

Mineral Industry Surveys

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MOLYBDENUM IN APRIL 2021

Domestic production of molybdenum in concentrate in April 2021 was essentially unchanged compared with the output of the previous month and 16% more compared with that of April 2020 (fig. 1, table 1).

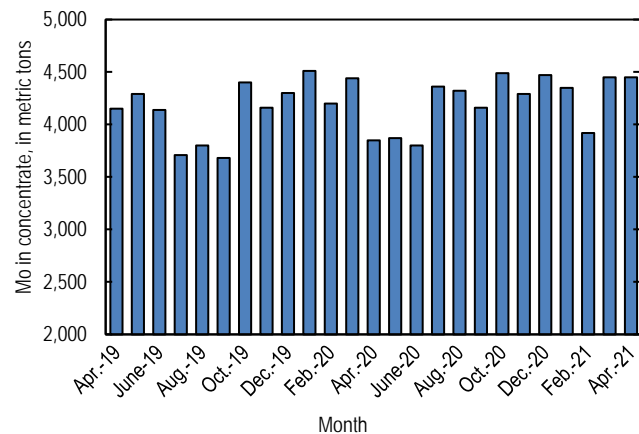


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from April 2019 through April 2021 (may include revisions to previously published data).

According to CRU Group (2021), the March and April 2021 monthly average price range for U.S. ferromolybdenum (FeMo) was \$13.000 to \$14.000 per pound of molybdenum content. FeMo monthly average prices in Europe ranged from \$26.717 to \$27.567 per kilogram (\$12.119 to \$12.504 per pound) of molybdenum content in April 2021 compared with \$27.922 to \$28.589 per kilogram (\$12.665 to \$12.968 per pound) in March 2021. U.S. molybdic oxide (MoO₃) prices ranged from \$12.000

to \$12.700 per pound of molybdenum content in March and April 2021 (fig. 2).

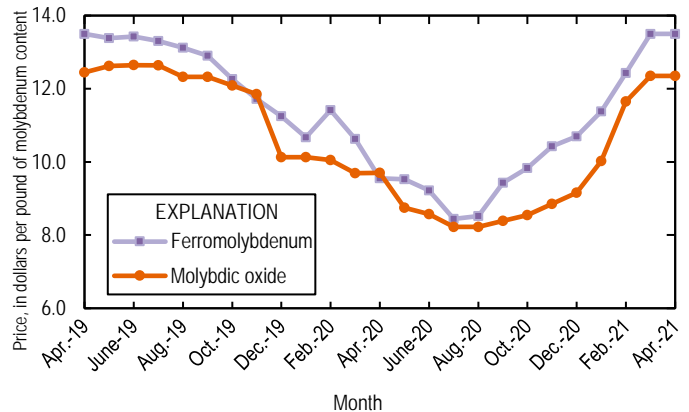


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdic oxide from April 2019 through April 2021. Source: CRU Group.

Reference Cited

CRU Group, 2021, Molybdenum prices: London, United Kingdom, CRU Group, June 3. (Accessed June 14, 2021, 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}
2020:		
January	4,510	4,480
February	4,200	4,220
March	4,440	4,440
April	3,850	3,840
May	3,870	3,880
June	3,800	3,800
July	4,360	4,360
August	4,320	4,300
September	4,160	4,190
October	4,490	4,480
November	4,290	4,300
December	4,470	4,480
January–December	50,800	50,800
2021:		
January	4,350	4,320
February	3,920	3,910 ^r
March	4,450	4,470
April	4,450	4,460
January–April	17,200	17,200

^rRevised.

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

²Includes data from Freeport-McMoRan Inc., 2020–2021. 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. CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS^{e,1}

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molybdenum ²	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2021:						
March:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	8,500	--	--	--	8,500
Stainless and heat-resisting	160,000	47,000	--	(3)	W	207,000
Full alloy	240,000	78,000	--	--	W	318,000
Tool	W	W	--	--	--	W
Total	400,000	134,000	--	(3)	W	534,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	59,000	59,000
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	200	W	--	--	--	200
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	--	--	--	--	9,400	9,400
Other	180,000	62,000	600	(3)	300,000	543,000
Grand total	580,000	196,000	600	(3)	368,000	1,140,000
Stocks, March 31, 2021	490,000	540,000	3,000	(6)	(6)	1,700,000
April:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	8,000	--	--	--	8,000
Stainless and heat-resisting	158,000	50,000	--	(3)	W	208,000
Full alloy	247,000	80,000	--	--	W	327,000
Tool	W	W	--	--	--	W
Total	405,000	138,000	--	(3)	W	543,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	--	--	(3)	58,000	58,000
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	200	W	--	--	--	200
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	--	--	--	--	9,800	9,800
Other	201,000	60,000	700	(3)	300,000	562,000
Grand total	606,000	198,000	700	(3)	368,000	1,170,000
Stocks, April 30, 2021	470,000	510,000	3,000	(6)	(6)	1,680,000

