

## DIATOMITE

(Data in thousand metric tons unless otherwise noted)

**Domestic Production and Use:** In 2010, domestic production of diatomite was estimated at 550,000 tons with an estimated processed value of \$138 million, f.o.b. plant. Production occurred at 7 diatomite-producing companies with 12 mining areas and 9 processing facilities in California, Nevada, Oregon, and Washington. Diatomite is frequently used in filter aids, 55%; cement additives, 23%; absorbents, 10%; fillers, 9%; insulation, 2%; and less than 1% for other applications, including specialized pharmaceutical and biomedical uses. The unit value of diatomite varied widely in 2010, from less than \$7.00 per ton for cement manufacture to more than \$10,500 per ton for limited specialty markets, including art supplies, cosmetics, and DNA extraction. The average unit value for filter-grade diatomite was \$380 per ton.

<b><u>Salient Statistics—United States:</u></b>	<b><u>2006</u></b>	<b><u>2007</u></b>	<b><u>2008</u></b>	<b><u>2009</u></b>	<b><u>2010<sup>e</sup></u></b>
Production <sup>1</sup>	799	687	764	575	550
Imports for consumption	7	4	3	1	1
Exports	150	143	151	88	90
Consumption, apparent	656	548	616	488	460
Price, average value, dollars per ton, f.o.b. plant	220	237	224	255	250
Stocks, producer, yearend <sup>e</sup>	40	40	40	40	40
Employment, mine and plant, number <sup>e</sup>	1,020	1,020	1,020	1,020	1,020
Net import reliance <sup>2</sup> as a percentage of apparent consumption	E	E	E	E	E

**Recycling:** None.

**Import Sources (2006–09):** Spain, 31%; Italy, 25%; France, 16%; Mexico, 13%; and other, 15%.

<b><u>Tariff:</u></b>	<b><u>Item</u></b>	<b><u>Number</u></b>	<b><u>Normal Trade Relations</u></b>
	Siliceous fossil meals, including diatomite	2512.00.0000	<b><u>12-31-10</u></b> Free.

**Depletion Allowance:** 14% (Domestic and foreign).

**Government Stockpile:** None.

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**Events, Trends, and Issues:** The amount of domestically produced diatomite sold or used in 2010 decreased by about 4% compared with that of 2009. Filtration (including the purification of beer, liquors, and wine and the cleansing of greases and oils) continued to be the largest end use for diatomite, also known as diatomaceous earth. Domestically, production of diatomite used as an ingredient in portland cement was the next largest use. An important application for diatomite is the removal of microbial contaminants, such as bacteria, protozoa, and viruses in public water systems. Other applications for diatomite include filtration of human blood plasma, pharmaceutical processing, and use as a nontoxic insecticide.

### World Mine Production and Reserves:

	Mine production		Reserves <sup>3</sup>
	<u>2009</u>	<u>2010<sup>e</sup></u>	
United States <sup>1</sup>	575	550	250,000
Argentina	40	40	N/A
China	440	450	110,000
Commonwealth of Independent States	80	80	NA
Denmark <sup>4</sup> (processed)	225	225	NA
France	75	75	NA
Iceland	26	25	NA
Italy	25	25	NA
Japan	110	110	NA
Mexico	116	120	NA
Spain	50	50	NA
Turkey	30	30	NA
Other countries	<u>50</u>	<u>50</u>	<u>NA</u>
World total (rounded)	1,840	1,830	Large

**World Resources:** World resources of crude diatomite are adequate for the foreseeable future. Transportation costs will continue to determine the maximum economic distance most forms of diatomite may be shipped and still remain competitive with alternative materials.

**Substitutes:** Many materials can be substituted for diatomite. However, the unique properties of diatomite assure its continuing use in many applications. Expanded perlite and silica sand compete for filtration. Synthetic filters, notably ceramic, polymeric, or carbon membrane filters and filters made with cellulose fibers, are becoming competitive as filter media. Alternate filler materials include clay, ground limestone, ground mica, ground silica sand, perlite, talc, and vermiculite. For thermal insulation, materials such as various clays, exfoliated vermiculite, expanded perlite, mineral wool, and special brick can be used.

<sup>e</sup>Estimated. E Net exporter. NA Not available.

<sup>1</sup>Processed ore sold and used by producers.

<sup>2</sup>Defined as imports – exports + adjustments for Government and industry stock changes.

<sup>3</sup>[See Appendix C for resource/reserve definitions and information concerning data sources.](#)

<sup>4</sup>Includes sales of molar production.