MOLYBDENUM

(Data in metric tons, molybdenum content, unless otherwise specified)

Domestic Production and Use: Total estimated U.S. mine production of molybdenum concentrate increased by 18% to 40,000 tons of molybdenum content in 2025 compared with 34,000 tons in 2024. Molybdenum concentrate production at primary molybdenum mines continued at two operations in Colorado, and molybdenum concentrate production from mines where molybdenum was a byproduct continued at seven operations (four in Arizona and one each in Montana, Nevada, and Utah). Three roasting plants converted molybdenum concentrate to molybdic oxide, from which intermediate products, such as ferromolybdenum, metal powder, and various chemicals, were produced. Molybdenum is a refractory metallic element used principally as an alloying agent in cast iron, steel, and superalloys and is also used in numerous chemical applications, including catalysts, lubricants, and pigments.

Salient Statistics—United States:	2021	2022	2023	2024	2025[e]
Production, mine	41,100	34,600	34,000	34,000	40,000
Imports for consumption total:					
Ore and concentrates	15,500	15,700	16,200	14,700	17,000
Primary products	14,700	13,100	13,500	12,200	9,700
Exports:					
Ore and concentrates[1]	33,900	26,900	29,200	26,900	27,000
Primary products	4,150	4,860	4,230	5,890	6,500
Consumption:					
Reported[2]	16,100	15,800	[e]16,000	[e]17,000	18,000
Apparent[3]	33,100	31,500	30,700	28,500	34,000
Price, average, dollars per kilogram[4]	35.62	41.72	54.32	47.72	51
Stocks, consumer materials	2,040	2,040	[e]1,900	[e]1,900	2,000
Net import reliance[5] as a percentage of apparent consumption	E	E	E	E	E

Recycling: Molybdenum is recycled as a component of catalysts, ferrous scrap, and superalloy scrap. Revert scrap comes from steelmaking remnants, new scrap is generated by steel mill customers and recycled by processors, and old scrap consists of molybdenum-bearing alloys recycled after their service life. The amount of molybdenum recycled as part of new and old steel and other scrap may be as much as 30% of the apparent supply of molybdenum. There are no separate recovery processes for the refining of secondary molybdenum from its alloys, but the molybdenum content of the recycled alloys is significant and reused.

Import Sources (2021–24): Ferromolybdenum: Chile, 74%; Republic of Korea, 21%; United Kingdom, 4%; and other, 1%. Molybdenum ore and concentrates: Peru, 69%; Mexico, 15%; Chile, 12%; and Canada, 4%. Total: Chile, 36%; Peru, 35%; Mexico, 8%; Republic of Korea, 7%; and other, 14%.

Tariff: Item	Number	Normal Trade Relations 12–31–25
Molybdenum ore and concentrates, roasted	2613.10.0000	12.8¢/kg on molybdenum content + 1.8% ad valorem.
Molybdenum ore and concentrates, other	2613.90.0000	17.8¢/kg on molybdenum content.
Molybdenum chemicals:		
Molybdenum oxides and hydroxides	2825.70.0000	3.2% ad valorem.
Molybdates of ammonium	2841.70.1000	4.3% ad valorem.
Molybdates, all others	2841.70.5000	3.7% ad valorem.
Molybdenum pigments, molybdenum orange	3206.20.0020	3.7% ad valorem.
Ferroalloys, ferromolybdenum	7202.70.0000	4.5% ad valorem.
Molybdenum metals:		
Powders	8102.10.0000	9.1¢/kg on molybdenum content + 1.2% ad valorem.
Unwrought	8102.94.0000	13.9¢/kg on molybdenum content + 1.9% ad valorem.
Wrought bars and rods	8102.95.3000	6.6% ad valorem.
Wrought plates, sheets, strips, and so forth	8102.95.6000	6.6% ad valorem.
Wire	8102.96.0000	4.4% ad valorem.
Waste and scrap	8102.97.0000	Free.
Other	8102.99.0000	3.7% ad valorem.

