ASBESTOS

(Data in metric tons unless otherwise specified)

Domestic Production and Use: The last U.S. producer of asbestos ceased operations in 2002 as a result of the decline in domestic and international asbestos use associated with health and liability issues. Since then, the United States has been wholly dependent on imports to meet manufacturing needs. All of the unmanufactured asbestos fiber imported into and used within the United States has consisted of chrysotile since no later than 1999. In 2024, domestic consumption of chrysotile was estimated to be 110 tons; all consumption was from stockpiles, as no chrysotile was imported. The chloralkali industry, which uses chrysotile in nonreactive semipermeable diaphragms that prevent chlorine generated at the anode of an electrolytic cell from reacting with sodium hydroxide generated at the cathode, has accounted for 100% of U.S. asbestos fiber consumption since no later than 2015. In addition to unmanufactured asbestos fiber, an unknown quantity of asbestos is imported annually within manufactured products. According to the U.S. Environmental Protection Agency (EPA), the only imported items known to contain asbestos are aftermarket automotive brakes and linings and other vehicle friction products, brake blocks used in the oil industry, and sheet and other gaskets.[1]

Salient Statistics—United States:[2]	2020	2021	2022	2023	2024[e]
Imports for consumption[3]	305	41	224	—	—
Exports[4]	—	—	—	—	—
Consumption, estimated[5]	450	310	290	150	110
Price, average U.S. customs unit value of imports, dollars per ton	2,110	1,880	2,630	NA	NA
Net import reliance[6] as a percentage of estimated consumption	100	100	100	100	100

Recycling: None.

Import Sources (2020–23): Brazil, 91%; and Russia, 9%. The U.S. Census Bureau reported imports from China and Poland during this time period, but bill of lading information, data reported by the Government of China, and an asbestos ban in Poland suggest that these shipments were misclassified.

Tariff: Item	Number	Normal Trade Relations 12–31–24
Crocidolite	2524.10.0000	Free.
Amosite	2524.90.0010	Free.
Chrysotile:		
Crudes	2524.90.0030	Free.
Milled fibers, group 3 grades	2524.90.0040	Free.
Milled fibers, group 4 and 5 grades	2524.90.0045	Free.
Other	2524.90.0055	Free.
Other, asbestos	2524.90.0060	Free.

Depletion Allowance: 22% (domestic), 10% (foreign).

Government Stockpile: None.

Events, Trends, and Issues: Consumption of unmanufactured asbestos fiber in the United States has decreased significantly during the past several decades, from a record high of 803,000 tons in 1973 to 500 tons or less in each year since 2018. This decline has taken place as a result of health and liability issues associated with asbestos use, leading to the displacement of asbestos from traditional domestic markets by substitutes, alternative materials, and new technology. The chloralkali industry is the only remaining U.S. consumer of asbestos in mineral form.

In March 2024, the EPA issued a final rule[1] that will prohibit the commercial use, distribution in commerce, import, manufacturing, and processing of chrysotile for all chrysotile-containing products that are still used in the United States: aftermarket automotive brakes and linings and other vehicle friction products, diaphragms used in the chloralkali industry, oilfield brake blocks, and sheet and other gaskets. Imports of chrysotile for use in the chloralkali industry were banned as of May 28, the effective date of the new regulation. The remaining eight chloralkali plants that use asbestos diaphragms will be required to transition to alternative materials; six of these facilities were expected to complete this conversion within 5 years, and the other two were projected to follow at a later date. The EPA ordered most other uses of asbestos to cease from 6 months to 2 years after the effective date of the rule. Asbestos-containing sheet gaskets used to produce titanium dioxide and in the processing of nuclear material will have a 5-year phaseout, and the U.S. Department of Energy's Savannah River site will be permitted to use asbestos-containing sheet gaskets in the disposal of nuclear materials through 2037. In 2019, the EPA banned all discontinued

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uses of asbestos from restarting without the EPA having an opportunity to evaluate each intended use and take any necessary regulatory action. Consequently, the March 2024 rule will effectively prohibit all uses of asbestos in the United States as of the compliance date for each specific application.

