

## LITHIUM

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

**Domestic Production and Use:** Commercial-scale lithium production in the United States was from a continental brine operation in Nevada. Two companies produced a wide range of downstream lithium compounds in the United States from domestic or imported lithium carbonate, lithium chloride, and lithium hydroxide. Domestic production data were withheld to avoid disclosing company proprietary data.

Although lithium uses vary by location, global end uses were estimated as follows: batteries, 88%; ceramics and glass, 4%; lubricating greases, 2%; air treatment, 1%; continuous casting mold flux powders, 1%; medical, 1%; and other uses, 3%. Lithium consumption for batteries increased significantly owing to the use of rechargeable lithium batteries in the growing market for electric vehicles (EVs), energy grid storage applications, portable electronic devices, and electric tools. Lithium minerals were used directly as mineral concentrates in ceramics and glass applications.

<b>Salient Statistics—United States:</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025<sup>e</sup></b>
Production	W	W	W	W	W
Imports for consumption	2,640	3,260	3,390	3,020	3,800
Exports	1,870	2,440	1,960	1,690	2,000
Consumption, apparent <sup>1</sup>	W	W	W	W	W
Price, annual average-real, battery-grade lithium carbonate, dollars per metric ton <sup>2</sup>	11,700	63,700	39,000	11,800	9,000
Employment, mine and mill, number	70	70	70	70	70
Net import reliance <sup>3</sup> as a percentage of apparent consumption	>25	>25	>50	>50	>50

**Recycling:** Construction of lithium battery recycling plants continued throughout 2025. Automobile companies and battery recyclers partnered to supply the automobile industry with a source of battery materials.

**Import Sources (2021–24):** Chile, 54%; Argentina, 43%; and other, 3%.

<b>Tariff:</b> Item	<b>Number</b>	<b>Normal Trade Relations 12–31–25</b>
Lithium oxide and hydroxide	2825.20.0000	3.7% ad valorem.
Lithium carbonate:		
U.S. pharmaceutical grade	2836.91.0010	3.7% ad valorem.
Other	2836.91.0050	3.7% ad valorem.

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

**Government Stockpile:** Not available.

**Events, Trends, and Issues:** Excluding U.S. production, worldwide lithium production in 2025 increased by 31% to approximately 290,000 tons from 222,000 tons in 2024 in response to strong demand from the lithium-ion battery market, high lithium prices from 2021 to early 2023, and an increase in global lithium production capacity. Global consumption of lithium in 2025 was estimated to be 263,000 tons, a 20% increase from consumption of 220,000 tons in 2024. Concern about a short-term lithium oversupply kept prices low during the first half of 2025. However, considerable EV sales growth in China and Europe and increased demand for battery energy storage systems contributed to lithium price increases during the second half of 2025.

Spot lithium carbonate prices in China [cost, insurance, and freight (c.i.f.)] increased from approximately \$9,300 per ton in January to approximately \$10,300 per ton in November. For fixed contracts, the annual average U.S. lithium carbonate price was \$9,000 per ton in 2025, a decrease of 31% from that in 2024. Spot lithium hydroxide prices in China [free on board (f.o.b.)] increased from approximately \$10,300 per ton in January to approximately \$11,200 per ton in November. Spodumene (6% lithium oxide) prices in Australia (f.o.b.) increased from approximately \$800 per ton in January to approximately \$970 per ton in November.

Four brine operations in Argentina, seven mineral operations in Australia, one mineral operation in Brazil, two mineral operations in Canada, two brine operations Chile, nine mineral and six brine operations in China, two mineral operations in Mali, and five mineral operations in Zimbabwe accounted for the majority of world lithium production. Additionally, smaller operations in Argentina, Brazil, China, Portugal, and the United States also contributed to world lithium production. Namibia temporarily removed from mine production owing to legal uncertainties. Despite some lithium producers reducing output or expansion projects being postponed in 2025 owing to low prices, significant production capacity expansions took place in Argentina, Brazil, Canada, Chile, China, Mali, the United States, and Zimbabwe.

