

# PERLITE

(Data in thousand metric tons unless otherwise noted)

**Domestic Production and Use:** In 2022, the quantity of domestic processed crude perlite sold and used was estimated to be 520,000 tons with a value of \$34 million. Crude ore production was from nine mines operated by six companies in six Western States. New Mexico continued to be the leading producing State. Domestic apparent consumption of crude perlite was estimated to be 720,000 tons. Processed crude perlite was expanded at 51 plants in 27 States. The applications for expanded perlite were building construction products, 44%; horticultural aggregate, 19%; fillers, 15%; filter aids, 14%; and other, 8%. Other applications included specialty insulation and miscellaneous uses.

<b>Salient Statistics—United States:</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022<sup>e</sup></b>
Mine production, crude ore	504	629	845	884	880
Sold and used, processed crude perlite	444	397	493	496	520
Imports for consumption <sup>1</sup>	200	180	160	170	230
Exports <sup>1</sup>	16	19	25	27	29
Consumption, apparent <sup>2</sup>	630	560	630	640	720
Price, average value, free on board mine, dollars per ton	69	64	61	64	66
Employment, mine and mill, number	130	140	140	150	150
Net import reliance <sup>3</sup> as a percentage of apparent consumption	30	29	21	23	28

**Recycling:** Not available.

**Import Sources (2018–21):** Greece, 92%; China, 5%; Mexico, 2%; and other, 1%.

<b>Tariff:</b>	<b>Item</b>	<b>Number</b>	<b>Normal Trade Relations 12-31-22</b>
	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. Horticultural perlite is useful to both commercial growers and hobby gardeners. Owing primarily to cost, some commercial greenhouse growers in the United States have recently switched to a wood fiber material instead of 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 fire resistant, an excellent insulator, and lightweight. Novel and small markets for perlite have increased during the past 10 years; cosmetics, environmental remediation, and personal care products have become increasing markets for perlite.

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The value of total construction put in place in the United States increased by about 11% during the first 6 months of 2022 compared with that of the same period in 2021, indicating a similar change in consumption of perlite. Construction products remained the largest domestic market for perlite. Increased interest in commercial greenhouse and hobby gardening may also correspond to increased consumption of horticultural-grade perlite.

Based on estimated world production for 2022, the world's leading producers were, in descending order of production, China, Turkey, Greece, and the United States, accounting for about 35%, 26%, 17%, and 12%, 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 Mine Production and Reserves:** Reserves data for China were revised based on Government reports.

	<b>Production</b>		<b>Reserves<sup>4</sup></b>
	<b>2021</b>	<b>2022<sup>e</sup></b>	
United States	<sup>5</sup> 496	<sup>5</sup> 520	50,000
Argentina <sup>e</sup>	18	20	NA
Armenia <sup>e</sup>	80	180	NA
China <sup>e</sup>	1,500	1,500	78,000
Greece <sup>e</sup>	700	710	120,000
Hungary <sup>e</sup>	77	80	49,000
Iran <sup>e</sup>	32	30	73,000
Mexico <sup>e</sup>	24	20	NA
New Zealand <sup>e</sup>	18	20	NA
Slovakia <sup>e</sup>	37	40	NA
Turkey <sup>e</sup>	1,100	1,100	57,000
Other countries <sup>e</sup>	<u>70</u>	<u>40</u>	<u>NA</u>
World total (rounded)	4,150	4,300	NA

**World Resources:**<sup>4</sup> Perlite occurrences in Arizona, California, Idaho, Nevada, New Mexico, and Oregon may contain large resources. Significant deposits have been reported in China, Greece, Turkey, and a few other countries. Available information was insufficient 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, coco coir, pumice, vermiculite, and wood pulp are alternative soil additives and are sometimes used in conjunction with perlite.

<sup>e</sup>Estimated. NA Not available.

<sup>1</sup>Exports and imports were estimated by the U.S. Geological Survey from U.S. Census Bureau combined data for vermiculite, perlite, and chlorites, unexpanded. Data are rounded to two significant digits.

<sup>2</sup>Defined as processed crude perlite sold and used + imports – exports. Data are rounded to two significant digits.

<sup>3</sup>Defined as imports – exports.

<sup>4</sup>See Appendix C for resource and reserve definitions and information concerning data sources.

<sup>5</sup>Processed ore sold and used by producers.