

TALC AND PYROPHYLLITE¹

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: Three companies operated five talc-producing mines in three States during 2018, and domestic production of crude talc was estimated to have increased slightly to 620,000 tons valued at \$22.8 million. Montana was the leading producer State, followed by Texas and Vermont. Total sales (domestic and export) of talc by U.S. producers were estimated to be 540,000 tons valued at \$117 million, a slight increase from those in 2017. Talc produced and sold in the United States was used in ceramics (including automotive catalytic converters) (22%), paint (21%), paper (21%), plastics (8%), roofing (4%), rubber (4%), and cosmetics (2%). The remaining 18% was for export, insecticides, refractories, and other miscellaneous uses.

One company in North Carolina mined and processed pyrophyllite in 2018. Domestic production was withheld in order to avoid disclosing company proprietary data and was estimated to have increased from that in 2017. Pyrophyllite was sold for refractory, paint, and ceramic products.

Salient Statistics—United States:	2014	2015	2016	2017	2018^e
Production, mine	608	615	578	610	620
Sold by producers	551	535	528	528	540
Imports for consumption	308	322	378	354	300
Exports	190	206	238	220	230
Consumption, apparent ²	669	651	668	662	610
Price, average, milled, dollars per metric ton ³	171	186	197	214	216
Employment, mine and mill, talc ⁴	230	239	223	206	208
Employment, mine and mill, pyrophyllite ⁴	26	29	30	31	30
Net import reliance ⁵ as a percentage of apparent consumption	21	22	27	20	11

Recycling: Insignificant.

Import Sources (2014–17): Pakistan, 40%; Canada, 27%; China, 22%; and other, 11%. Large quantities of crude talc are mined in Afghanistan before being milled in and exported from Pakistan.

Tariff: Item	Number	Normal Trade Relations 12–31–18
Natural steatite and talc:		
Not crushed, not powdered	2526.10.0000	Free.
Crushed or powdered	2526.20.0000	Free.
Talc, steatite, and soapstone; cut or sawed	6815.99.2000	Free.

Depletion Allowance: Block steatite talc: 22% (Domestic), 14% (Foreign). Other talc and pyrophyllite: 14% (Domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: Canada, China, and Pakistan were the principal sources for United States talc imports in recent years. Imports from Pakistan increased significantly in recent years and imports from China dropped to about one-third of what they had been. In 2018, imports from China recovered and imports from Pakistan declined. Canada and Mexico continued to be the primary destinations for United States talc exports, collectively receiving about one-half of exports.

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U.S. talc production has increased for the past 2 years after decreasing in 2016. Apparent consumption was relatively flat for 4 consecutive years through 2017 but is estimated to decrease in 2018 owing to decreased imports and increased exports. Production and apparent consumption in 2018 were still about 42% and 32% lower, respectively, than in 1995. Several domestic talc markets have declined over this 23-year period, with the largest decreases taking place in the ceramics (talc use fell by an estimated 58%), cosmetics (57%), roofing (47%), paint (24%), and paper (21%) industries. Ceramic tile and sanitaryware formulations and the technology for firing ceramic tile changed, reducing the amount of talc required for the manufacture of some ceramic products. For paint, the industry shifted its focus to production of water-based paint (a product for which talc is not well suited because it is hydrophobic) from oil-based paint, in order to reduce volatile emissions. Paper manufacturing began to decrease beginning in the 1990s, and some talc used for pitch control was replaced by chemical agents. For cosmetics, manufacturers of body dusting powders shifted some of their production from talc-based to corn-starch-based products. In contrast, sales of domestic talc for plastics increased by an estimated 34% from 1995 to 2018, primarily as the result of increased use in automotive plastics, but a significant share of the increased demand has been met with imported talc. The quantity of talc used in rubber production increased by 11% in 2018 compared with that in 1995.

The paper industry has traditionally been the largest consumer of talc worldwide; however, plastics are expected to overtake paper as the predominant end use within the next several years, as papermakers in Asia make greater use of talc substitutes and as the use of talc in automobile plastics increases.

World Mine Production and Reserves:

	Mine production ^e		Reserves ⁶
	2017	2018	
United States (crude)	⁷ 610	620	140,000
Brazil (crude and beneficiated) ⁸	850	850	44,000
China (unspecified minerals)	1,800	1,800	82,000
Finland	350	360	Large
France (crude)	450	450	Large
India ⁸	900	900	110,000
Japan ⁸	365	370	100,000
Korea, Republic of ⁸	⁷ 603	610	8,100
Other countries (includes crude) ⁸	<u>1,340</u>	<u>1,500</u>	<u>Large</u>
World total (rounded) ⁸	<u>7,270</u>	<u>7,500</u>	Large

World Resources: The United States is self-sufficient in most grades of talc and related minerals, but lower priced imports have replaced domestic minerals for some uses. Talc occurs in the United States from New England to Alabama in the Appalachian Mountains and the Piedmont region, as well as in California, Montana, Nevada, Texas, and Washington. Domestic and world resources are estimated to be approximately five times the quantity of reserves.

Substitutes: Substitutes for talc include bentonite, chlorite, feldspar, kaolin, and pyrophyllite in ceramics; chlorite, kaolin, and mica in paint; calcium carbonate and kaolin in paper; bentonite, kaolin, mica, and wollastonite in plastics; and kaolin and mica in rubber.

^eEstimated.

¹All statistics exclude pyrophyllite unless otherwise noted.

²Defined as sold by producers + imports – exports.

³Average ex-works unit value of milled talc sold by U.S. producers, based on data reported by companies.

⁴Includes only companies that mine talc or pyrophyllite. Excludes office workers and mills that process imported or domestically purchased material.

⁵Defined as imports – exports.

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

⁷Reported figure.

⁸Includes pyrophyllite.