

## DIATOMITE

(Data in thousand metric tons unless otherwise noted)

**Domestic Production and Use:** In 2009, domestic production of diatomite was estimated at 790,000 tons with an estimated processed value of \$179 million, f.o.b. plant. Production took place 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, 48%; cement additives, 33%; absorbents, 9%; fillers, 8%; insulation, 2%; and less than 1% for other applications, including specialized pharmaceutical and biomedical uses. The unit value of diatomite varied widely in 2009, from less than \$9.00 per ton for cement manufacture to more than \$3,500 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>2005</u></b>	<b><u>2006</u></b>	<b><u>2007</u></b>	<b><u>2008</u></b>	<b><u>2009<sup>e</sup></u></b>
Production <sup>1</sup>	653	799	687	764	790
Imports for consumption	4	7	4	3	3
Exports	142	150	143	151	98
Consumption, apparent	515	656	548	616	692
Price, average value, dollars per ton, f.o.b. plant	274	220	237	224	228
Stocks, producer, yearend <sup>e</sup>	40	40	40	40	40
Employment, mine and plant, number <sup>e</sup>	1,000	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 (2005-08):** Spain, 26%; Mexico, 23%; Italy, 19%; France, 16%; and other, 16%.

<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>12-31-09</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 2009 increased by about 3% compared with that of 2008. 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 increased. 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:** The reserves estimate for Czech Republic was revised based on information from the Czech Government.

	Mine production		Reserves <sup>3</sup>
	2008	2009 <sup>e</sup>	
United States <sup>1</sup>	764	790	250,000
Chile	25	25	NA
China	440	450	110,000
Commonwealth of Independent States	80	80	NA
Costa Rica	26	26	NA
Czech Republic	20	20	4,100
Denmark <sup>4</sup> (processed)	230	240	NA
France	75	75	NA
Germany	54	54	NA
Iceland	28	28	NA
Italy	25	25	NA
Japan	115	120	NA
Mexico	83	87	NA
Peru	35	35	2,000
Spain	34	34	NA
Other countries	<u>132</u>	<u>135</u>	<u>550,000</u>
World total (rounded)	2,200	2,200	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 definitions. Reserve base estimates were discontinued in 2009; see [Introduction](#).

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