^eEstimated. 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, and 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	2020			2021		
	January– December	April	January– April	March	April	January– April
Belgium	8,880,000 ^r	779,000	3,180,000	784,000	489,000	3,060,000
Brazil	19,400 ^r	-- ^r	1,420 ^r	38,500	15,600	54,100
Cambodia	1,440	--	1,440	21,000	--	21,000
Canada	1,130,000	18,300	503,000	91,700	79,100	294,000
Chile	1,810,000 ^r	89,500	89,500	--	119,000	386,000
China	3,680,000 ^r	174,000 ^r	426,000 ^r	260,000	138,000	1,010,000
Estonia	305,000	--	305,000	--	--	--
Germany	285	285	285	--	--	--
India	900,000 ^r	22,700 ^r	150,000 ^r	124,000	187,000	489,000
Japan	2,980,000 ^r	262,000 ^r	1,260,000 ^r	292,000	102,000	973,000
Korea, Republic of	4,600,000 ^r	654,000 ^r	1,810,000 ^r	49,200	78,500	579,000
Mexico	4,220,000 ^r	31,400	1,460,000	993,000	270,000	2,580,000
Netherlands	24,500,000 ^r	2,090,000 ^r	8,670,000 ^r	1,950,000	1,500,000	9,220,000
South Africa	300	--	--	--	--	1,110
Thailand	722,000 ^r	15,100	573,000	--	--	--
Turkey	1,400	--	363	--	--	--
United Kingdom	5,100,000	577,000	2,520,000	1,630,000	507,000	2,810,000
Vietnam	381,000	50,600	93,600	35,200	11,700	69,000
Total	59,300,000 ^r	4,770,000 ^r	21,000,000 ^r	6,270,000	3,490,000	21,500,000

^rRevised. -- 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	2020			2021		
	January– December	April	January– April	March	April	January– April
Australia	1,070	--	697	697	--	1,320
Canada	381,000	4,370	134,000	12,600	27,900	73,400
Denmark	948	--	474	--	--	474
Mexico	170,000	20,000	122,000	14,900	5,230	40,500
Total	554,000	24,400	257,000	28,100	33,100	116,000

-- 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 2020			2021					
	Gross weight	Contained molybdenum	Value ² (thousands)	April			January–April		
				Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates, roasted	7,310,000	4,490,000	\$81,900	451,000	282,000	\$6,580	2,130,000	1,340,000	\$28,500
Ore and concentrates, other	22,300,000	10,600,000	210,000	1,870,000	921,000	21,100	8,190,000	4,090,000	82,500
Molybdenum chemicals:									
Oxides and hydroxides	3,450,000	NA	54,100	335,000	NA	6,800	1,210,000	NA	22,000
Molybdates of ammonium	947,000	533,000	12,900	160,000	90,200	2,730	564,000	318,000	8,810
Molybdates (all others)	109,000	44,500	1,120	2,820	1,120	34	37,200	14,800	387
Molybdenum orange	138,000	NA	1,270	8,350	NA	95	22,300	NA	177
Ferromolybdenum	6,820,000	4,630,000	99,400	1,400,000	974,000	25,900	4,340,000	3,010,000	73,700
Molybdenum powders	211,000 ^r	191,000 ^r	7,160 ^r	690	611	39	49,000	45,600	1,600
Molybdenum unwrought	415,000	413,000	11,900	12,600	12,600	393	133,000	132,000	4,060
Molybdenum waste and scrap	1,130,000	1,100,000	31,000	184,000	165,000	4,490	484,000	463,000	12,200
Molybdenum wire	16,400 ^r	NA	1,610 ^r	809	NA	103	5,070	NA	681
Molybdenum other	174,000	NA	14,800 ^r	14,500	NA	1,330	55,300	NA	4,980
Total	43,100,000 ^r	XX	527,000	4,440,000	XX	69,600	17,200,000	XX	239,000

^rRevised. 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.