	75,800	190,000	174,000	152,000	325,000
Chile	218,000	--	218,000	--	--	--
China	533,000	51,900	106,000	1,700	--	1,700
Colombia	339	339	339	--	--	--
Estonia	--	--	--	--	147,000	147,000
Germany	1,090	--	--	--	--	--
India	205,000	9,650	10,700	51,500	22,100	73,500
Japan	3,920,000	251,000	503,000	316,000	247,000	563,000
Korea, Republic of	3,120,000	176,000	316,000	511,000	286,000	797,000
Mexico	3,050,000	260,000	508,000	613,000	463,000	1,080,000
Netherlands	35,900,000	2,290,000	5,470,000	1,220,000	1,610,000	2,830,000
Sri Lanka	1,630	--	--	--	--	--
Taiwan	23,300	--	23,300	--	--	--
Thailand	1,380,000	--	--	73,100	250,000	323,000
Turkey	--	--	--	363	--	363
United Kingdom	7,550,000	602,000	2,370,000	324,000	684,000	1,010,000
Vietnam	434,000	39,100	61,200	26,000	10,100	36,100
Total	64,200,000	4,050,000	10,900,000	4,230,000	4,890,000	9,120,000

-- 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	February	January– February	January	February	January– February
Australia	1,610	--	--	697	--	697
Canada	185,000	5,400	12,200	33,300	32,200	65,400
China	1,210	--	1,210	--	--	--
Denmark	903	--	431	474	--	474
Mexico	306,000	--	18,000	22,000	--	22,000
United Kingdom	420	--	--	--	--	--
Total	495,000	5,400	31,800	56,400	32,200	88,600

-- 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)	February			January–February		
				Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates, roasted	6,470,000	4,030,000	\$89,600	1,020,000	620,000	\$11,900	2,030,000	1,240,000	\$23,400
Ore and concentrates, other	34,400,000	16,400,000	440,000	1,520,000	733,000	14,700	5,900,000	2,730,000	62,300
Molybdenum chemicals:									
Oxides and hydroxides	4,290,000	NA	89,300	435,000	NA	7,550	713,000	NA	12,000
Molybdates of ammonium	1,400,000	789,000	24,200	101,000	56,600	1,500	161,000	90,500	2,380
Molybdates (all others)	221,000	87,700	3,060	22,400	8,880	146	22,400	8,880	146
Molybdenum orange	234,000	NA	1,350	19,400	NA	148	30,500	NA	249
Ferromolybdenum	10,400,000	6,990,000	196,000	563,000	378,000	8,520	997,000	666,000	15,000
Molybdenum powders	238,000	221,000	8,520	26,900	26,600	934	70,900	69,600	2,390
Molybdenum unwrought	595,000	593,000	19,300	28,000	27,800	887	69,100	68,700	2,040
Molybdenum waste and scrap	1,890,000	1,740,000	59,500	70,800	68,700	1,580	173,000	170,000	4,660
Molybdenum wire	18,400	NA	2,150	1,020	NA	126	2,140	NA	236
Molybdenum other	193,000	NA	18,300	11,100	NA	1,020	24,200	NA	2,200
Total	60,300,000	XX	951,000	3,820,000	XX	49,000	10,200,000	XX	127,000

NA Not available. XX Not applicable. -- Zero

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

²Customs value.

Source: U.S. Census Bureau.