Depletion Allowance: 22% (domestic), 14% (foreign).

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MOLYBDENUM

Government Stockpile: None.

Events, Trends, and Issues: In 2025, the estimated average U.S. molybdic oxide price decreased by 7% compared with that in 2024. Estimated U.S. total imports for consumption of molybdenum were 27,000 tons compared with 26,900 tons in 2024. Estimated U.S. total exports increased by 1% compared with those in 2024. Estimated apparent consumption in 2025 increased by 18% compared with that in 2024. Estimated global molybdenum production in 2025 increased by 2% from that in 2024, with China, Chile, the United States, Peru, and Mexico, in descending order of production, accounting for 90% of total global production. Only China and the United States produced molybdenum from both primary molybdenum mines and byproduct copper mines; the other countries relied on byproduct copper production. Rising molybdenum consumption has led many copper producers to upgrade facilities to extract molybdenite from existing deposits, helping offset supply risks from aging mines and declining ore grades. Global molybdenum consumption was expected to remain strong as countries continued to invest in renewable energy infrastructure. A Canadian company remained on schedule to restart its idled molybdenum mine in Idaho during the second half of 2027 and continued its progressive rampup to full capacity production at its molybdenum-processing facility in Pennsylvania. The Government of China imposed export controls on molybdenum powders in February 2025, prompting the United States and other countries to seek alternative sources.

World Mine Production and Reserves: Significant revisions were made to the 2024 production for Australia and Canada based on company and Government reports. Reserves data for Australia, Chile, China, North Korea, and Peru were revised based on company and Government reports.

	Mine production		Reserves[6]
	2024	2025[e]	(thousand metric tons)
United States	34,000	40,000	3,500
Armenia	[e]8,200	5,300	150
Australia	600	1,000	[7]760
Canada	1,540	2,200	64
Chile	38,500	42,000	2,600
China	[e]100,000	97,000	7,800
Iran	[e]2,900	3,300	43
Kazakhstan	4,080	4,300	7
Korea, North	[e]800	800	78
Korea, Republic of	340	500	8
Mexico	16,200	17,000	130
Mongolia	3,110	4,200	10
Peru	41,900	39,000	1,000
Russia	[e]1,500	1,300	1,100
Uzbekistan	[e]2,100	2,000	21
Other countries	—	—	150
World total (rounded)	256,000	260,000	17,000

World Resources:[6] Identified resources of molybdenum in the United States are about 5.4 million tons and, in the rest of the world, about 20 million tons. Molybdenum occurs as the principal metal sulfide in large low-grade porphyry molybdenum deposits and as an associated metal sulfide in low-grade porphyry copper deposits. Resources of molybdenum are adequate to supply world needs for the foreseeable future.

Substitutes: There is little substitution for molybdenum in its major application in steels and cast irons. In fact, because of the availability and versatility of molybdenum, industry has sought to develop new materials that benefit from its alloying properties. Potential substitutes include boron, chromium, niobium (columbium), and vanadium in alloy steels; tungsten in tool steels; graphite, tantalum, and tungsten for refractory materials in high-temperature electric furnaces; and cadmium-red, chrome-orange, and organic-orange pigments for molybdenum orange.

[e]Estimated. E Net exporter. — Zero.

[1]Molybdenum content of exports of molybdenum ores and concentrates was estimated based on U.S. Census Bureau unit values.

[2]Reported consumption of primary products.

[3]Defined as production + imports – exports ± adjustments for all industry stock changes.

[4]U.S. molybdic oxide (MoO_3) price, 57% molybdenum content. Source: Argus Media group, Argus Non-Ferrous Markets.

[5]Defined as imports – exports ± adjustments for industry stock changes.

[6]See Appendix C for resource and reserve definitions and information concerning data sources.

[7]For Australia, Joint Ore Reserves Committee-compliant or equivalent reserves were 260,000 tons.