

# Mineral Industry Surveys

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## MOLYBDENUM IN JANUARY 2019

Domestic production of molybdenum in concentrate in January 2019 was 4% more than the output of the previous month and 8% less than that of January 2018 (fig. 1, table 1).

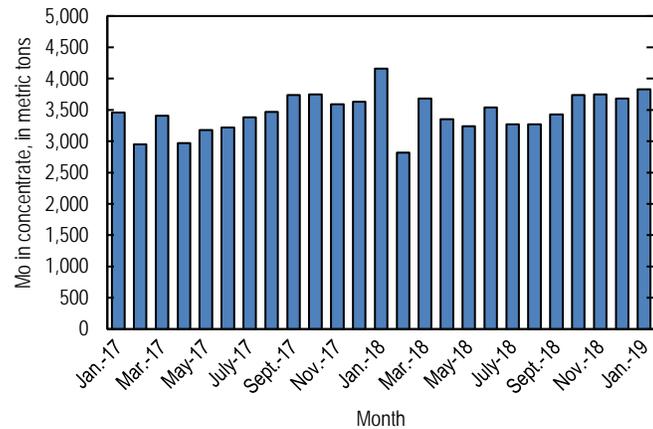


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from January 2017 through January 2019 (may include revisions to previously published data).

According to CRU Group (2019), the January 2019 monthly average price range for U.S. ferromolybdenum (FeMo) was \$12.645 to \$13.350 per pound of molybdenum content, compared with \$13.000 to \$13.500 per pound in December 2018. FeMo monthly averages in Europe ranged from \$26.915 to \$27.450 per kilogram of molybdenum content in January 2019 compared with \$29.038 to \$29.538 per kilogram in

December 2018. U.S. molybdenum oxide (MoO<sub>3</sub>) prices ranged from \$11.700 to \$12.280 per pound in January 2019 compared with \$12.000 to \$12.400 per pound in December 2018 (fig. 2).

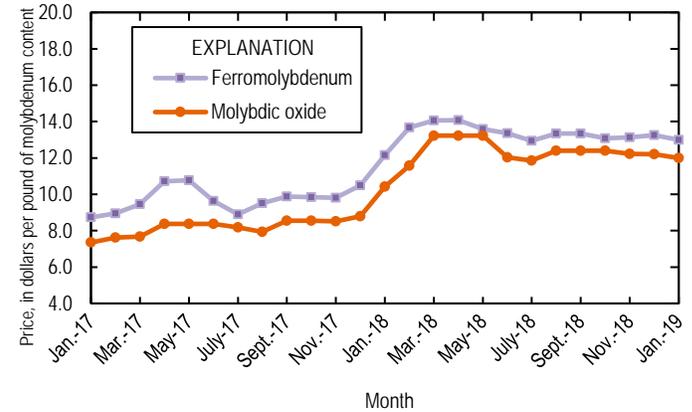


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdenic oxide from January 2017 through January 2019. Source: CRU Group.

**Reference Cited**

CRU Group, 2019, Molybdenum prices: CRU Group, February 1. (Accessed April 10, 2019, via <http://www.crugroup.com/>.)

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TABLE 1  
U.S. SALIENT MOLYBDENUM CONCENTRATE  
STATISTICS<sup>1,2</sup>

(Metric tons, contained molybdenum)

Period	Production	Shipments <sup>3,4</sup>
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 <sup>r</sup>	3,730 <sup>r</sup>
November	3,750 <sup>r</sup>	3,730 <sup>r</sup>
December	3,680 <sup>r</sup>	3,720 <sup>r</sup>
January–December	41,900 <sup>r</sup>	41,800 <sup>r</sup>
2019, January	3,830	3,830

<sup>r</sup>Revised.

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

<sup>2</sup>Includes data from Freeport-McMoRan Copper & Gold Inc., 2018–2019. Adjusted by USGS to reflect estimated monthly data.

<sup>3</sup>As reported by producers.

<sup>4</sup>Shipments 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 MATERIALS<sup>1</sup>

(Kilograms, contained molybdenum)

