

Mineral Industry Surveys

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MOLYBDENUM IN MARCH 2020

Domestic production of molybdenum in concentrate in March 2020 was 5% more than the output of the previous month and 25% more than that of March 2019 (fig. 1, table 1).

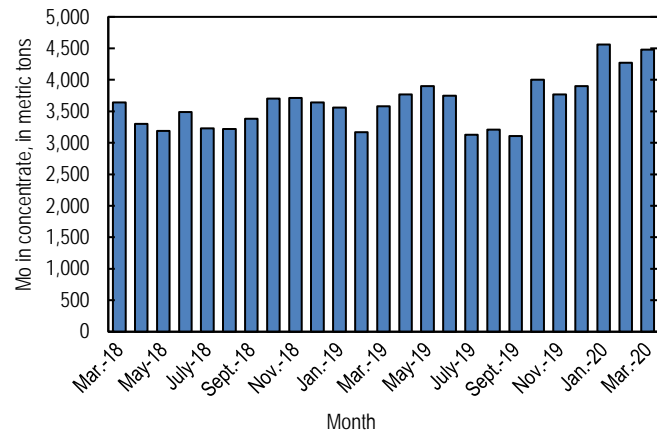


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from March 2018 through March 2020 (may include revisions to previously published data).

According to CRU Group (2020), the March 2020 monthly average price range for U.S. ferromolybdenum (FeMo) was \$10.378 to \$10.878 per pound of molybdenum content, compared with \$11.150 to \$11.688 per pound in February 2020. FeMo monthly averages in Europe ranged from \$22.344 to \$23.100 per kilogram (\$10.135 to \$10.478 per pound) of molybdenum content in March 2020 compared with \$24.863 to \$25.531 per kilogram (\$11.278 to \$11.581 per pound) in February 2020. U.S. molybdenum oxide (MoO₃) prices ranged

from \$9.450 to \$9.933 per pound of molybdenum content in March 2020 compared with \$9.713 to \$10.381 per pound of molybdenum content in February 2020 (fig. 2).

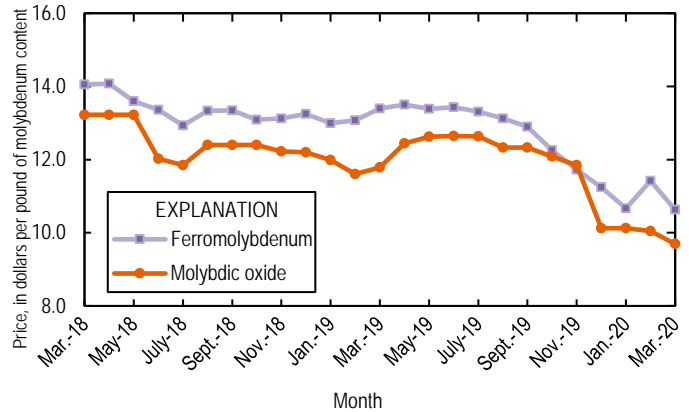


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdenic oxide from March 2018 through March 2020. Source: CRU Group.

Reference Cited

CRU Group, 2020, Molybdenum prices: London, United Kingdom, CRU Group, May 1. (Accessed May 14, 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	4,560 ^r	4,510
February	4,270 ^r	4,280
March	4,480	4,520
January–March	13,300	13,300

^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:						
February:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	185,000 ^r	51,000 ^r	--	(3)	W	236,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	68	68
Total	431,000 ^r	142,000 ^r	--	(3)	68	573,000
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	626,000 ^r	203,000 ^r	425	(3)	406,000	1,240,000
Stocks, February 29, 2020	508,000 ^r	320,000 ^r	2,750	(6)	(6)	1,750,000
March:						
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, March 31, 2020	553,000	339,000	2,750	(6)	(6)	1,750,000

^rRevised.

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."

(including roasted concentrate), BY COUNTRY OR LOCALITY¹

(Kilograms, contained molybdenum)

Country or locality	2019			2020		
	January– December	March	January– March	February	March	January– March
Belgium	6,690,000	586,000	1,720,000	1,020,000	463,000	2,400,000
Brazil	15,900	--	--	1,420	--	1,420
Cambodia	--	--	--	1,440	--	1,440
Canada	1,120,000	80,600	271,000	152,000	160,000	485,000
Chile	218,000	--	218,000	--	--	--
China	533,000	94,100	200,000	--	250,000	252,000
Colombia	339	--	339	--	--	--
Estonia	--	--	--	147,000	158,000	305,000
Germany	1,090	--	--	--	--	--
India	205,000	18,700	29,400	22,100	60,800	134,000
Japan	3,920,000	473,000	976,000	247,000	498,000	1,060,000
Korea, Republic of	3,120,000	318,000	634,000	286,000	518,000	1,320,000
Mexico	3,050,000	201,000	709,000	463,000	357,000	1,430,000
Netherlands	35,900,000	2,900,000	8,370,000	1,610,000	3,740,000	6,570,000
Sri Lanka	1,630	--	--	--	--	--
Taiwan	23,300	--	23,300	--	--	--
Thailand	1,380,000	--	--	250,000	235,000	558,000
Turkey	--	--	--	--	--	363
United Kingdom	7,550,000	141,000	2,510,000	684,000	938,000	1,950,000
Vietnam	434,000	12,700	73,900	10,100	6,840	42,900
Total	64,200,000	4,820,000	15,700,000	4,890,000	7,390,000	16,500,000

-- 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	March	January– March	February	March	January– March
Australia	1,610	871	871	--	--	697
Canada	185,000	15,800	28,000	32,200	63,700	129,000
China	1,210	--	1,210	--	--	--
Denmark	903	--	431	--	--	474
Mexico	306,000	85,300	103,000	--	80,000	102,000
United Kingdom	420	--	--	--	--	--
Total	495,000	102,000	134,000	32,200	144,000	232,000

-- 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)	March			January–March		
				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	1,050,000	645,000	\$12,100	3,090,000	1,890,000	\$35,500
Ore and concentrates, other	34,400,000	16,400,000	440,000	2,520,000	1,250,000	26,400	8,420,000	3,980,000	88,700
Molybdenum chemicals:									
Oxides and hydroxides	4,290,000	NA	89,300	403,000	NA	7,100	1,120,000	NA	19,100
Molybdates of ammonium	1,400,000	789,000	24,200	138,000	77,800	2,080	299,000	168,000	4,460
Molybdates (all others)	221,000	87,700	3,060	19,600	7,790	249	42,000	16,700	394
Molybdenum orange	234,000	NA	1,350	13,700	NA	104	44,200	NA	353
Ferromolybdenum	10,400,000	6,990,000	196,000	1,430,000	963,000	22,600	2,420,000	1,630,000	37,600
Molybdenum powders	238,000	221,000	8,520	50,400	47,900	1,680	121,000	118,000	4,070
Molybdenum unwrought	595,000	593,000	19,300	42,500	42,400	1,140	112,000	111,000	3,170
Molybdenum waste and scrap	1,890,000	1,740,000	59,500	119,000	118,000	3,720	292,000	288,000	8,390
Molybdenum wire	18,400	NA	2,150	1,160	NA	136	3,300	NA	372
Molybdenum other	193,000	NA	18,300	15,000	NA	1,400	39,200	NA	3,610
Total	60,300,000	XX	951,000	5,800,000	XX	78,800	16,000,000	XX	206,000

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.