

ASBESTOS

(Data in metric tons unless otherwise noted)

Domestic Production and Use: Domestic mining of asbestos ceased in 2002 owing to the decline in U.S. asbestos markets associated with health and liability issues; the United States is wholly dependent on imports to meet manufacturing needs. In 2015, asbestos consumption in the United States was estimated to be about 360 tons. The chloralkali industry accounted for an estimated 90% of U.S. consumption, with the remainder used in coatings and compounds, plastics, roofing products, and other unknown applications. The chloralkali industry 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.

Salient Statistics—United States:	2011	2012	2013	2014	2015^e
Imports for consumption	1,180	1,610	772	406	358
Exports ¹	169	47	27	279	38
Consumption, estimated ²	1,180	1,020	772	406	358
Price, average value, dollars per ton ³	931	1,570	1,510	1,830	1,610
Net import reliance ⁴ as a percentage of estimated consumption	100	100	100	100	100

Recycling: None.

Import Sources (2011–14): Brazil, 77%; Canada, 22%; and other, 1%.

Tariff: Item	Number	Normal Trade Relations 12–31–15
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: Estimated domestic asbestos consumption declined 12% in 2015, continuing the downward trend from the record high of 803,000 tons in 1973. This decline has occurred because asbestos substitutes, alternative materials, and new technology have displaced asbestos from traditional domestic markets. The chloralkali industry, currently the leading consumer of asbestos in the United States, gained a greater share of the U.S. asbestos market as other end uses fell. Use of asbestos by the chloralkali industry may decline, however, as companies make greater use of nonasbestos diaphragms and membrane cell technology that does not require asbestos. Globally, asbestos-cement products are expected to be the leading market for asbestos. World production is likely to remain steady at approximately 2.0 million metric tons for the near future owing to continued demand for asbestos products in many regions of the world.

In 2015, at least 95% of the asbestos imported and used in the United States was chrysotile originating in Brazil. Although Canada was a major source of imports during the time period from 2011 to 2014, the United States has not imported asbestos fiber from Canada since 2011.

World Mine Production and Reserves:

	Mine production		Reserves ⁵
	<u>2014</u>	<u>2015^e</u>	
United States	—	—	Small
Brazil	284,000	311,000	10,000,000
China ^e	400,000	400,000	Large
Kazakhstan	240,000	215,000	Large
Russia ^e	1,100,000	1,100,000	Large
Other countries ^e	<u>370</u>	<u>350</u>	<u>Moderate</u>
World total (rounded)	2,020,000	2,000,000	Large

World Resources: The world has 200 million tons of identified asbestos resources. 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.

^eEstimated.

¹Comprises nonasbestos materials and (or) reexports. The United States no longer produces asbestos.

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

³Average Customs unit value of U.S. imports.

⁴Defined as imports – exports.

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