

PERLITE

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: In 2019, the quantity of domestic processed crude perlite sold and used was estimated to be 480,000 tons with a value of \$35 million. Crude ore production was from eight mines operated by six companies in five Western States. New Mexico and Oregon continued to be the leading producing States. Processed crude perlite was expanded at 56 plants in 27 States. Domestic apparent consumption was 670,000 tons. The applications for expanded perlite were building construction products, 58%; fillers, 18%; horticultural aggregate, 16%; filter aid, 4%; and other, 4%. Other applications included specialty insulation and miscellaneous uses.

Salient Statistics—United States:	2015	2016	2017	2018	2019^e
Mine production, crude ore	501	521	570	^e 510	520
Sold and used, processed crude perlite	444	437	479	^e 460	480
Imports for consumption ¹	154	199	171	204	200
Exports ¹	18	16	18	16	13
Consumption, apparent ²	580	620	632	^e 620	670
Price, average value, dollars per ton, f.o.b. mine	61	65	73	72	72
Employment, mine and mill, number	142	135	139	130	140
Net import reliance ³ as a percentage of apparent consumption	23	30	24	30	28

Recycling: Not available.

Import Sources (2015–18): Greece, 89%; China, 8%; Mexico, 2%; and other, 1%.

Tariff: Item	Number	Normal Trade Relations 12–31–19
Vermiculite, perlite and chlorites, unexpanded	2530.10.0000	Free.

Depletion Allowance: 10% (Domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: Perlite is a siliceous volcanic glass that expands up to 20 times its original volume when rapidly heated. In horticultural uses, expanded perlite is used to provide moisture retention and aeration without compaction when added to soil. Owing primarily to cost, some commercial greenhouse growers in the United States have recently switched to a wood fiber material over perlite. Perlite, however, remained a preferred soil amendment for segments of greenhouse growers because it does not degrade or compact over lengthy growing times and is inert. Construction applications for expanded perlite are numerous because it is lightweight, fire resistant, and an excellent insulator. Novel and small markets for perlite have increased during the past 10 years; cosmetics, environmental remediation, personal care products, and marijuana growing have become increasing markets for perlite. Exploration continued at a perlite deposit in Nevada that could be developed as a potential supplier of crude perlite ore for industrial and household applications.

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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.

Based on estimated world production for 2019, the world's leading producers were, in descending order of production, China, Greece, Turkey, and the United States, with about 47%, 20%, 16%, and 13%, respectively, of world production. Although China was the leading producer, most of its perlite production was thought to be consumed internally. Greece and Turkey remained the leading exporters of perlite.

World Perlite Production and Reserves:

	Production		Reserves ⁴
	2018	2019 ^e	
United States	e, ⁵ 510	⁵ 520	50,000
Argentina	20	20	NA
Armenia	45	45	NA
China	1,900	1,900	NA
Greece	750	800	120,000
Hungary	39	40	49,000
Iran	20	20	NA
Mexico	20	20	NA
New Zealand	20	20	NA
Turkey	650	650	57,000
Other countries	<u>50</u>	<u>50</u>	<u>NA</u>
World total (rounded)	4,020	4,100	NA

World Resources: Perlite occurrences in Arizona, Idaho, Nevada, New Mexico, and Oregon are thought to contain large resources. Significant deposits have been reported in China, Greece, Hungary, and Turkey, and a few other countries. Insufficient information is available to make reliable estimates of resources in many 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, wood pulp, 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, perlite, and chlorites, unexpanded.

²Defined as sold or used processed perlite + imports – exports.

³Defined as imports – exports.

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

⁵Mine production of crude ore.