

## DIATOMITE

(Data in thousand metric tons unless otherwise noted)

**Domestic Production and Use:** In 2007, domestic production of diatomite was estimated at 830,000 tons with an estimated processed value of \$183 million, f.o.b. plant. Production was from 7 diatomite-producing companies with 11 mining areas and 9 processing facilities in California, Nevada, Oregon, and Washington. Estimated end uses of diatomite were filter aids, 60%; ingredients in cement, 20%, fillers, 10%; absorbents, 5%; and other (mostly cement manufacture and thermal insulation), 5%. The unit value of diatomite varied widely in 2007 from less than \$3.00 per ton for cement manufacture to over \$1,000 per ton for some limited market specialty uses, such as art supplies and cosmetics. The average unit value for filter-grade diatomite was \$265 per ton.

<b><u>Salient Statistics—United States:</u></b>	<b><u>2003</u></b>	<b><u>2004</u></b>	<b><u>2005</u></b>	<b><u>2006</u></b>	<b><u>2007<sup>e</sup></u></b>
Production <sup>1</sup>	599	620	653	799	830
Imports for consumption	(2)	1	4	4	4
Exports	136	143	142	150	175
Consumption, apparent	463	478	507	653	659
Price, average value, dollars per ton, f.o.b. plant	255	258	274	220	220
Stocks, producer, year end <sup>e</sup>	36	36	40	40	40
Employment, mine and plant, number <sup>e</sup>	1,000	1,000	1,000	1,020	1,020
Net import reliance <sup>3</sup> as a percentage of apparent consumption	E	E	E	E	E

**Recycling:** None.

**Import Sources (2003-06):** Mexico, 35%; France, 34%; Italy, 12%; Germany, 11%; and other, 8%.

<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>12-31-07</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 2007 increased by about 4% compared with that of 2006. 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 (D.E.). Domestically, production of diatomite used as an ingredient for 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 an insecticide that is nontoxic to humans.

### **World Mine Production, Reserves, and Reserve Base:**

	Mine production		Reserves <sup>4</sup>	Reserve base <sup>4</sup>
	2006	2007 <sup>e</sup>		
United States <sup>1</sup>	799	830	250,000	500,000
Chile	30	27	NA	NA
China	420	420	110,000	410,000
Commonwealth of Independent States	80	80	NA	13,000
Costa Rica	26	26	NA	NA
Czech Republic	40	40	4,500	4,800
Denmark <sup>5</sup> (processed)	235	240	NA	NA
France	75	75	NA	2,000
Germany	54	55	NA	NA
Iceland	28	28	NA	NA
Italy	25	25	NA	NA
Japan	130	130	NA	NA
Mexico	60	60	NA	2,000
Peru	35	35	2,000	5,000
Spain	35	35	NA	NA
Other countries	88	88	550,000	NA
World total (rounded)	2,160	2,200	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 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 also 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>Less than ½ unit.

<sup>3</sup>Defined as imports – exports + adjustments for Government and industry stock changes.

<sup>4</sup>See Appendix C for definitions.

<sup>5</sup>Includes sales of moler production.