

PERLITE

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: In 2016, domestic production of processed crude perlite was estimated to be 473,000 tons with a value of \$28.9 million. Crude ore production was from seven mines operated by six companies in five Western States. New Mexico continued to be the leading producing State. Processed crude perlite was expanded at 46 plants in 28 States. Domestic apparent consumption was 585,000 tons. The applications for expanded perlite were building construction products, 53%; horticultural aggregate, 15%; fillers, 15%; filter aid, 9%; and other, 8%. Other applications included specialty insulation and miscellaneous uses.

Salient Statistics—United States:	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016^e</u>
Production, processed crude perlite	393	419	462	459	473
Imports for consumption ¹	150	187	166	155	160
Exports ¹	38	51	46	40	48
Consumption, apparent	505	555	582	574	585
Price, average value, dollars per ton, f.o.b. mine	52	55	55	60	61
Employment, mine and mill	95	117	119	142	135
Net import reliance ² as a percentage of apparent consumption	22	25	21	20	19

Recycling: Not available.

Import Sources (2012–15): Greece, 95%; Mexico, 2%; Turkey, 2%; and other, 1%.

Tariff: Item	Number	Normal Trade Relations <u>12–31–16</u>
Vermiculite, perlite and chlorites, unexpanded	2530.10.0000	Free.

Depletion Allowance: 10% (Domestic and foreign).

Government Stockpile: None.

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Events, Trends, and Issues: Perlite is a siliceous volcanic glass that expands up to 20 times its original volume when rapidly heated. Expanded perlite is used to provide moisture retention and aeration when added to soil. Construction applications for expanded perlite are numerous because it is lightweight, fire resistant, and an excellent insulator. In 2016, the quantity of processed crude perlite sold or used by U.S. mines increased to the highest level since 2005, and estimated apparent consumption increased to its highest level since 2011. Increased demand for perlite-based construction products, fillers, and filter aids in 2014 through 2016 was supplied by increased domestic production. Net import reliance, as a percent of apparent consumption, decreased to its lowest level since 2001. Novel and small markets for perlite have increased during the past 10 years, one of the applications being the use of perlite as an alternative to microbeads in bath products and makeup.

Domestic perlite mining generally takes place in remote areas, and its environmental impact is not severe. The mineral fines, overburden, and reject ore produced during ore mining and processing are used to reclaim the mined-out areas, and, therefore, little waste remains. Airborne dust is captured by baghouses, and virtually no runoff contributes to water pollution.

New information for China's perlite production for 2011–15 was received from industry sources. Inclusion of this data in world totals results in a significant increase in tabulated world production compared with previous tabulations. Exclusive of China, world perlite production was estimated to be approximately 2.8 million tons in 2016; however, with production in China included, world production was estimated to be about 4.6 million tons. Based on the newly included estimates for China's production, the world's leading producers were, in descending order of production, China, Greece, Turkey, and the United States, with 40%, 20%, 20%, and 10%, respectively, of world production. It was noted in prior publications that China was the source country for nearly 15% of the world's processed crude perlite exports, but insufficient production data for China and several other countries were available to make reliable estimates of their production. Although China was the leading producer, most was believed to be consumed internally. Greece and Turkey remained the leading exporters of perlite.

World Processed Perlite Production and Reserves: The estimates of reserves were revised for Hungary and Turkey based on new information from official Government sources.

	Production		Reserves ³
	2015	2016 ^e	
United States	459	473	50,000
China	1,800	1,800	NA
Greece	1,000	1,100	50,000
Hungary	40	40	28,000
Iran	60	60	NA
Mexico	26	30	NA
Turkey	925	1,000	57,000
Other countries	70	70	NA
World total (rounded)	4,380	4,600	NA

World Resources: Insufficient information is available to make reliable estimates of resources in perlite-producing countries.

Substitutes: In construction applications, diatomite, expanded clay and shale, pumice, and slag can be substituted for perlite. For horticultural uses, vermiculite, coco coir, and pumice are alternative soil additives and are sometimes used in conjunction with perlite.

^eEstimated. NA Not available.

¹Exports and imports were estimated by the U.S. Geological Survey from U.S. Census Bureau combined data for vermiculite, and perlite and chlorites.

²Defined as imports – exports.

³See [Appendix C](#) for resource and reserve definitions and information concerning data sources.