

Mineral Industry Surveys

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MOLYBDENUM IN OCTOBER 2018

Domestic production of molybdenum in concentrate in October 2018 was slightly more from the output of the previous month and 6% less than that of October 2017 (fig. 1, table 1).

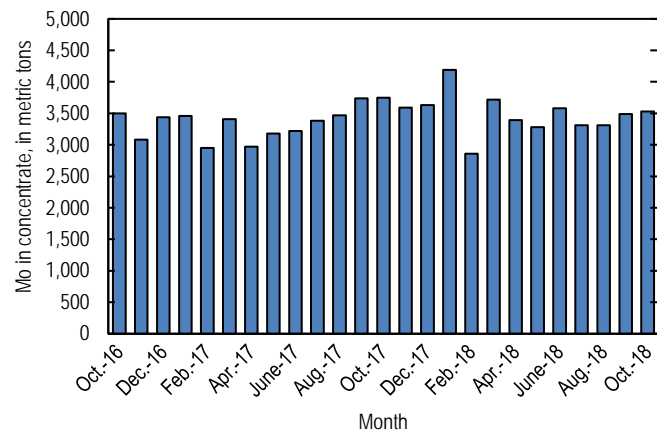


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from October 2016 through October 2018 (may include revisions to previously published data).

According to CRU Group (2018), the October 2018 monthly average price range for U.S. ferromolybdenum (FeMo) was \$12.983 to \$13.189 per pound of molybdenum content, compared with \$13.225 to \$13.463 per pound in September 2018. FeMo monthly averages in Europe ranged from \$28.800 to \$29.500 per kilogram of molybdenum content in October 2018 compared with \$29.238 to \$29.700 per kilogram in September 2018. U.S. molybdenum oxide (MoO₃) prices ranged

from \$12.150 to \$12.650 per pound, unchanged since August 2018 (fig. 2).

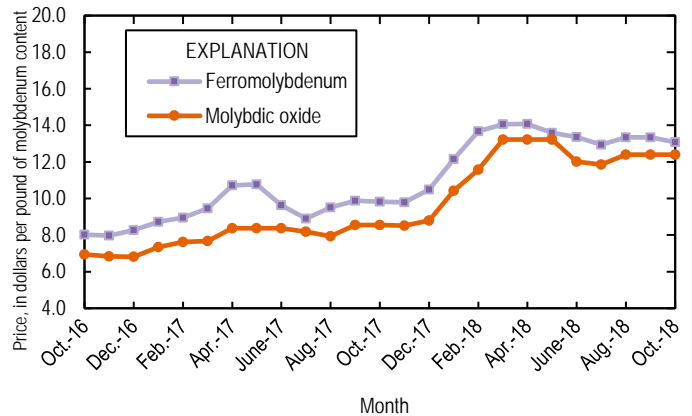


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdcic oxide from October 2016 through October 2018. Source: CRU Group.

Reference Cited

CRU Group, 2018, Molybdenum prices: CRU Group, November 30. (Accessed December 19, 2018, 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}
2017:		
January	3,460	3,410
February	2,950	2,920
March	3,410	3,450
April	2,970	2,930
May	3,180	3,250
June	3,220	3,220
July	3,380	3,320
August	3,470	3,490
September	3,740	3,780
October	3,750	3,710
November	3,590	3,620
December	3,630	3,620
January–December	40,700	40,700
2018:		
January	4,190	4,220
February	2,860	2,840
March	3,720	3,730
April	3,390	3,350
May	3,280	3,280
June	3,580	3,670
July	3,310	3,320
August	3,310	3,250
September	3,490 ^r	3,380 ^r
October	3,530	3,480
January–October	34,600	34,500

^rRevised.

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

²Includes data from Freeport-McMoRan Copper & Gold Inc., 2017–2018. 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
September:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	176,000	48,700	--	(3)	W	224,000
Full alloy	246,000	78,200	--	--	W	324,000
Tool	W	W	--	--	--	W
Total	422,000	141,000	--	(3)	W	563,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	--	W
Superalloys	W	W	--	(3)	73,700	73,700
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	129	W	--	--	--	129
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	207,000	50,700 ^r	425	(3)	339,000 ^r	597,000 ^r
Grand total	629,000	192,000 ^r	425	(3)	422,000 ^r	1,240,000 ^r
Stocks, September 30, 2018	530,000	310,000 ^r	3,350 ^r	(6)	(6)	1,730,000 ^r
October:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	173,000	48,800	--	(3)	W	222,000
Full alloy	246,000	78,200	--	--	W	324,000
Tool	W	W	--	--	--	W
Total	419,000	141,000	--	(3)	W	561,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	--	W
Superalloys	W	W	--	(3)	68,900	68,900
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	194	W	--	--	--	194
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	204,000	56,800	425	(3)	335,000	596,000
Grand total	623,000	198,000	425	(3)	413,000	1,230,000
Stocks, October 31, 2018	573,000	310,000	3,340	(6)	(6)	1,770,000

^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."

