

# Mineral Industry Surveys

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## MOLYBDENUM IN SEPTEMBER 2023

Domestic production of molybdenum in concentrate in September 2023 was essentially unchanged compared with the output in the previous month and 10% more than the output in September 2022 (fig. 1, table 1).

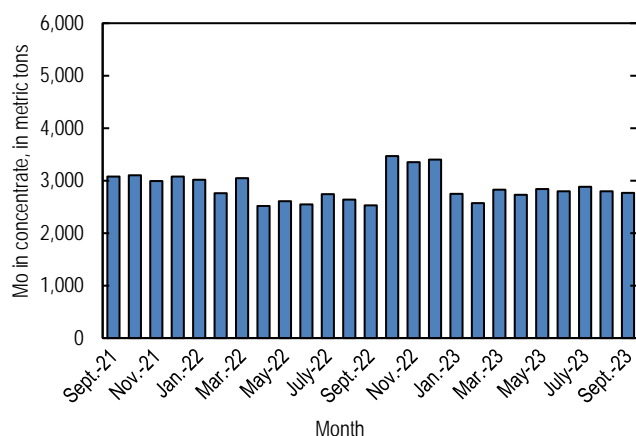


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from September 2021 through September 2023 (may include revisions to previously published data).

## Prices

According to CRU Group, the monthly average price range for U.S. ferromolybdenum (FeMo) was \$26.469 to \$27.469 per pound of molybdenum content in September 2023 compared with \$25.400 to \$26.400 per pound in August 2023. FeMo monthly average prices in Europe ranged from \$54.875 to \$55.875 per kilogram (\$24.891 to \$25.345 per pound) of molybdenum content in September 2023 compared with \$54.000 to \$55.200 per kilogram (\$24.494 to \$25.038 per pound) in August 2023. U.S. molybdic oxide (MoO<sub>3</sub>) prices ranged from \$22.688 to \$23.538 per pound of molybdenum content in September 2023 compared with \$22.425 to \$23.425 per pound of molybdenum content in August 2023 (fig. 2).

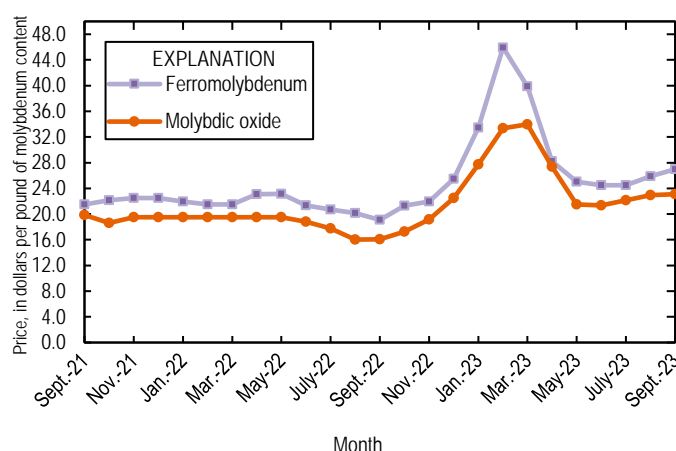


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdic oxide from September 2021 through September 2023. Source: CRU Group.

## Industry News

Centerra Gold Inc. (Toronto, Ontario, Canada) completed a prefeasibility study (PFS) on the restart of its Thompson Creek Mine in Idaho that has been on care and maintenance status since 2014. The PFS called for restarting the mine along with increasing capacity utilization at Centerra's Langeloth metallurgical facility in Langeloth, PA. According to the PFS, increasing the capacity utilization at Langeloth would allow the company to mix higher quality Thompson Creek molybdenum concentrates with lower quality third-party concentrates, which would give Centerra a long-term profitable operation. The company anticipated that it would be able to produce approximately 61,000 metric tons of molybdenum over an 11-year mine life. Following the PFS, Centerra commenced a feasibility study for Thompson Creek that was expected to be completed by the middle of 2024 (Centerra Gold Inc., 2023, p. 2–3).

## Reference Cited

Centerra Gold, Inc., 2023, Centerra Gold announces strategic plan including Thompson Creek prefeasibility study: Toronto, Ontario, Canada, Centerra Gold Inc. press release, September 18, 11 p. (Accessed November 11, 2023, at <https://www.centerragold.com/news-releases/2023/centerra-gold-announces-strategic-plan-including-thompson-creek-prefeasibility-study-highlights/>.)

