BROMINE

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

Domestic Production and Use: Bromine was recovered from underground brines by two companies in Arkansas. Bromine is one of the leading mineral commodities, in terms of value, produced in Arkansas. The two bromine companies in the United States account for a large percentage of world production capacity.

The leading global applications of bromine are for the production of brominated flame retardants (BFRs) and clear brine drilling fluids. Bromine compounds also are used in a variety of other applications, including industrial uses, as intermediates, and for water treatment. U.S. apparent consumption of bromine in 2025 was estimated to be less than that in 2024.

Salient Statistics—United States:	2021	2022	2023	2024	2025[e]
Production	W	W	W	W	W
Imports for consumption, elemental bromine and compounds[1]	27,200	36,500	50,800	58,300	40,000
Exports, elemental bromine and compounds[2]	27,900	19,400	38,900	33,800	33,000
Consumption, apparent[3]	W	W	W	W	W
Price, average unit value of imports (cost, insurance, and freight), dollars per kilogram, bromine content	2.85	3.29	2.92	2.70	3.00
Employment, number[e]	1,100	1,100	1,100	1,100	1,100
Net import reliance[4] as a percentage of apparent consumption	E	<25	<25	<25	<25

Recycling: Some bromide solutions were recycled to obtain elemental bromine and to prevent the solutions from being disposed of as hazardous waste. For example, hydrogen bromide is emitted as a byproduct of several organic reactions; this byproduct can be recycled with virgin bromine brines and used as a source of bromine production. Bromine contained in plastics, such as BFRs, can be difficult and costly to remove because the BFR is often bound to the polymer or resin matrix; therefore, bromine will often be recycled via the parent polymer with the polymer used again in new products. The stability of BFRs may reduce or eliminate the need for incorporating additional flame retardants into new products made from recycled plastic because the recycled plastic may meet the same levels of fire safety as the virgin material. However, this stability may lead to the unintentional reintroduction of bromine or BFRs into new plastic product cycles. Bromine used in zinc-bromine batteries can be removed and completely recovered as bromine at the battery's end of life, purified, and used for new batteries. Available information was insufficient to estimate the quantity of bromine recovered and recycled.

Import Sources (2021–24):[5] Israel, 83%; Jordan, 12%; China,[6] 3%; and other, 2%.

Tariff: Item	Number	Normal Trade Relations 12–31–25
Bromine	2801.30.2000	5.5% ad valorem.
Hydrobromic acid	2811.19.3000	Free.
Potassium or sodium bromide	2827.51.0000	Free.
Ammonium, calcium, or zinc bromide	2827.59.2500	Free.
Potassium bromate	2829.90.0500	Free.
Sodium bromate	2829.90.2500	Free.
Methyl bromide[7]	2903.61.0000	Free.
Ethylene dibromide[8]	2903.62.1000	5.4% ad valorem.
Dibromoneopentylglycol	2905.59.3000	Free.
Tetrabromobisphenol A	2908.19.2500	5.5% ad valorem.
Decabromodiphenyl and octabromodiphenyl oxide	2909.30.0700	5.5% ad valorem.

Depletion Allowance: Brine wells, 5% (domestic and foreign).

Government Stockpile: None.

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BROMINE

Events, Trends, and Issues: The United States maintained its position as one of the leading bromine producers in the world along with China, Israel, and Jordan. In 2025, estimated total imports of bromine and bromine compounds (bromine content) decreased by about 30% from those in 2024, and the leading source of imports of bromine and bromide compounds (gross weight) through July 2025 was Israel (89%), followed by Jordan (6%). The average annual unit value of imported bromine and bromine compounds (bromine content) was approximately $3.00 per kilogram, which was 12% more than that in 2024. Together, the leading imported bromine products in terms of both gross weight and bromine content were bromides and bromide oxides of ammonium, calcium, or zinc and bromides of sodium or potassium, accounting for almost 90% of total imported bromine.

In 2025, estimated total exports (bromine content) decreased slightly compared with those in 2024, and the leading destinations for exports (gross weight) through July 2025 were Guyana (43%) and Saudi Arabia (20%). The average annual unit value of exported bromine and bromine compounds (bromine content) was approximately $3.20 per kilogram, slightly more than that in 2024.

Bromine production in Jordan continued without interruption from ongoing regional conflicts and achieved record production in the first half of 2025.

World Production and Reserves: Production in 2024 for Israel was revised significantly based on a Government report.

	Production[e]		Reserves[9]
	2024	2025	
United States	W	W	11,000,000
China	100,000	90,000	130,000
India	7,000	7,000	NA
Israel	[10]190,000	200,000	Large
Japan	20,000	20,000	NA
Jordan	[10]112,000	110,000	360,000
Ukraine	11,000	6,000	NA
World total (rounded)	[11]440,000	[11]430,000	Large

World Resources:[9] Bromine is found principally in seawater, evaporitic (salt) lakes, and underground brines associated with petroleum deposits. Seawater contains about 65 parts per million bromine, or an estimated 100 trillion tons. The Dead Sea, in the Middle East, is estimated to contain 1 billion tons of bromine. Bromine also is recovered from seawater as a coproduct during evaporation to produce salt.

Substitutes: Chlorine and iodine may be substituted for bromine in a few chemical reactions and for sanitation purposes. There are no comparable substitutes for bromine in various oil- and gas-well-completion and packer applications. Because plastics have a low ignition temperature, aluminum hydroxide, magnesium hydroxide, organic chlorine compounds, and phosphorus compounds can be substituted for bromine as fire retardants in some uses.

[e]Estimated. E Net exporter. NA Not available. W Withheld to avoid disclosing company proprietary data.

[1]Includes data for the Harmonized Tariff Schedule of the United States codes shown in the "Tariff" section.

[2]Includes data for the following Schedule B numbers: 2801.30.2000, 2827.51.0000, and 2827.59.0000 (for the years 2021–25); 2903.31.0000 and 2903.39.1520 (for 2021); and 2903.61.0000 and 2903.62.1000 (for the years 2022–25).

[3]Defined as production (sold or used) + imports – exports.

[4]Defined as imports – exports.

[5]Calculated using the gross weight of imports.

[6]Includes Hong Kong.

[7]Prior to 2022, was listed under Harmonized Tariff Schedule of the United States code 2903.39.1520.

[8]Prior to 2022, was listed under Harmonized Tariff Schedule of the United States code 2903.31.0000.

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

[10]Reported.

[11]Excludes U.S. production.