

## CLAYS

(Data in thousand metric tons, unless otherwise noted)

**Domestic Production and Use:** In 1999, clays were produced in most States except Alaska, Delaware, Hawaii, Rhode Island, Vermont, and Wisconsin. A total of 238 companies operated approximately 700 clay pits or quarries. The leading 20 firms supplied 50% of the tonnage and 75% of the value for all types of clay sold or used in the United States. U.S. production was estimated to be 42.2 million metric tons valued at \$1.71 billion. Major domestic uses for specific clays were estimated as follows: ball clay—33% floor and wall tile, 24% sanitaryware, 11% pottery, and 32% other uses; bentonite—26% foundry sand bond, 23% pet waste absorbent, 20% drilling mud, 16% iron ore pelletizing, and 15% other uses; common clay—54% brick, 21% cement, 17% lightweight aggregate, and 8% other uses; fire clay—81% refractories and 19% other uses; fuller's earth—74% absorbent uses, 6% pesticide and related products, and 20% other uses; and kaolin—56% paper, 17% refractories, and 27% other.

<b>Salient Statistics—United States:<sup>1</sup></b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999<sup>e</sup></b>
Production, mine:					
Ball clay	993	935	1,060	1,130	1,140
Bentonite	3,820	3,740	4,020	3,820	3,850
Common clay	25,600	26,200	24,600	24,500	24,800
Fire clay <sup>2</sup>	583	505	415	410	410
Fuller's earth	2,640	2,600	2,370	2,350	2,350
Kaolin	<u>9,480</u>	<u>9,180</u>	<u>9,280</u>	<u>9,450</u>	<u>9,710</u>
Total <sup>3</sup>	43,000	43,100	41,800	41,600	42,200
Imports for consumption	35	45	64	86	97
Exports	4,680	4,830	5,080	5,230	4,700
Consumption, apparent	38,500	38,300	36,800	36,500	37,600
Price, average, dollars per ton:					
Ball clay	46	44	47	45	46
Bentonite	36	36	42	46	43
Common clay	6	5	6	6	6
Fire clay	22	21	19	18	18
Fuller's earth	101	106	107	109	97
Kaolin	117	120	111	111	115
Stocks, yearend <sup>4</sup>	NA	NA	NA	NA	NA
Employment, number: <sup>e</sup> Mine	3,950	4,900	4,900	4,800	4,800
Mill	9,000	9,000	9,000	8,900	8,900
Net import reliance <sup>5</sup> as a percent of apparent consumption	E	E	E	E	E

**Recycling:** Insignificant.

**Import Sources (1995-98):** Mexico, 28%; Brazil, 24%; United Kingdom, 21%; Canada, 8%; and other, 19%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Normal Trade Relations 12/31/99</b>
Kaolin and other kaolinitic clays, whether or not calcined	2507.00.0000	Free.
Bentonite	2508.10.0000	Free.
Fuller's and decolorizing earths	2508.20.0000	Free.
Fire clay	2508.30.0000	Free.
Common blue and other ball clays	2508.40.0010	Free.
Other clays	2508.40.0050	Free.
Chamotte or dina's earth	2508.70.0000	Free.
Activated clays and earths	3802.90.2000	2.5% ad val.
Expanded clays and mixtures	6806.20.0000	Free.

**Depletion Allowance:** Ball clay, bentonite, fire clay, fuller's earth, and kaolin, 15% (Domestic and foreign); brick and tile clay used in the manufacture of common brick, drain and roofing tile, sewer pipe, flower pots, and kindred products, 5% (Domestic and foreign).

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**Government Stockpile:** None.

**Events, Trends, and Issues:** The amount of clay and shale sold or used by domestic producers increased slightly in 1999. Small increases were reported for ball clay, bentonite, common clay, and kaolin. Sales and use of fire clay and fuller's earth were unchanged from 1998. Imports for consumption increased to 97,000 tons in 1999 from 86,000 tons in 1998. Imports of kaolin from Brazil have risen dramatically in the past 3 years, increasing from less than 1,000 tons in 1996 to a projected 48,000 tons in 1999. Brazil, Mexico, and the United Kingdom were the major sources for imported clays. Tariffs were eliminated for many of the clay varieties. Exports decreased to 4.7 million tons in 1999 from 5.2 millions tons in 1998. Exports declined for all clay types except fuller's earth. Canada, Finland, Japan, and the Netherlands were major markets for exported clays. U.S. apparent consumption was estimated to be 37.6 million tons.

**World Mine Production, Reserves, and Reserve Base:** Not available.

**World Resources:** Clays are divided for commercial purposes into ball clay, bentonite, common clay, fire clay, fuller's earth, and kaolin. Resources of these types of clay are extremely large except for lesser resources of high-grade ball clay and sodium-bentonite. Resources of kaolin in Georgia are estimated to be 5 to 10 billion tons.

**Substitutes:** Limited substitutes and alternatives, such as calcium carbonate and talc, are available for filler and extender applications.

<sup>0</sup>Estimated. E Net exporter. NA Not available.

<sup>1</sup>Excludes Puerto Rico.

<sup>2</sup>Refractory uses only.

<sup>3</sup>Data may not add to total shown because of independent rounding.

<sup>4</sup>Data on stocks are not available and are assumed to be zero for apparent consumption and net import reliance calculations.

<sup>5</sup>Defined as imports - exports + adjustments for Government and industry stock changes.