

VERMICULITE

(Data in thousand metric tons, unless otherwise noted)

Domestic Production and Use: Two companies, with mining and processing facilities, produced vermiculite concentrate. One company had its operation in South Carolina, and the other company had an operation in Virginia and an operation in South Carolina run by its subsidiary company. Most of the vermiculite concentrate was shipped to 20 exfoliating plants in 11 States. The end uses for exfoliated vermiculite were estimated to be agriculture and insulation, 78%; lightweight concrete aggregates (including concrete, plaster, and cement premixes), 18%; and other, 4%.

Salient Statistics—United States:	1995	1996	1997	1998	1999^e
Production ¹	171	W	W	W	W
Imports for consumption ^e	30	48	67	68	70
Exports ^e	6	8	8	11	10
Consumption, apparent, concentrate	195	W	W	W	W
Consumption, exfoliated	130	135	^e 155	^e 170	170
Price, average value, concentrate, dollars per ton, f.o.b. mine	W	W	W	W	W
Stocks, producer, yearend	NA	NA	NA	NA	NA
Employment, mine and mill, number ^e	230	230	230	230	230
Net import reliance ² as a percent of apparent consumption	12	W	W	W	W

Recycling: Insignificant.

Import Sources (1995-98): South Africa, 76%; China, 21%; and other, 3%.

Tariff: Item	Number	Normal Trade Relations 12/31/99
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: 15% (Domestic and foreign).

Government Stockpile: None.

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Events, Trends, and Issues: A U.S. natural resource holding company reportedly was planning to complete its current exploration program at yearend on two vermiculite properties in Nevada and Montana. Its jointly held affiliate company was planning to test vermiculite ore amenability to the milling process used at the company's mill at Dillon, MT. The holding company had entered negotiations in September to acquire a vermiculite exfoliation plant in California. In recent years, the only domestic mining of vermiculite has been in the eastern United States.

In Brazil, four companies had an estimated output of 23,000 tons, Japan had an estimated 15,000 tons, and output in Zimbabwe was about 15,000 tons and came from two companies. Recent information from a nongovernment source, which is not included in the world mine production data below, gave production of vermiculite in Australia of around 11,000 tons in 1998, with an increase anticipated in 1999; production in China was an estimated 40,000 tons.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves³	Reserve base³
	1998	1999^e		
United States	W	W	25,000	100,000
Russia	25	25	NA	NA
South Africa	210	210	20,000	80,000
Other countries ⁴	<u>57</u>	<u>60</u>	<u>5,000</u>	<u>20,000</u>
World total	⁵ 292	⁵ 295	<u>50,000</u>	<u>200,000</u>

World Resources: Marginal reserves of vermiculite, occurring in Colorado, Nevada, North Carolina, Texas, and Wyoming, are estimated to be 2 to 3 million tons. Resources in other countries may include material that does not exfoliate as well as U.S. and South African vermiculite.

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, slate, and slag. 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. W Withheld to avoid disclosing company proprietary data.

¹Concentrate sold and used by producers.

²Defined as imports - exports + adjustments for Government and industry stock changes.

³See Appendix C for definitions.

⁴Excludes countries for which information is not available.

⁵Excludes the United States.