

Mineral Industry Surveys

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MOLYBDENUM IN NOVEMBER 2022

Domestic production of molybdenum in concentrate in November 2022 was essentially unchanged compared with the output of the previous month and 5% more than that of November 2021 (fig. 1, table 1).

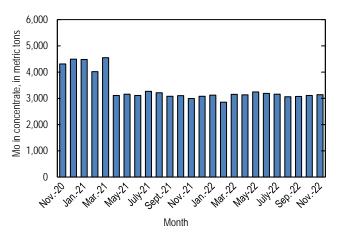


Figure 1. Monthly domestic production of molybdenum (Mo) in concentrate from November 2020 through November 2022 (may include revisions to previously published data).

Prices

According to CRU Group (2022), the monthly average price range for U.S. ferromolybdenum (FeMo) was \$21.589 to \$22,361 per pound of molybdenum content in November 2022 compared with \$20.875 to \$21.719 per pound of molybdenum content in October 2022. FeMo monthly average prices in Europe ranged from \$47.067 to \$48.067 per kilogram (\$21.349) to \$21.803 per pound) of molybdenum content in November 2022 compared with \$41.688 to \$42.688 per kilogram (\$18.909 to \$19.363 per pound) in October 2022.

U.S. molybdic oxide (MoO₃) prices ranged from \$18.944 to \$19.356 per pound of molybdenum content in November 2022 compared with from \$17.000 to \$17.563 per pound of molybdenum content in October 2022 (fig. 2).

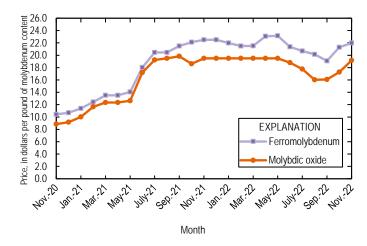


Figure 2. Average monthly prices for U.S. ferromolybdenum and molybdic oxide from November 2020 through November 2022. Source: CRU Group.

Reference Cited

CRU Group, 2022, Molybdenum prices: London, United Kingdom, CRU Group, November 30. (Accessed January 14, 2022, via http://www.crugroup.com/.)

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TABLE 1 $\begin{tabular}{ll} U.S. SALIENT MOLYBDENUM CONCENTRATE \\ STATISTICS 1,2 \end{tabular}$

(Metric tons, contained molybdenum)

| Period | Production | Shipments ^{3, 4} | |
|------------------|------------|---------------------------|--|
| 2021: | | | |
| January | 4,480 | 4,450 | |
| February | 4,020 | 4,010 | |
| March | 4,550 | 4,580 | |
| April | 3,110 | 3,120 | |
| May | 3,160 | 3,080 | |
| June | 3,110 | 3,140 | |
| July | 3,270 | 3,210 | |
| August | 3,210 | 3,290 | |
| September | 3,080 | 3,100 | |
| October | 3,100 | 3,060 | |
| November | 2,990 | 2,950 | |
| December | 3,080 | 3,090 | |
| January-December | 41,100 | 41,100 | |
| 2022: | | | |
| January | 3,120 | 3,080 | |
| February | 2,850 | 2,850 | |
| March | 3,150 | 3,180 | |
| April | 3,130 | 3,150 | |
| May | 3,240 | 3,250 | |
| June | 3,190 | 3,170 | |
| July | 3,160 | 3,130 | |
| August | 3,060 | 3,100 | |
| September | 3,070 | 3,090 | |
| October | 3,110 | 3,030 | |
| November | 3,140 | 3,150 | |
| January-November | 34,200 | 34,200 | |

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

²Includes data from Freeport-McMoRan Inc., 2021–2022. 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. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES (including roasted concentrate), BY COUNTRY OR LOCALITY 1

(Kilograms, contained molybdenum)

| | | 2021 | | 2022 | | | |
|---------------------|------------|------------------------|-------------------------|-----------|-----------|----------------------|--|
| | January- | | January- | | | January– November | |
| Country or locality | December | November | November | October | November | | |
| Argentina | 33,200 | 11,000 | 11,000 | | | 87,000 | |
| Belgium | 5,900,000 | 222,000 | 5,780,000 ^r | 343,000 | 186,000 | 1,910,000 | |
| Brazil | 136,000 | 7,890 | 132,000 | 36,700 | 39,800 | 195,000 | |
| Cambodia | 29,900 | 8,300 ^r | 29,900 ^r | | | 5,000 | |
| Canada | 782,000 | 18,500 | 782,000 | 18,700 | 19,600 | 371,000 | |
| Chile | 1,230,000 | | 1,080,000 r | | | 98,400 | |
| China | 1,510,000 | | 1,510,000 | 65,800 | 182,000 | 267,000 | |
| Germany | | | | | | 5,700 | |
| Hong Kong | | | | | | 1,680 | |
| India | 757,000 | 21,900 | 723,000 ^r | 91,900 | 22,200 | 460,000 | |
| Italy | | | | | 114 | 114 | |
| Japan | 4,340,000 | 297,000 ^r | 3,950,000 ^r | 209,000 | 151,000 | 3,200,000 | |
| Korea, Republic of | 1,480,000 | 70,800 ^r | 1,360,000 ^r | 63,800 | 93,800 | 681,000 | |
| Latvia | | | | | | 1,140 | |
| Lithuania | 1,900 | | 1,900 | | | | |
| Mexico | 3,350,000 | 162,000 | 3,270,000 | 157,000 | 178,000 | 1,800,000 | |
| Netherlands | 27,700,000 | 1,990,000 ^r | 25,100,000 ^r | 1,600,000 | 2,790,000 | 25,800,000 | |
| South Africa | 3,810 | | 3,810 | | | 11,800 | |
| Taiwan | 3,130 | | 3,130 | | | 3,400 | |
| Thailand | | | | | 5,310 | 12,400 | |
| United Kingdom | 8,250,000 | 453,000 | 7,740,000 | 326,000 | 72,600 | 5,960,000 | |
| Vietnam | 369,000 | 145,000 | 336,000 ^r | 135,000 | 242,000 | 1,030,000 | |
| Total | 55,900,000 | 3,400,000 r | 51,900,000 ^r | 3,050,000 | 3,980,000 | 41,900,000 | |