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Lithium supply security has become a priority for technology companies in Asia, Europe, and North America. Strategic alliances and joint ventures among technology companies and exploration companies continued to be established to ensure a reliable, diversified supply of lithium for battery suppliers and vehicle manufacturers. Brine-based lithium sources were in various stages of development or exploration in Argentina, Bolivia, Canada, Chile, China, and the United States; mineral-based lithium sources were in various stages of development or exploration in Australia, Austria, Brazil, Canada, China, Congo (Kinshasa), Czechia, Ethiopia, Finland, France, Germany, Ghana, India, Iran, Kazakhstan, Mali, Namibia, Nigeria, Peru, Portugal, Russia, Rwanda, Serbia, Spain, Thailand, Turkey, the United Kingdom, the United States, and Zimbabwe; lithium-clay sources were in various stages of development or exploration in Mexico and the United States.

**World Mine Production and Reserves:** Significant revisions were made to the 2024 production for Argentina based on company reports and for Mali based on two new operations started in 2024. Reserves for Argentina, Australia, Brazil, Canada, Chile, China, the United States, and Zimbabwe were revised based on company and Government reports.

	Mine production <sup>e</sup>		Reserves <sup>4</sup>
	2024	2025	
United States	W	W	4,400,000
Argentina	<sup>5</sup> 13,800	23,000	4,400,000
Australia	82,700	92,000	<sup>6</sup> 8,400,000
Brazil	10,200	12,000	540,000
Canada	4,820	5,600	1,600,000
Chile	<sup>5</sup> 48,900	56,000	9,200,000
China	41,400	62,000	4,600,000
Mali	770	9,400	370,000
Portugal	380	380	60,000
Zimbabwe	20,000	28,000	500,000
Other countries <sup>7</sup>	—	—	2,400,000
World total (rounded)	<sup>8</sup> 222,000	<sup>8</sup> 290,000	37,000,000

**World Resources:**<sup>4</sup> Owing to continuing exploration, measured and indicated lithium resources have increased substantially worldwide and total about 150 million tons. Measured and indicated lithium resources in the United States—from continental brines, claystone, geothermal brines, hectorite, oilfield brines, and pegmatites—are 30 million tons. Measured and indicated lithium resources in other countries have been revised to 120 million tons. Resources are distributed as follows: Argentina, 28 million tons; Bolivia, 23 million tons; Chile, 13 million tons; Australia, 10 million tons; China, 10 million tons; Germany, 8.9 million tons; Canada, 8.1 million tons; Congo (Kinshasa), 3 million tons; Mexico, 1.7 million tons; Brazil, 1.4 million tons; Czechia, 1.3 million tons; Mali, 1.2 million tons; Serbia, 1.2 million tons; France, 1 million tons; Peru, 1 million tons; Russia, 1 million tons; Zimbabwe, 860,000 tons; Spain, 320,000 tons; Portugal, 260,000 tons; Namibia, 230,000 tons; Ghana, 200,000 tons; United Kingdom, 61,000 tons; Austria, 60,000 tons; Finland, 55,000 tons; and Kazakhstan, 45,000 tons.

**Substitutes:** Substitution for lithium compounds is possible in batteries, ceramics, greases, and manufactured glass. Examples are calcium, magnesium, mercury, and zinc as anode material in primary batteries; calcium and aluminum soaps as substitutes for stearates in greases; and sodic and potassic fluxes in ceramics and glass manufacture.

<sup>e</sup>Estimated. W Withheld to avoid disclosing company proprietary data. — Zero.

<sup>1</sup>Defined as production + imports – exports ± adjustments for industry stock changes.

<sup>2</sup>Lithium carbonate price assessments for spot and long-term contracts. Source: Benchmark Mineral Intelligence Ltd.

<sup>3</sup>Defined as imports – exports ± adjustments for industry stock changes.

<sup>4</sup>See Appendix C for resource and reserve definitions and information concerning data sources.

<sup>5</sup>Reported.

<sup>6</sup>For Australia, Joint Ore Reserves Committee-compliant or equivalent reserves were 5.1 million tons.

<sup>7</sup>Other countries with reported reserves include Austria, Congo (Kinshasa), Czechia, Finland, Germany, Ghana, Mexico, Namibia, Serbia, and Spain.

<sup>8</sup>Excludes U.S. production.