

DIATOMITE

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: In 2015, production of diatomite was estimated to be 925,000 tons with an estimated processed value of \$287 million, f.o.b. plant. Six companies produced diatomite at 11 mining areas and nine processing facilities in California, Nevada, Oregon, and Washington. Diatomite is used in filter aids, 55%; cement, 21%; fillers, 14%, absorbents, 9%; and other applications, 1%, including specialized pharmaceutical and biomedical uses. The unit value of diatomite varied widely in 2015, from approximately \$10 per ton when used as a lightweight aggregate in portland cement concrete to more than \$400 per ton for limited specialty markets, including art supplies, cosmetics, and DNA extraction.

Salient Statistics—United States:	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015^e</u>
Production ¹	813	735	782	901	925
Imports for consumption	2	3	1	4	7
Exports	106	96	92	82	79
Consumption, apparent	709	642	691	823	853
Price, average value, dollars per ton, f.o.b. plant	269	286	293	298	310
Stocks, producer, yearend ^e	40	40	40	40	40
Employment, mine and plant, number ^e	660	660	660	660	660
Net import reliance ² as a percentage of apparent consumption	E	E	E	E	E

Recycling: None.

Import Sources (2011–14): Mexico, 30%; Canada, 26%; France, 24%; and other, 20%.

Tariff:	Item	Number	Normal Trade Relations
	Siliceous fossil meals, including diatomite	2512.00.0000	<u>12–31–15</u> 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 by producers in 2015 increased by 3% compared with that of 2014. Apparent domestic consumption increased by 4% in 2015 to an alltime estimated high of 853,000 tons; exports decreased by 9%. 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, diatomite used in the production of 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: Reserves for Turkey were updated based on Government reports.

	Mine production		Reserves ³
	2014	2015 ^e	
United States ¹	901	925	250,000
Argentina	100	55	NA
China	420	420	110,000
Czech Republic	49	50	NA
Denmark ⁴ (processed)	95	95	NA
France	75	75	NA
Japan	90	100	NA
Mexico	88	80	NA
Peru	125	125	NA
Russia	70	70	NA
Spain	36	36	NA
Turkey	85	90	44,000
Other countries	122	170	NA
World total (rounded)	2,260	2,290	Large

World Resources: World resources of crude diatomite are adequate for the foreseeable future.

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. Filters made from manufactured materials, 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. Transportation costs will continue to determine the maximum economic distance that most forms of diatomite may be shipped and still remain competitive with alternative materials.

^eEstimated. E Net exporter. NA Not available.

¹Processed ore sold and used by producers.

²Defined as imports – exports + adjustments for industry stock changes.

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

⁴Includes sales of moler production.