

PUMICE AND PUMICITE

(Data in thousand metric tons unless otherwise specified)

Domestic Production and Use: In 2023, 10 operations in five States produced pumice and pumicite. Estimated production¹ was 310,000 tons with an estimated processed value of about \$21 million, free on board (f.o.b.) plant. That represented an increase in both quantity and value from the 2022 reported production of 295,000 tons valued at \$19.2 million. Pumice and pumicite were mined in California, Idaho, Kansas, New Mexico, and Oregon. The porous, lightweight properties of pumice are well suited for its main uses. Mined pumice was used in the production of abrasives, concrete admixtures and aggregates, lightweight building blocks, horticultural purposes, and other uses, including absorbent, filtration, laundry stone washing, and road use.

Salient Statistics—United States:

	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023^e</u>
Production, mine ¹	565	578	504	295	310
Imports for consumption	136	90	87	102	81
Exports	11	8	11	14	11
Consumption, apparent ²	690	660	580	383	380
Price, average unit value, f.o.b. mine or mill, dollars per metric ton	28	31	46	65	68
Employment, mine and mill, number	140	140	140	140	140
Net import reliance ³ as a percentage of apparent consumption	18	12	13	23	18

Recycling: Little to no known recycling.

Import Sources (2019–22): Greece, 90%; Iceland, 7%; and other, 3%.

<u>Tariff:</u>	<u>Item</u>	<u>Number</u>	<u>Normal Trade Relations</u> <u>12–31–23</u>
	Pumice, crude or in irregular pieces, including crushed	2513.10.0010	Free.
	Pumice, other	2513.10.0080	Free.

Depletion Allowance: 5% (domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: The amount of domestically produced pumice and pumicite sold or used in 2023 was estimated to be 5% more than that in 2022. Imports and exports were estimated to have decreased compared with those in 2022. An estimated 75% of all imported pumice originated from Greece in 2023 and primarily supplied markets in the eastern and gulf coast regions of the United States.

Pumice and pumicite are plentiful in the Western States, but legal challenges and public land designations could limit access to known deposits. Production of pumice and pumicite is sensitive to mining and transportation costs.

All known domestic pumice and pumicite mining in 2023 was accomplished through open pit methods, generally in remote areas away from major population centers. Although the generation and disposal of reject fines in mining and milling may result in local dust issues at some operations, such environmental impacts were thought to be restricted to relatively small geographic areas.

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World production of pumice and related material was estimated to be 18 million tons (rounded) in 2023, which was slightly less than that in 2022. Turkey was the leading global producer of pumice and pumicite, followed by Uganda. Pumice is used more extensively as a building material outside the United States, which explained the large global production of pumice relative to that of the United States. In Europe, basic home construction uses stone and concrete as the preferred building materials. Prefabricated lightweight concrete walls, which may contain pumice as lightweight aggregate, are often produced and shipped to construction locations. Because of their cementitious properties, light weight, and strength, pumice and pumicite perform well in European-style construction.

World Mine Production and Reserves:

	Mine production ^e		Reserves ⁴
	2022	2023	
United States ¹	⁵ 295	310	Large in the United States. Quantitative estimates of reserves for most countries were not available.
Algeria ⁶	900	900	
Cameroon ⁶	280	280	
Chile ⁶	720	720	
Ecuador ⁶	800	800	
Ethiopia	510	510	
France ⁶	280	200	
Greece ⁶	1,010	1,000	
Guadeloupe	200	200	
Guatemala	570	570	
Indonesia	200	200	
Saudi Arabia ⁶	980	980	
Spain	240	240	
Syria ⁶	200	200	
Tanzania	220	230	
Turkey	8,700	8,700	
Uganda	1,300	1,500	
Other countries ⁶	<u>750</u>	<u>700</u>	
World total (rounded)	18,200	18,000	

World Resources:⁴ The identified U.S. resources of pumice and pumicite, estimated to be more than 25 million tons, are concentrated in the Western States. The estimated total resources (identified and undiscovered) in the Western and Great Plains States are at least 250 million tons and may total more than 1 billion tons. Large resources of pumice and pumicite have been identified on all continents.

Substitutes: The costs of transportation determine the maximum economic distance pumice and pumicite can be shipped and still remain competitive with alternative materials. Competitive materials that may be substituted for pumice and pumicite include crushed aggregates, diatomite, expanded shale and clay, and vermiculite.

^eEstimated.

¹Quantity sold and used by producers.

²Defined as production + imports – exports.

³Defined as imports – exports.

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

⁵Reported.

⁶Includes pozzolan and (or) volcanic tuff.