

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. Most of the vermiculite concentrate was shipped to 17 exfoliating plants in 11 States. The end uses for exfoliated vermiculite were estimated to be lightweight agriculture/horticulture, 43%; concrete aggregates (including cement premixes, concrete, and plaster), 36%; insulation, 7%; and other, 14%.

Salient Statistics—United States:	2006	2007	2008	2009	2010^e
Production ^{e, 1}	100	100	100	100	100
Imports for consumption ^{e, 2}	65	51	73	39	30
Exports ^e	5	5	5	3	2
Consumption, apparent, concentrate ^e	160	150	170	140	130
Consumption, exfoliated ^e	90	85	82	69	80
Price, average, concentrate, dollars per ton, ex-plant	³ 138	140	140	130	145
Employment, number ^e	95	100	100	75	80
Net import reliance ⁴ as a percentage of apparent consumption ^e	40	32	40	26	22

Recycling: Insignificant.

Import Sources (2006–09): China, 56%; South Africa, 42%; and other, 2%.

Tariff: Item	Number	Normal Trade Relations 12-31-10
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.

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Events, Trends, and Issues: U.S. imports of vermiculite are not collected as a separate category by the U.S. Census Bureau. However, according to a nongovernmental source, U.S. imports, excluding any material from Canada and Mexico, were about 18,000 tons for the first 8 months of 2010. South Africa provided 76%, Mozambique, 10%, and Australia, Brazil, and China, about 5% each.

An Australian company continued development of and production at the East African Namekara vermiculite deposit, a portion of the larger East African vermiculite project (EAVP). The EAVP has about 55 million tons of inferred resources and is considered to be one of the world's largest deposits. The company planned to increase annual production from the current 18,000 tons to 115,000 tons of vermiculite concentrate by 2014. The Namekara deposit has sufficient resources for more than 50 years at the expanded rate of production. The company secured a 25-year sales contract for all production. Another industrial minerals company was to market and distribute the product.

World Mine Production and Reserves:

	Mine production		Reserves⁵
	<u>2009</u>	<u>2010^e</u>	
United States ^{e, 1}	100	100	25,000
Australia	12	15	NA
Brazil	20	15	NA
China	120	130	NA
Russia	25	25	NA
South Africa	193	210	14,000
Zimbabwe	10	5	NA
Other countries	<u>24</u>	<u>26</u>	<u>14,000</u>
World total	500	530	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, reserves 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 peat, perlite, sawdust, bark and other plant materials, 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.

³Moeller, Eric, 2007, Vermiculite: Mining Engineering, v. 59, no. 6, June, p. 61–62. (Average of prices from range of sized grades.)

⁴Defined as imports – exports + adjustments for Government and industry stock changes.

⁵[See Appendix C for resource/reserve definitions and information concerning data sources.](#)