TABLE 3
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY OR LOCALITY¹

(Kilograms, contained molybdenum)

Country or locality	2017			2018		
	January– December	October	January- October	September	October	January- October
Belgium	5,350,000	570,000	4,290,000	228,000	757,000	4,280,000
Brazil	39,400	--	31,800	--	792	27,400
Canada	1,570,000	169,000	1,390,000	37,600	127,000	1,180,000
Chile	1,550,000	92,900	1,230,000	182,000	68,300	929,000
China	4,950,000	273,000 [†]	4,130,000 [†]	138,000	45,500	995,000
Estonia	19,500	--	--	--	--	--
Germany	166	--	--	--	--	--
India	199,000	11,600 [†]	107,000 [†]	79,600	74,200	465,000
Israel	--	--	--	--	--	262
Japan	2,860,000	222,000	2,400,000 [†]	344,000	369,000	3,290,000
Korea, Republic of	876,000	60,000	783,000 [†]	33,400	70,400	440,000
Malaysia	--	--	--	--	--	227
Mexico	704,000	239,000	568,000	99,400	255,000	1,460,000
Netherlands	14,000,000	1,460,000 [†]	12,200,000	2,210,000	2,300,000	16,400,000
Russia	--	--	--	--	--	98,100
Sweden	1,720	--	1,720	--	63,300	63,300
Taiwan	10,300	--	10,300	--	--	--
Thailand	74,500	--	49,300	--	--	37,100
Turkey	1,060	--	1,060	--	--	--
United Kingdom	7,220,000	602,000	6,030,000 [†]	880,000	513,000	5,850,000
Vietnam	393,000	--	273,000	14,500	65,200	771,000
Total	39,800,000	3,700,000 [†]	33,500,000 [†]	4,250,000	4,710,000	36,300,000

[†]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	2017			2018		
	January– December	October	January– October	September	October	January– October
Australia	1,320	--	1,320 ^r	889	--	2,530
Canada	586,000	24,800 ^r	506,000 ^r	42,100	27,800	364,000
Colombia	200	--	200 ^r	--	--	225
Denmark	710	--	465 ^r	--	--	837
Israel	--	--	--	--	249	249
Mexico	39,500	19,500 ^r	24,500 ^r	--	--	511,000
Total	628,000	44,300 ^r	532,000 ^r	43,000	28,000	878,000

-- 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	2017			2018					
	January–December			October			January - October		
	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	11,100,000	6,630,000	\$116,000	494,000	305,000	\$7,430	6,160,000	3,790,000	\$89,300
Ore and concentrates other	36,000,000	17,600,000	297,000	3,550,000	1,710,000	48,900	30,900,000	15,000,000	385,000
Molybdenum chemicals:									
Oxides and hydroxides	2,920,000	NA	42,700	196,000	NA	4,040	2,950,000	NA	59,000
Molybdates of ammonium	2,530,000	1,430,000	32,700	203,000	114,000	3,680	1,440,000	810,000	24,500
Molybdates (all others)	302,000	119,000	2,980	46,400	18,400	666	333,000	133,000	4,370
Molybdenum orange	840,000	NA	3,370	145,000	NA	402	641,000	NA	2,360
Ferromolybdenum	7,590,000	5,130,000	112,000	1,020,000	683,000	19,900	9,790,000	6,600,000	183,000
Molybdenum powders	368,000	350,000	10,400	39,400	34,900	1,430	352,000	334,000	12,700
Molybdenum unwrought	987,000	985,000	20,700	21,200	21,100	518	614,000	612,000	17,500
Molybdenum waste and scrap	1,150,000	1,120,000	23,700	189,000	172,000	5,700	1,500,000	1,420,000	43,500
Molybdenum wire	25,600 ^r	NA	2,600 ^r	1,040	NA	113	24,300	NA	2,290
Molybdenum other	233,000	NA	15,300	11,800	NA	1,400	144,000	NA	15,100
Total	64,000,000	XX	680,000	5,920,000	XX	94,200	54,800,000	XX	839,000

^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.