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

(Metric tons, molybdenum content)

Period	Production	Shipments <sup>3,4</sup>
2022:		
January	3,020	3,100
February	2,760	2,760
March	3,050	3,080
April	2,520	2,540
May	2,610	2,620
June	2,550	2,530
July	2,740	2,700
August	2,640	2,680
September	2,530	2,550
October	3,470	3,390
November	3,350	3,360
December	3,400	3,350
January–September	24,400	24,600
January–December	34,600	34,700
2023:		
January	2,750	2,610
February	2,570	2,570
March	2,830	2,900
April	2,730	2,720
May	2,840	2,860
June	2,800	2,790
July	2,880 <sup>r</sup>	2,850 <sup>r</sup>
August	2,800 <sup>r</sup>	2,830 <sup>r</sup>
September	2,770	2,760
January–September	25,000	24,900

<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 annual or quarterly published data from Freeport-McMoran Inc. (2022–2023) that has been adjusted by USGS to reflect estimated monthly

<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. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES  
(including roasted concentrate), BY COUNTRY OR LOCALITY<sup>1</sup>

(Kilograms, molybdenum content)

Country or locality	2022			2023		
	January– December	September	January– September	August	September	January– September
Argentina	87,000	--	87,000	--	--	--
Belgium	2,130,000	--	1,440,000 <sup>r</sup>	75,800	6,690	379,000
Brazil	229,000	17,200	118,000	33,900	1,620	212,000
Cambodia	5,000	--	5,000	--	--	--
Canada	408,000	46,800	333,000	70,000	91,100	733,000
Chile	98,400	--	98,400	85,700	253,000	1,170,000
China	402,000	--	19,100	600,000	122,000	1,180,000
France	--	--	--	3,640	--	3,640
Germany	5,700	--	5,700	--	181	181
Hong Kong	1,680	--	1,680	--	--	--
India	499,000	--	316,000 <sup>r</sup>	11,900	53,000	280,000
Italy	114	--	--	--	--	--
Japan	3,460,000	346,000 <sup>r</sup>	2,790,000 <sup>r</sup>	237,000	278,000	2,540,000
Korea, Republic of	681,000	38,700 <sup>r</sup>	507,000 <sup>r</sup>	--	--	509,000
Latvia	1,140	--	1,140	--	--	--
Mexico	1,970,000	190,000	1,460,000	--	--	92,900
Netherlands	28,300,000	1,680,000	21,200,000 <sup>r</sup>	1,490,000	2,180,000	21,200,000
Singapore	--	--	--	--	--	55,000
South Africa	11,800	11,800	11,800	--	--	330
Sweden	--	--	--	--	12,500	12,500
Taiwan	3,400	--	3,400	--	--	--
Thailand	12,400	--	7,060	--	--	14,900
United Kingdom	6,740,000	307,000	5,560,000	1,090,000	599,000	5,810,000
Vietnam	1,130,000	104,000	656,000 <sup>r</sup>	10,900	39,700	688,000
Total	46,200,000	2,740,000 <sup>r</sup>	34,700,000 <sup>r</sup>	3,710,000	3,640,000	34,800,000

<sup>r</sup>Revised. -- 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 3  
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY OR LOCALITY<sup>1</sup>

(Kilograms, molybdenum content)

Country or locality	2022			2023		
	January– December	September	January– September	August	September	January– September
Argentina	547	--	462	--	--	--
Australia	2,560	--	2,560	111	1,340	2,510
Canada	93,400	1,590	88,800 <sup>r</sup>	4,270	19,300	157,000
Denmark	880	--	880	--	--	1,060
India	--	--	--	--	--	17,700
Mexico	92,600	11,000	82,500	226	4,450	108,000
Total	190,000	12,600	175,000 <sup>r</sup>	4,600	25,100	287,000

<sup>r</sup>Revised. -- 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. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS<sup>1</sup>

(Kilograms, unless otherwise specified)

Material	2022			2023					
	January–December			September			January–September		
	Gross weight	Molybdenum content	Value <sup>2</sup> (thousands)	Gross weight	Molybdenum content	Value <sup>2</sup> (thousands)	Gross weight	Molybdenum content	Value <sup>2</sup> (thousands)
Ore and concentrates, roasted	3,240,000	2,000,000	\$74,600	220,000	139,000	\$7,470	1,750,000	1,100,000	\$63,100
Ore and concentrates, other	28,800,000	13,700,000	511,000	3,040,000	1,560,000	68,200	23,700,000	11,800,000	603,000
Molybdenum chemicals:									
Oxides and hydroxides	3,660,000	NA	106,000	184,000	NA	6,890	3,700,000	NA	149,000
Molybdates of ammonium	1,360,000	773,000	33,700	154,000	86,700	4,910	1,260,000	711,000	42,400
Molybdates (all others)	360,000	144,000	5,980	5,080	2,010	119	169,000	66,900	3,390
Molybdenum orange	174,000	NA	1,260	6,480	NA	61	207,000	NA	1,210
Ferromolybdenum	10,600,000	7,260,000	311,000	481,000	319,000	17,600	7,940,000	5,440,000	290,000
Molybdenum powders	238,000	232,000	13,400	18,400	16,000	1,190	63,300	57,200	4,670
Molybdenum unwrought	318,000	317,000	14,300	48,600	48,600	3,050	474,000	472,000	29,400
Molybdenum waste and scrap	1,910,000	1,540,000	68,000	120,000	116,000	7,140	1,410,000	1,270,000	79,700
Molybdenum wire	15,800	NA	1,950	2,110	NA	289	15,300	NA	2,220
Molybdenum other	192,000	NA	24,700	13,700	NA	2,160	191,000	NA	28,600
Total	50,900,000	XX	1,160,000	4,290,000	XX	119,000	40,900,000	XX	1,300,000

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.