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 2019, all of the asbestos minerals imported into and used within the United States consisted of chrysotile and were shipped from Russia. Domestic consumption of chrysotile in 2019 was estimated to be 100 tons, based on import data available through August. Actual consumption may have been higher owing to companies drawing from stockpiles, 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 consumption in 2019, based on bill of lading information from a commercial trade database. In addition to asbestos minerals, a small, but unknown, quantity of asbestos was imported within manufactured products, including brake blocks for use in the oil industry, rubber sheets for gaskets used to create a chemical containment seal in the production of titanium dioxide, certain other types of preformed gaskets, and some vehicle friction products.

Salient Statistics—United States:	**2015**	**2016**	**2017**	**2018**	**2019[e]**
Imports for consumption[1]	325	747	332	681	[2]100
Exports[3]	—	—	—	—	—
Consumption, estimated[4]	325	747	332	681	100
Price, average U.S. Customs value, dollars per ton	1,880	1,910	1,870	1,670	1,500
Net import reliance[5] as a percentage of estimated consumption	100	100	100	100	100

Recycling: None.

Import Sources (2015–18): Brazil, 96%; and Russia, 4%.

Tariff: Item	**Number**	**Normal Trade Relations 12–31–19**
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 in the United States (excluding asbestos contained within imported manufactured products) has decreased during the past several decades, falling from a record high of 803,000 tons in 1973 to less than 775 tons in each year since 2013. From 2013 through 2018, consumption fluctuated between 325 tons and roughly 775 tons, likely owing to stockpiling by companies in certain years, and averaged about 550 t, less than 0.1% of peak consumption in the 1970s. 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. Asbestos diaphragms are used in 11 chloralkali plants in the United States and account for about one-third of domestic chlorine production.

Estimated worldwide consumption of asbestos minerals decreased from approximately 2 million tons in 2010 to approximately 1 million tons in 2019. Asbestos-cement products, such as corrugated roofing tiles, pipes, and wall panels, are expected to continue to be the leading global market for asbestos.

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Published by AsbestosClaims.Law
asbestosclaims.law/library/10968/1

ASBESTOS

The U.S. Environmental Protection Agency (EPA) issued a significant new use rule (SNUR) under Section 5 of the Toxic Substances Control Act of 1976. The regulation, which went into effect on June 24, prohibits discontinued uses of asbestos from restarting without the EPA having an opportunity to evaluate each intended use for potential risks to health and the environment and take any necessary regulatory action, which may include a ban. The SNUR requires manufacturers to request approval before importing, manufacturing, or processing asbestos for adhesives, arc chutes, beater-add gaskets, building materials (insulation, plastics, textured paints, etc.), cement products, coatings, extruded sealant tape and other tape, filler for acetylene cylinders, friction materials (except brake blocks used in oil drilling equipment and vehicle brakes and linings), high-grade electrical paper, millboard, missile liner, packings, pipeline wrap, reinforced plastics, roofing felt, sealants, separators in fuel cells and batteries, vinyl-asbestos floor tile, woven products, and any other applications that are not currently in use in the United States.

The only asbestos producer in Brazil suspended mining activities on February 11. A comprehensive national ban on asbestos was enacted in November 2017, but the company had previously been allowed to continue operating owing to a judicial injunction. As of the end of September, the company was awaiting a decision from the Supreme Federal Court on a petition to restart mining for export purposes only.

At the former Mashaba Mine in Zimbabwe, which closed in 2007, a company began producing asbestos from tailings and was working to dewater the mining shafts and procure equipment to restart underground production. At full capacity, the mine was expected to produce 75,000 tons of asbestos per year. Asbestos was last produced in Zimbabwe in 2013.

World Mine Production and Reserves:

	Mine production		Reserves[6]
	2018	2019[e]	
United States	—	—	Small
Brazil	[e]110,000	15,000	12,000,000
China	[e]125,000	125,000	96,000,000
Kazakhstan	203,000	200,000	Large
Russia	[e]710,000	750,000	110,000,000
Zimbabwe	—	2,500	Large
World total (rounded)	1,150,000	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. Membrane cells and mercury cells are alternatives to asbestos diaphragms used in the chloralkali industry.

[e]Estimated. — Zero.

[1]Additional imports were reported by the U.S. Census Bureau in some years, but bill of lading information from a commercial trade database suggests that some shipments were misclassified.

[2]According to the U.S. Census Bureau, imports of asbestos minerals (chrysotile) totaled 100 tons through November 2019. Final 2019 imports may differ significantly from the provided estimate because imports of chrysotile typically do not follow a predictable pattern throughout the year.

[3]Exports of asbestos reported by the U.S. Census Bureau were 517 tons in 2015, 587 tons in 2016, 143 tons in 2017, 235 tons in 2018, and an estimated 200 tons in 2019. These shipments likely consisted of materials misclassified as asbestos, reexports, and (or) waste products because the United States no longer mines asbestos.

[4]Assumed to equal imports. Actual consumption in each year may have been higher or lower owing to stockpiling by companies, but information regarding industry stocks was unavailable.

[5]Defined as imports – exports.

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

U.S. Geological Survey, Mineral Commodity Summaries, January 2020