

Mineral Industry Surveys

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MOLYBDENUM IN OCTOBER 2019

Domestic production of molybdenum in concentrate in October 2019 was slightly more than the output of the previous month and 15% less than that of October 2018 (fig. 1, table 1).

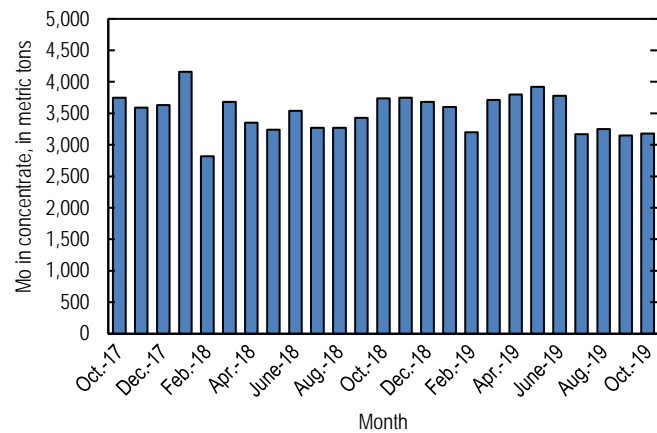


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from October 2017 through October 2019 (may include revisions to previously published data).

According to CRU Group (2019), the October 2019 monthly average price range for U.S. ferromolybdenum (FeMo) was \$11.965 to \$12.555 per pound of molybdenum content, compared with \$12.500 to \$13.300 per pound in September 2019. FeMo monthly averages in Europe ranged from \$24.100 to \$25.125 per kilogram (\$10.932 to \$11.397 per pound) of molybdenum content in October 2019 compared with \$27.188 to \$27.788 per kilogram (\$12.332 to \$12.604 per pound) in September 2019. U.S. molybdenum oxide (MoO₃) prices ranged

from \$11.850 to \$12.325 per pound of molybdenum content in October 2019 compared with \$12.150 to \$12.500 per pound in September 2019 (fig. 2).

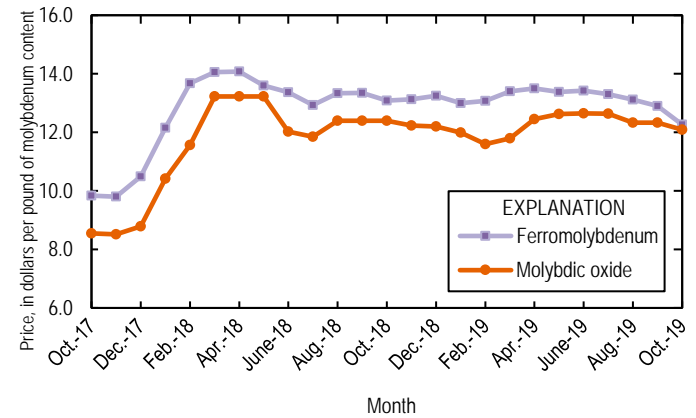


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdenic oxide from October 2017 through October 2019. Source: CRU Group.

Reference Cited

CRU Group, 2019, Molybdenum prices: CRU Group, December 2. (Accessed December 11, 2019, 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}
2018:		
January	4,160	4,180
February	2,820	2,800
March	3,680	3,690
April	3,350	3,310
May	3,240	3,240
June	3,540	3,630
July	3,270	3,280
August	3,270	3,220
September	3,430	3,310
October	3,740	3,730
November	3,750	3,730
December	3,680	3,720
January–December	41,900	41,800
2019:		
January	3,600	3,590
February	3,200	3,170
March	3,710	3,750
April	3,800	3,800
May	3,920	3,930
June	3,780	3,790
July	3,170	3,170
August	3,250	3,240
September	3,150	3,140
October	3,180	3,190
January–October	34,800	34,800

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

²Includes data from Freeport-McMoRan Copper & Gold Inc., 2018–2019. 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
2019:						
September:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	182,000	50,400	--	(3)	W	232,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	--	W
Total	428,000	141,000	--	(3)	W	569,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	W	--	(3)	63,200	63,200
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	116	W	--	--	--	116
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	199,000	61,300 ^f	425	(3)	334,000	595,000 ^f
Grand total	627,000	203,000 ^f	425	(3)	406,000	1,240,000
Stocks, September 30, 2019	518,000	267,000 ^f	2,770	(6)	(6)	1,680,000
October:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	160,000	49,400	--	(3)	W	210,000
Full alloy	246,000	76,600	--	--	W	322,000
Tool	W	W	--	--	--	W
Total	406,000	140,000	--	(3)	W	546,000
Cast irons (gray, malleable, and ductile iron)	--	W	--	--	--	W
Superalloys	--	W	--	(3)	65,700	65,700
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	275	W	--	--	--	275
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	197,000	61,600	425	(3)	334,000	592,000
Grand total	603,000	202,000	425	(3)	409,000	1,210,000
Stocks, October 31, 2019	511,000	276,000	2,760	(6)	(6)	1,680,000

^fRevised.