Globally, asbestos is used predominantly in cement pipe, roofing sheets, and other construction materials in Asia. Worldwide consumption of unmanufactured asbestos fiber ranged from an estimated 1.1 million to 1.4 million tons per year from 2015 through 2024, a significant decrease from approximately 2 million tons in 2000, and will likely remain steady for the foreseeable future.

World Mine Production and Reserves: In addition to the countries listed, Zimbabwe may have produced asbestos from old mine tailings; information on the status of these operations was unavailable.

	Mine production		Reserves[7]
	2023	2024[e]	
United States	—	—	Small
Brazil	[8]189,000	160,000	11,000,000
China	[e]200,000	200,000	18,000,000
Kazakhstan	255,000	210,000	Large
Russia	600,000	600,000	110,000,000
World total (rounded)	1,240,000	1,200,000	Large

World Resources:[7] Reliable evaluations of global asbestos resources have not been published recently, and available information was insufficient to make accurate estimates for many countries. However, world resources are large and more than adequate to meet anticipated demand in the foreseeable future. Resources in the United States are composed mostly of short-fiber asbestos for which use in asbestos-based products is more limited than long-fiber asbestos.

Substitutes: Numerous materials substitute for asbestos, including calcium silicate, carbon fiber, cellulose fiber, ceramic fiber, glass fiber, steel fiber, wollastonite, and several organic fibers, such as aramid, polyethylene, polypropylene, and polytetrafluoroethylene. Several nonfibrous minerals or rocks, such as perlite, serpentine, silica, and talc, are also considered to be possible asbestos substitutes for products in which the reinforcement properties of fibers are not required. Membrane cells and mercury cells are alternatives to asbestos diaphragms used in the chloralkali industry.

[e]Estimated. NA Not available. — Zero.

[1]Source: U.S. Environmental Protection Agency, 2024, Asbestos part 1—Chrysotile asbestos—Regulation of certain conditions of use under the Toxic Substances Control Act (TSCA): Federal Register, v. 89, no. 61, March 28, p. 21970–22010. (Accessed October 15, 2024, at https://www.govinfo.gov/content/pkg/FR-2024-03-28/pdf/2024-05972.pdf.)

[2]Includes unmanufactured asbestos fiber (chrysotile) only; excludes asbestos contained in manufactured products.

[3]Modified from reported U.S. Census Bureau data. Additional chrysotile imports from China were reported in 2021 (59 tons) and 2022 (99 tons), but bill of lading information and data reported by the Government of China suggest that these shipments were misclassified. The U.S. Census Bureau also reported imports of 2 tons from Poland in 2023 and 4 tons from Germany through August 2024, but asbestos bans in these countries suggest that these shipments were misclassified.

[4]Exports of unmanufactured asbestos fiber were reported by the U.S. Census Bureau in each year from 2020 through 2024 but these shipments likely consisted of materials misclassified as asbestos, reexports, and (or) waste products because asbestos has not been mined in the United States since 2002.

[5]To account for year-to-year fluctuations in chrysotile imports owing to cycles of companies replenishing and drawing down stockpiles, consumption was estimated as a 5-year rolling average of imports for consumption. Information regarding the quantity of industry stocks was unavailable.

[6]Defined as imports – exports. The United States has been 100% import reliant since 2002. All domestic consumption of chrysotile was from imports and unreported inventories.

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

[8]Export sales reported by the only producer of asbestos in Brazil. In February 2023, the Supreme Federal Court of Brazil confirmed a 2017 judgment that the extraction, sale, and use of asbestos were unconstitutional. Despite the ruling, a company in Brazil continued to mine asbestos, citing the authority of a State law that authorized extraction and processing for export purposes.

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