

DIATOMITE

(Data in thousand metric tons, unless otherwise noted)

Domestic Production and Use: The estimated value of processed diatomite, f.o.b. plant, was \$159 million in 2003. Production was from 7 companies with 13 processing facilities in 4 States. California and Nevada were the principal producing States and accounted for about 70% of U.S. production in 2003. Estimated end uses of diatomite were filter aids, 68%; absorbents, 14%; fillers, 12%; and other (mostly cement manufacture), 6%.

Salient Statistics—United States:	1999	2000	2001	2002	2003^e
Production ¹	747	677	644	624	625
Imports for consumption	2	(2)	(2)	(2)	2
Exports	123	131	148	128	39
Consumption, apparent	625	546	546	497	588
Price, average value, dollars per ton, f.o.b. plant	238	256	270	255	254
Stocks, producer, yearend	36	36	36	36	36
Employment, mine and plant, number ^e	1,000	1,000	1,000	1,000	1,000
Net import reliance ³ as a percentage of apparent consumption	E	E	E	E	E

Recycling: None.

Import Sources (1999-2002): France, 61%; Italy, 21%; Mexico, 10%; and other, 8%.

Tariff: Item	Number	Normal Trade Relations 12/31/03
Siliceous fossil meals, including diatomite	2512.00.0000	Free.

Depletion Allowance: 14% (Domestic and foreign).

Government Stockpile: None.

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Events, Trends, and Issues: Filtration (including purification of beer, wine, liquors, oils, and greases) continued to be the largest end use for diatomite, also known as diatomaceous earth (D.E.). Other applications include the removal of microbial contaminants, such as bacteria, viruses, and protozoa, in public water systems, and the filtration of human blood plasma. D.E. filter aids have been successfully deployed in about 200 locations throughout the United States for the treatment of potable water. Emerging small-scale applications for diatomite include pharmaceutical processing and use as an insecticide that is nontoxic to humans.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves ⁴	Reserve base ⁴
	2002	2003 ^e		
United States ¹	624	625	250,000	500,000
China	370	370	110,000	410,000
Commonwealth of Independent States	80	80	NA	13,000
Czech Republic	35	35	4,500	4,800
Denmark ⁵ (processed)	28	30	NA	NA
France	75	75	NA	2,000
Japan	180	180	NA	NA
Korea, Republic of	30	21	NA	NA
Mexico	70	65	NA	2,000
Peru	35	35	2,000	5,000
Spain	36	36	NA	NA
Other countries	170	170	550,000	NA
World total (rounded)	1,730	1,720	920,000	Large

World Resources: World resources of crude diatomite are adequate for the foreseeable future, but the need for diatomite to be near markets because of transportation costs encourages development of new sources for the material.

Substitutes: Many materials can be substituted for diatomite. However, the unique properties of diatomite assure its continuing use for many applications. Expanded perlite and silica sand compete for filtration purposes. Other filtration technologies use ceramic, polymeric, or carbon membrane. Alternate filler materials include talc, ground silica sand, ground mica, clay, perlite, vermiculite, and ground limestone. For thermal insulation, materials such as various clays and special brick, mineral wool, expanded perlite, and exfoliated vermiculite can be used.

^eEstimated. E Net exporter. NA Not available.

¹Processed ore sold and used by producers.

²Less than ½ unit.

³Defined as imports – exports + adjustments for Government and industry stock changes.

⁴See Appendix C for definitions.

⁵Includes sales of molar production.