End use	Molybdc oxides	Ferro molyb- denum <sup>2</sup>	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
December, 2018:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	176,000	47,800	--	(3)	W	224,000
Full alloy	246,000	85,300	--	--	W	331,000
Tool	W	W	--	--	--	W
Total	422,000	147,000	--	(3)	W	570,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	--	W
Superalloys	W	W	--	(3)	68,500	68,500
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	131	W	--	--	--	131
Mill products made from metal powder <sup>4</sup>	--	--	--	--	W	W
Cemented carbides and related products <sup>5</sup>	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	(3)	--	--	(3)
Catalysts	W	--	(3)	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	9,440	9,440
Other	214,000	59,500	425	(3)	334,000	608,000
Grand total	636,000	207,000	425	(3)	412,000	1,260,000
Stocks, December 31, 2018	548,000	315,000	3,430	(6)	(6)	1,750,000
January, 2019:						
Steel:						
Carbon	W	W	--	--	--	W
High-strength low-alloy	W	14,400	--	--	--	14,400
Stainless and heat-resisting	184,000	47,800	--	(3)	W	231,000
Full alloy	246,000	91,100	--	--	W	337,000
Tool	W	W	--	--	--	W
Total	430,000	153,000	--	(3)	W	583,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	--	W
Superalloys	W	W	--	(3)	74,600	74,600
Alloys: (other than steels, cast irons, and superalloys)						
Other alloys	66	W	--	--	--	66
Mill products made from metal powder <sup>4</sup>	--	--	--	--	W	W
Cemented carbides and related products <sup>5</sup>	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	(3)	--	--	(3)
Catalysts	W	--	(3)	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	9,440	9,440
Other	223,000	48,500	425	(3)	335,000	606,000
Grand total	652,000	202,000	425	(3)	419,000	1,270,000
Stocks, January 31, 2019	549,000	293,000	3,420	(6)	(6)	1,730,000

W Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified uses: Other" category. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown. Includes U.S. Geological Survey estimates.

<sup>2</sup>Includes calcium molybdate.

<sup>3</sup>Withheld to avoid disclosing company proprietary data; included in "Other, Miscellaneous and unspecified uses: Other" category.

<sup>4</sup>Includes ingot, wire, rod, and sheet.

<sup>5</sup>Includes construction, mining, oil and gas, metalworking machinery.

<sup>6</sup>Withheld 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 LOCALITY<sup>1</sup>

(Kilograms, contained molybdenum)

Country or locality	2018			2019
	January– December	January	December	January
Belgium	5,030,000	904,000	442,000	845,000
Brazil	27,400	--	--	--
Canada	1,370,000	113,000	94,400	114,000
Chile	1,420,000	78,100	268,000	218,000
China	1,030,000	33,100	21,700	54,000
India	603,000	22,900	93,300	1,070
Israel	262	--	--	--
Japan	3,930,000	331,000	336,000	252,000
Korea, Republic of	546,000	34,300	71,800	140,000
Malaysia	227	--	--	--
Mexico	1,880,000	240,000	83,100	248,000
Netherlands	21,000,000	1,620,000	2,610,000	3,180,000
Russia	98,100	--	--	--
Sweden	123,000	--	--	--
Taiwan	--	--	--	23,300
Thailand	37,400	--	280	--
United Kingdom	6,710,000	662,000	452,000	1,770,000
Vietnam	848,000	79,400	68,600	22,100
Total	44,700,000	4,120,000	4,540,000	6,870,000

-- Zero.

<sup>1</sup>Data 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 LOCALITY<sup>1</sup>

(Kilograms, contained molybdenum)

Country or locality	2018			2019 January
	January– December	January	December	
Australia	2,530	871	--	--
Canada	426,000	43,000	59,100	6,800
China	--	--	--	1,210
Colombia	225	--	--	--
Denmark	837	--	--	431
Israel	249	--	--	--
Mexico	513,000	--	--	18,000
Total	943,000	43,900	59,100	26,400

-- Zero.

<sup>1</sup>Data 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 PRODUCTS<sup>1</sup>

(Kilograms, unless otherwise specified)

Material	January–December 2018			January 2019		
	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)	Gross weight	Contained molybdenum	Value <sup>2</sup> (thousands)
Ore and concentrates roasted	7,030,000	4,330,000	\$102,000	639,000	399,000	\$9,110
Ore and concentrates other	38,200,000	18,600,000	481,000	2,630,000	1,270,000	32,500
Molybdenum chemicals:						
Oxides and hydroxides	3,460,000	NA	69,500	355,000	NA	7,760
Molybdates of ammonium	1,750,000	985,000	29,800	160,000	90,100	2,880
Molybdates (all others)	384,000	154,000	5,000	5,780	2,270	186
Molybdenum orange	683,000	NA	2,630	4,380	NA	38
Ferromolybdenum	11,900,000	7,990,000	223,000	1,200,000	805,000	23,100
Molybdenum powders	410,000	386,000	15,000	17,000	16,500	675
Molybdenum unwrought	722,000	721,000	21,000	59,300	59,200	2,050
Molybdenum waste and scrap	1,700,000	1,580,000	48,900	134,000	131,000	3,960
Molybdenum wire	31,100	NA	3,030	1,080	NA	126
Molybdenum other	179,000	NA	18,500	15,100	NA	1,240
Total	66,400,000	XX	1,020,000	5,220,000	XX	83,600

NA Not available. XX Not applicable.

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

<sup>2</sup>Customs value.

Source: U.S. Census Bureau.