

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 2016, and domestic production of crude talc was estimated to have decreased by 4% to 660,000 tons valued at \$19.1 million. Montana was the leading producer State, followed by Texas and Vermont. One company in Virginia that mines soapstone for dimension stone purposes had previously been included in the domestic talc data but was removed beginning in 2014. Total sales (domestic and export) of talc by U.S. producers were estimated to be 545,000 tons valued at \$97.5 million, a slight decline from those in 2015. Talc produced and sold in the United States was used in ceramics (including automotive catalytic converters) (26%), paper (18%), paint (17%), unclassified end uses (13%), plastics (12%), roofing (7%), rubber (4%), and cosmetics (3%). Of the estimated 385,000 tons of talc that was imported in 2016, it is likely that more than 75% was used in cosmetics, paint, and plastics applications. Including imported talc, the U.S. end-use rankings were thought to be, in decreasing order by tonnage, plastics, ceramics, paint, paper, roofing, rubber, cosmetics, and other.

One company in North Carolina mined and processed pyrophyllite in 2016. Domestic production was withheld in order to avoid disclosing company proprietary data and was estimated to have increased from that in 2015. Pyrophyllite was sold for refractory, paint, and ceramic products.

Salient Statistics—United States:	2012	2013	2014	2015	2016^e
Production, mine	515	542	608	687	660
Sold by producers	575	560	551	552	545
Imports for consumption	350	275	308	322	385
Exports	270	196	190	206	215
Consumption, apparent ²	595	621	726	803	830
Price, average, milled, dollars per metric ton ³	152	163	171	^e 169	180
Employment, mine and mill, talc ⁴	260	250	230	240	225
Employment, mine and mill, pyrophyllite ⁴	23	23	26	29	30
Net import reliance ⁵ as a percentage of apparent consumption	13	13	14	14	20

Recycling: Insignificant.

Import Sources (2012–15): Pakistan, 37%; Canada, 27%; China, 20%; Japan, 5% (includes pyrophyllite); 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 12–31–16
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: Through September 2016, trends in U.S. economic sectors that use talc were mixed but primarily positive compared with the same time period in 2015. Industrial output of paint, coatings, and adhesives increased by 7%; production of motor vehicles and parts grew by 5%; housing starts rose by 4%; manufacture of rubber products increased slightly; and output of paper and plastics each declined slightly. If sustained, this overall trend could lead to increased consumption of talc owing to its use in manufacturing catalytic converter bodies for automobiles (ceramics), automotive body and underhood components (plastics), and such construction products as adhesives, caulk, coatings, joint compounds, paint, and roofing products.

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China (35%), Pakistan (34%), and Canada (26%) were the principal import sources for talc during 2016, based on data reported by the U.S. Census Bureau. Imports from China and Pakistan increased by 42% and 15%, respectively, relative to 2015, and imports originating in China were nearly 250% higher than those in 2014. Canada and Mexico continued to be the primary destinations for U.S. talc shipments, collectively receiving nearly 70% of exports.

U.S. talc production increased for 3 consecutive years prior to 2016, and apparent consumption has increased for 4 consecutive years, but production and apparent consumption in 2016 were still about 38% and 19% lower, respectively, than in 1995. Several domestic talc markets have declined over this roughly 20-year period, with the largest decreases taking place in the ceramics (talc use fell by an estimated 55%), paint (44%), cosmetics (43%), and paper (39%) 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. Many domestic ceramic tile manufacturing plants also closed as tile imports increased, leading a major domestic producer to stop mining talc in 2008. 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 decreased 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 rose by an estimated 85% from 1995 to 2016, primarily the result of increased use in automotive plastics, but a significant share of the increased demand has been met with imported talc. The paper industry has traditionally been the largest consumer of talc worldwide, although plastics are expected to overtake paper as the predominant end use within the next several years as Asian papermakers make greater use of talc substitutes and use of talc in automobile plastics increases.

World Mine Production and Reserves:

	Mine production ^e		Reserves ⁶
	2015	2016	
United States (crude)	⁷ 687	660	140,000
Brazil (crude and beneficiated) ⁸	845	850	52,000
China (unspecified minerals)	2,200	2,200	Large
France (crude)	450	450	Large
India ⁸	⁷ 922	925	110,000
Japan ⁸	365	370	100,000
Korea, Republic of ⁸	605	610	11,000
Mexico	750	750	Large
Other countries (includes crude)	⁸ 1,590	⁸ 1,600	Large
World total (rounded)	⁸ 8,400	⁸ 8,400	Large

World Resources: The United States is self-sufficient in most grades of talc and related minerals. 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 mine production + 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.