^rRevised. -- Zero.

Source: U.S. Census Bureau.

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

 $\label{eq:table 3} \textbf{U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY OR LOCALITY}^1$

(Kilograms, contained molybdenum)

| | | 2021 | | 2022 | | | |
|---------------------|----------|----------|----------------------|---------|----------|----------|--|
| | January- | January– | | | January– | | |
| Country or locality | December | November | November | October | November | November | |
| Argentina | | | | | 85 | 547 | |
| Australia | 2,790 | 774 | 2,790 | | | 2,560 | |
| Canada | 217,000 | 15,700 | 211,000 ^r | 544 | 3,990 | 90,700 | |
| Denmark | 1,350 | 440 | 1,350 | | | 880 | |
| Mexico | 282,000 | | 282,000 | 73 | 10,000 | 92,600 | |
| Total | 504,000 | 17,000 | 497,000 ^r | 617 | 14,100 | 187,000 | |

Revised. -- Zero.

Source: U.S. Census Bureau.

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

 $\label{eq:table 4} \textbf{U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS}^1$

(Kilograms, unless otherwise specified)

| | 2021 | | | 2022 | | | | | |
|-------------------------------|------------------|------------|--------------------|-----------|------------|--------------------|------------------|------------|--------------------|
| | January-December | | | November | | | January-November | | |
| | Gross | Contained | Value ² | Gross | Contained | Value ² | Gross | Contained | Value ² |
| Material | weight | molybdenum | (thousands) | weight | molybdenum | (thousands) | weight | molybdenum | (thousands) |
| Ore and concentrates, roasted | 5,130,000 | 3,200,000 | \$89,700 | 230,000 | 142,000 | \$5,510 | 3,060,000 | 1,890,000 | \$68,900 |
| Ore and concentrates, other | 25,200,000 | 12,300,000 | 362,000 | 1,560,000 | 760,000 | 25,400 | 26,900,000 | 12,800,000 | 477,000 |
| Molybdenum chemicals: | - | | | | | | | | |
| Oxides and hydroxides | 3,770,000 | NA | 88,800 | 78,000 | NA | 2,230 | 3,290,000 | NA | 96,600 |
| Molybdates of ammonium | 1,610,000 | 907,000 | 32,400 | 47,100 | 26,500 | 1,070 | 1,350,000 | 762,000 | 33,100 |
| Molybdates (all others) | 182,000 | 72,100 | 2,540 | 46,100 | 18,300 | 741 | 314,000 | 125,000 | 5,180 |
| Molybdenum orange | 128,000 | NA | 1,010 | 33,200 | NA | 197 | 146,000 | NA | 1,050 |
| Ferromolybdenum | 12,300,000 | 8,390,000 | 280,000 | 497,000 | 333,000 | 13,400 | 10,300,000 | 7,070,000 | 302,000 |
| Molybdenum powders | 216,000 | 201,000 | 9,900 | 16,600 | 13,100 | 936 | 237,000 | 231,000 | 13,300 |
| Molybdenum unwrought | 426,000 | 425,000 | 14,700 | 43,800 | 43,700 | 1,920 | 274,000 | 273,000 | 11,800 |
| Molybdenum waste and scrap | 2,030,000 | 1,810,000 | 62,600 | 129,000 | 97,800 | 4,730 | 1,760,000 | 1,420,000 | 62,500 |
| Molybdenum wire | 17,900 | NA | 2,010 | 1,510 | NA | 178 | 14,400 | NA | 1,770 |
| Molybdenum other | 190,000 | NA | 18,900 | 17,700 | NA | 2,130 | 178,000 | NA | 22,800 |
| Total | 51,200,000 | XX | 964,000 | 2,700,000 | XX | 58,500 | 47,800,000 | XX | 1,100,000 |

NA Not available. XX Not applicable.

Source: U.S. Census Bureau.

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

²Customs value.