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 U.S. 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 2016, U.S. consumption of asbestos was estimated to be about 340 tons, essentially unchanged from that of 2015. 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, likely accounted for 100% of asbestos consumption during 2016. Insufficient data were available to reliably identify any additional markets, but most industrial applications for asbestos have been significantly curtailed in the United States since the first domestic ban on some asbestos-containing products was implemented in 1973. In addition to asbestos minerals, an unknown quantity of asbestos was imported within manufactured products, possibly including brake linings and pads, building materials, gaskets, millboard, and yarn and thread, among others.

Salient Statistics—United States:	**2012**	**2013**	**2014**	**2015**	**2016[e]**
Imports for consumption	1,610	772	406	343	340
Exports[1]	—	—	—	—	—
Consumption, estimated[2]	1,020	772	406	343	340
Price, average U.S. Customs value, dollars per ton	1,570	1,510	1,830	1,780	2,100
Net import reliance[3] as a percentage of estimated consumption	100	100	100	100	100

Recycling: None.

Import Sources (2012–15): Brazil, 100%.

Tariff: Item	**Number**	**Normal Trade Relations 12–31–16**
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.

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Events, Trends, and Issues: Consumption of asbestos minerals in the United States has steadily declined during the past several decades, falling from a record high of 803,000 tons in 1973 to an estimated 340 tons in 2016. 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 currently the only major user of asbestos and accounted for an estimated 100% of domestic consumption in 2016, rising from an estimated 35% of consumption in 2010. The quantity of asbestos used by the chloralkali industry will likely continue to decline, however, as companies make greater use of nonasbestos diaphragms and membrane cells. Globally, asbestos-cement products are expected to continue to be the leading market for asbestos. Owing to continued demand for asbestos products in many regions of the world, global production is likely to remain steady at approximately 2.0 million metric tons per year for the near future.

In 2016, about 95% of the asbestos minerals imported into and used within the United States were shipped from Brazil, with the remainder originating in Russia. All imports of asbestos minerals consisted of chrysotile. Although Canada was a major source of imports in the past, the United States has not imported asbestos from Canada since 2011.

World Mine Production and Reserves:

	Mine production[e]		Reserves[4]
	2015	2016	
United States	—	—	Small
Brazil	311,000	300,000	10,000,000
China	400,000	400,000	Large
India	200	200	Moderate
Kazakhstan	215,000	200,000	Large
Russia	1,100,000	1,100,000	Large
World total (rounded)	2,000,000	2,000,000	Large

World Resources: Reliable evaluations of global asbestos resources have not been published recently, and the available information is insufficient to make accurate estimates. However, world resources are large and more than adequate to meet anticipated demand in the foreseeable future. U.S. resources are large, but 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]Exports of asbestos minerals reported by the U.S. Census Bureau were 47 tons in 2012, 27 tons in 2013, 279 tons in 2014, 517 tons in 2015, and an estimated 980 tons in 2016. These shipments likely consisted of materials misclassified as asbestos, reexports, and (or) waste because the United States no longer mines asbestos.

[2]Assumed to equal imports, except in 2012, when an estimated 590 tons of asbestos were put into company stocks for future use.

[3]Defined as imports – exports.

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

U.S. Geological Survey, Mineral Commodity Summaries, January 2017