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	2018			2019		
	January– December	October	January– October	September	October	January– October
Belgium	5,070,000	805,000 ^r	4,330,000 ^r	480,000	837,000	5,450,000
Brazil	27,400	792	27,400	1,480	--	15,900
Canada	1,390,000	127,000	1,200,000 ^r	120,000	86,000	896,000
Chile	1,410,000	68,300	929,000	--	--	218,000
China	1,030,000	45,500	995,000	78,100	1,210	445,000
Colombia	--	--	--	--	--	339
Germany	--	--	--	--	--	1,090
India	603,000	74,200	465,000	11,000	22,200	161,000
Israel	262	--	262	--	--	--
Japan	3,920,000	369,000	3,270,000 ^r	342,000	347,000	3,340,000
Korea, Republic of	538,000	70,400	432,000 ^r	212,000	207,000	2,350,000
Malaysia	227	--	227	--	--	--
Mexico	1,880,000	255,000	1,460,000	109,000	273,000	2,320,000
Netherlands	21,100,000	2,110,000 ^r	16,300,000 ^r	2,000,000	2,960,000	29,200,000
Russia	98,100	--	98,100	--	--	--
Sri Lanka	--	--	--	1,630	--	1,630
Sweden	123,000	63,300	63,300	--	--	--
Taiwan	--	--	--	--	--	23,300
Thailand	60,000	--	59,700 ^r	528,000	104,000	797,000
United Kingdom	6,710,000	513,000	5,850,000	1,040,000	757,000	6,790,000
Vietnam	848,000	65,200	771,000	21,700	41,300	324,000
Total	44,800,000	4,560,000 ^r	36,200,000 ^r	4,940,000	5,630,000	52,400,000

^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	2018			2019		
	January– December	October	January– October	September	October	January– October
Australia	2,530	--	2,530	--	--	1,610
Canada	426,000	27,800	364,000	12,900	22,800	138,000
China	--	--	--	--	--	1,210
Colombia	225	--	225	--	--	--
Denmark	837	--	837	--	--	903
Israel	249	249	249	--	--	--
Mexico	513,000	--	511,000	60,000	21,100	304,000
United Kingdom	--	--	--	420	--	420
Total	943,000	28,000	878,000	73,300	43,900	445,000

-- 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 2018			2019					
	Gross weight	Contained molybdenum	Value ² (thousands)	October			January–October		
				Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	7,030,000	4,330,000	\$102,000	760,000	477,000	\$10,500	5,430,000	3,390,000	\$77,700
Ore and concentrates other	38,200,000	18,500,000	481,000	2,490,000	1,160,000	30,500	29,800,000	14,300,000	389,000
Molybdenum chemicals:									
Oxides and hydroxides	3,460,000	NA	69,500	390,000	NA	8,230	3,870,000	NA	81,400
Molybdates of ammonium	1,750,000	985,000	29,800	121,000	68,100	2,110	1,200,000	673,000	21,100
Molybdates (all others)	384,000	154,000	5,000	20,800	8,290	270	206,000	81,800	2,880
Molybdenum orange	683,000	NA	2,630	8,810	NA	51	201,000	NA	1,200
Ferromolybdenum	11,900,000	8,010,000	223,000	520,000	354,000	9,760	9,150,000	6,140,000	176,000
Molybdenum powders	410,000	386,000	15,000	24,800	21,400	589	209,000	193,000	7,820
Molybdenum unwrought	722,000	721,000	21,000	21,000	20,700	730	493,000	492,000	16,000
Molybdenum waste and scrap	1,700,000	1,580,000	48,900	118,000	105,000	3,920	1,630,000	1,500,000	51,500
Molybdenum wire	31,100	NA	3,030	1,250	NA	183	14,200	NA	1,680
Molybdenum other	177,000	NA	17,500	16,000	NA	1,820	164,000	NA	15,700
Total	66,400,000	XX	1,020,000	4,490,000	XX	68,700	52,400,000	XX	842,000

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.