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. Domestic consumption of chrysotile was estimated to be 150 tons in 2023; all consumption was from stockpiles, as no chrysotile was imported based on data available through September. 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 as of 2020 were brake blocks for use in the oil industry, preformed gaskets used in the exhaust system of a specific type of utility vehicle, rubber sheets for gasket fabrication (primarily used to create a chemical containment seal in the production of titanium dioxide), and some vehicle friction products.[1]

Salient Statistics—United States:[2]	2019	2020	2021	2022	2023[e]
Imports for consumption[3]	172	305	41	224	([4])
Exports[5]	—	—	—	—	—
Consumption, estimated[6]	450	450	310	290	150
Price, average U.S. customs unit value of imports, dollars per ton	1,570	2,110	1,880	2,630	—
Net import reliance[7] as a percentage of estimated consumption	100	100	100	100	100

Recycling: None.

Import Sources (2019–22): Brazil, 70%; and Russia, 30%. 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 12–31–23
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 domestic consumer of asbestos in mineral form. In 2023, asbestos diaphragms were used in eight chloralkali plants in the United States, three of which were in the process of transitioning to alternative materials.

In April 2022, the EPA proposed a rule that would ban 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. The prohibitions on asbestos diaphragms and sheet gaskets would take effect 2 years after the effective date of the final rule, and the prohibitions on other items would take effect 180 days after finalization. The EPA announced in July 2023 that it planned to issue the final rule by yearend. In 2019, the EPA banned all discontinued uses of asbestos from restarting without the EPA having an opportunity to evaluate each intended use and take any necessary regulatory action. Once finalized, the rule proposed in April 2022 would effectively prohibit all uses of asbestos in the United States.

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ASBESTOS

In July 2023, the EPA finalized reporting requirements for asbestos under the Toxic Substances Control Act of 1976. Companies that imported, manufactured, or processed asbestos from 2019 through 2022 and sold more than $500,000 worth of products in any of those years would be required to disclose to the EPA the quantity of asbestos manufactured or processed and the types of products in which the asbestos was used by no later than May 2024. The rule applied to all types of unmanufactured asbestos fiber and asbestos-containing manufactured products, including articles that contained asbestos as an impurity.

Estimated worldwide consumption of unmanufactured asbestos fiber ranged from 1.1 million to 1.3 million tons per year from 2015 through 2023, a significant decrease from approximately 2 million tons in 2000. Global demand for asbestos will likely continue for the foreseeable future, particularly for use in cement pipe, roofing sheets, and other construction materials in Asia.

World Mine Production and Reserves: Reserves for China were revised based on Government reports.

	Mine production[e]		Reserves[8]
	2022	2023	
United States	—	—	Small
Brazil	[9, 10]197,100	190,000	11,000,000
China	130,000	200,000	18,000,000
Kazakhstan	[9]250,100	260,000	Large
Russia	750,000	630,000	110,000,000
World total (rounded)	1,330,000	1,300,000	Large

World Resources:[8] 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. — Zero.

[1]Source: U.S. Environmental Protection Agency, 2020, Risk evaluation for asbestos part I—Chrysotile asbestos: Washington, DC, EPA Document no. EPA–740–R1–8012, December, 352 p.

[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. In 2023, imports of 2 tons from Poland were reported as of the end of September, but an asbestos ban in Poland suggests that these shipments were also misclassified.

[4]No chrysotile was imported into the United States during the first 9 months of 2023. Final 2023 imports may differ significantly from the provided estimate because chrysotile imports typically do not follow a predictable pattern throughout the year.

[5]Exports of unmanufactured asbestos fiber were reported by the U.S. Census Bureau but not listed in the Salient Statistics because those 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.

[6]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.

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

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

[9]Reported.

[10]Asbestos production in Brazil was permitted for export purposes only. The value shown is reported country exports of asbestos because production data were unavailable.

U.S. Geological Survey, Mineral Commodity Summaries, January 2024