

VERMICULITE

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: Two companies with mining and processing facilities in South Carolina and Virginia produced vermiculite concentrate and reported production of approximately 100,000 tons. Most of the vermiculite concentrate was shipped to 18 exfoliating plants in 11 States. The end uses for exfoliated vermiculite were estimated to be agriculture/horticulture, 50%; lightweight concrete aggregates (including cement premixes, concrete, and plaster), 20%; insulation, 5%; and other, 25%.

Salient Statistics—United States:	2010	2011	2012	2013	2014^e
Production ^{e, 1}	100	100	100	100	100
Imports for consumption ^{e, 2}	29	53	57	36	38
Exports ^e	2	2	2	2	2
Consumption, apparent, concentrate ³	130	150	160	130	140
Consumption, exfoliated ^e	67	62	59	64	65
Price, range of value, concentrate, dollars per ton, ex-plant ⁴	100–400	115–460	145–525	145–565	150–580
Employment, number ^e	80	80	75	70	75
Net import reliance ⁵ as a percentage of apparent consumption	20	30	35	25	25

Recycling: Insignificant.

Import Sources (2010–13): South Africa, 44%; Brazil, 28%; China, 26%; and other, 2%.

Tariff: Item	Number	Normal Trade Relations 12–31–14
Vermiculite, perlite and chlorites, unexpanded	2530.10.0000	Free.
Exfoliated vermiculite, expanded clays, foamed slag, and similar expanded materials	6806.20.0000	Free.

Depletion Allowance: 14% (Domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: U.S. exports and imports of vermiculite are not collected as a separate category by the U.S. Census Bureau. However, according to an independent industry trade information source, U.S. exports were about the same in 2014 as those of 2013. U.S. imports, excluding any material from Canada and Mexico, were estimated to be about 38,000 tons in 2014, slightly more than in 2013. Supplies of coarse grades remained tight, and prices rose slightly in 2014.

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An Australian company postponed reopening its East African Namekara vermiculite mine in Uganda. The delay was the result of an oversupply of the medium-to-finer grades in the world market; sluggish market conditions in Europe, its largest market; and transportation and related infrastructure-improvement issues. Although no vermiculite was produced, removal of overburden continued. The Namekara deposit has sufficient resources for more than 50 years of production and is a portion of the larger East African vermiculite project, which has about 55 million tons of inferred resources and is considered to be one of the world's largest deposits.

In July, the sale of the leading vermiculite producer in South Africa was completed to a consortium of South African and Chinese parastatal and private companies. Reserves identified on properties adjacent to and near ongoing vermiculite mining operations could enable increased vermiculite production and extend the mine's current expected 24-year mine life.

A Brazilian company, which expanded production capacity at its vermiculite mine in central Brazil in 2013, was developing another deposit near Brasilia. The new operation would bring the company's total production capacity to 200,000 tons per year by 2016.

World Mine Production and Reserves: The estimates of reserves were revised for Brazil based on new information from official Government sources.

	Mine production		Reserves ⁶
	2013	2014 ^e	
United States ^{e, 1}	100	100	25,000
Brazil	55	50	13,100
Bulgaria	19	20	NA
China	15	50	NA
India	11	15	1,700
Russia	20	25	NA
South Africa	128	130	14,000
Other countries	10	10	15,000
World total	358	400	NA

World Resources: Marginal reserves of vermiculite in Colorado, Nevada, North Carolina, Texas, and Wyoming are estimated to be 2 million to 3 million tons. Reserves have been reported in Australia, Brazil, China, Russia, South Africa, Uganda, the United States, Zimbabwe, and some other countries. However, reserve information comes from many sources, and in most cases, it is not clear whether the numbers refer to vermiculite alone or vermiculite plus host rock and overburden.

Substitutes: Expanded perlite is a substitute for vermiculite in lightweight concrete and plaster. Other more dense but less costly material substitutes in these applications are expanded clay, shale, slag, and slate. Alternate materials for loosefill fireproofing insulation include fiberglass, perlite, and slag wool. In agriculture, substitutes include bark and other plant materials, peat, perlite, sawdust, and synthetic soil conditioners.

^eEstimated. NA Not available.

¹Concentrate sold and used by producers. Data are rounded to one significant digit to avoid disclosing company proprietary data.

²Excludes Canada and Mexico.

³Rounded to two significant digits to protect proprietary data.

⁴Source: Mining Engineering.

⁵Defined as imports – exports.

⁶See [Appendix C](#) for resource/reserve definitions and information concerning data sources.