ASBESTOS

(Data in metric tons unless otherwise noted)

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 markets associated with health and liability issues. The United States has since been wholly dependent on imports to meet manufacturing needs. In 2018, all of the asbestos minerals imported into and used within the United States consisted of chrysotile and were predominantly shipped from Brazil. Domestic consumption of asbestos minerals in 2018 was estimated to be 750 tons. Actual consumption of asbestos may have been lower owing to stockpiling by companies for future use, but information regarding industry stocks was unavailable. The chloralkali industry, which uses asbestos to manufacture semipermeable diaphragms that prevent chlorine generated at the anode of an electrolytic cell from reacting with sodium hydroxide generated at the cathode, accounted for 100% of asbestos mineral consumption in 2018, based on bill of lading information obtained from a commercial trade database. In addition to asbestos minerals, an unknown quantity of asbestos was imported within manufactured products, including asbestos-containing brake materials, rubber sheets for gaskets, tile, wallpaper, and potentially asbestos-cement pipe and knitted fabrics.

Salient Statistics—United States:	**2014**	**2015**	**2016**	**2017**	**2018[e]**
Imports for consumption	406	325	747	332	[1]750
Exports[2]	—	—	—	—	—
Consumption, estimated[3]	406	325	747	332	750
Price, average U.S. Customs value, dollars per ton	1,830	1,880	1,910	1,870	1,900
Net import reliance[4] as a percentage of estimated consumption	100	100	100	100	100

Recycling: None.

Import Sources (2014–17): Brazil, >99%; and Russia, <1%.

Tariff: Item	**Number**	**Normal Trade Relations 12–31–18**
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 asbestos minerals in the United States has decreased during the past several decades, falling from a record high of 803,000 tons in 1973 to a record low of 325 tons in 2015. Annual consumption has since varied between roughly 330 tons and 750 tons. 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 accounted for all domestic consumption of asbestos minerals in 2018 compared with an estimated 35% in 2010.

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Published by AsbestosClaims.Law
asbestosclaims.law/library/10967/1

ASBESTOS

Estimated worldwide consumption of asbestos minerals decreased from approximately 2 million tons in 2010 to slightly less than 1 million tons in 2017. Asbestos-cement products are expected to continue to be the leading global market for asbestos.

According to multiple news agencies, the Supreme Federal Court of Brazil enacted a comprehensive national ban on asbestos in November 2017. However, company documents indicate that the only asbestos producer in the country continued to operate during 2018. Pending a further court ruling, the company disputed the national nature of the ban and considered asbestos to be legal in those States without explicit laws that disallow its production, use, or exportation. Brazil accounted for an estimated 14% of global asbestos production and an estimated 7% of global asbestos mineral consumption in 2017.

The Frank R. Lautenberg Chemical Safety for the 21st Century Act, which amended the Toxic Substances Control Act of 1976, was signed into law in 2016. The legislation granted the U.S. Environmental Protection Agency (EPA) greater authority to evaluate the hazards posed by new chemicals as well as those already in the marketplace. In 2018, the EPA finalized the end uses and exposure pathways that will be considered in its asbestos evaluation and proposed a rule that would require manufacturers and importers to obtain EPA approval before starting or resuming the importation or processing of asbestos.

World Mine Production and Reserves: Two former asbestos mines in Zimbabwe were potentially in the process of restarting during 2018, but information regarding the status and production of these operations was unavailable. Reserves for Brazil were revised based on information from Government and industry sources.

	Mine production		Reserves[5]
	2017	2018[e]	
United States	—	—	Small
Brazil	[e]160,000	100,000	12,000,000
China	125,000	100,000	96,000,000
Kazakhstan	193,000	220,000	Large
Russia	[e]690,000	650,000	110,000,000
World total (rounded)	1,170,000	1,100,000	Large

World Resources: Reliable evaluations of global asbestos resources have not been published recently, and the available information is 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. Substitutes include 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. For the chloralkali industry, membrane cell technology is one alternative to asbestos diaphragms.

[e]Estimated. — Zero.

[1]According to the U.S. Census Bureau and bill of lading information from a commercial trade database, U.S. imports of asbestos minerals (chrysotile) totaled approximately 540 tons through August 2018. Final 2018 imports may differ significantly from the provided estimate because imports of chrysotile typically do not follow a predictable pattern throughout the year.

[2]Exports of asbestos reported by the U.S. Census Bureau were 279 tons in 2014, 517 tons in 2015, 587 tons in 2016, 143 tons in 2017, and an estimated 490 tons in 2018. These shipments likely consisted of materials misclassified as asbestos, reexports, and (or) waste products because the United States no longer mines asbestos.

[3]Assumed to equal imports.

[4]Defined as imports – exports.

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

U.S. Geological Survey, Mineral Commodity Summaries, February 2019