CLAYS
(Data in thousand metric tons, unless otherwise noted)

**Domestic Production and Use**: In 1998, clays were produced in most States except Alaska, Delaware, Hawaii, Idaho, New Hampshire, Rhode Island, Vermont, and Wisconsin. The leading 21 firms supplied 50% of the tonnage, and 219 firms provided the remainder. Together, these firms operated approximately 766 mines. The estimated value of all marketable clay produced was about $2.14 billion. Major domestic uses for specific clays were estimated as follows: ball clay—30% floor and wall tile, 21% sanitaryware, 10% pottery, and 39% other uses; bentonite—26% foundry sand bond, 23% drilling mud, 17% pet waste absorbent, 15% iron ore pelletizing, and 9% other uses; common clay—52% brick, 23% cement, and 16% lightweight aggregate; fire clay—53% refractories and 47% other uses; fuller’s earth—75% absorbent uses, 8% insecticide dispersant, and 17% other uses; and kaolin—56% paper, 14% refractories, 7% fiberglass, 5% paint, and 18% other uses.

### Salient Statistics—United States:

<table>
<thead>
<tr>
<th>Year</th>
<th>Ball Clay</th>
<th>Bentonite</th>
<th>Common Clay</th>
<th>Fire Clay</th>
<th>Fuller’s Earth</th>
<th>Kaolin</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>1,050</td>
<td>3,290</td>
<td>25,900</td>
<td>458</td>
<td>2,640</td>
<td>8,770</td>
<td>42,000</td>
</tr>
<tr>
<td>1995</td>
<td>993</td>
<td>3,820</td>
<td>25,600</td>
<td>583</td>
<td>2,640</td>
<td>9,480</td>
<td>43,100</td>
</tr>
<tr>
<td>1996</td>
<td>935</td>
<td>3,740</td>
<td>26,200</td>
<td>505</td>
<td>2,600</td>
<td>9,480</td>
<td>43,100</td>
</tr>
<tr>
<td>1997</td>
<td>1,040</td>
<td>4,020</td>
<td>24,500</td>
<td>649</td>
<td>2,370</td>
<td>9,180</td>
<td>42,000</td>
</tr>
<tr>
<td>1998</td>
<td>1,130</td>
<td>4,030</td>
<td>24,900</td>
<td>604</td>
<td>2,500</td>
<td>9,770</td>
<td>43,000</td>
</tr>
</tbody>
</table>

**Imports for Consumption**
- 1994: 36
- 1995: 35
- 1996: 45
- 1997: 64
- 1998: 75

**Exports**
- 1994: 4,620
- 1995: 4,680
- 1996: 4,830
- 1997: 5,080
- 1998: 5,100

**Consumption, Apparent**
- 1994: 37,600
- 1995: 38,500
- 1996: 38,300
- 1997: 37,000
- 1998: 38,000

**Price, Average, Dollars per Ton**
- Ball Clay: 43–46
- Bentonite: 41–36
- Common Clay: 5–6
- Fire Clay: 25–21
- Fuller’s Earth: 92–106
- Kaolin: 116–117

**Stocks, Yearend**
- 1994: NA
- 1995: NA
- 1996: NA

**Employment, Number**
- Mine: 4,500–4,900
- Mill: 9,000–9,000

**Net Import Reliance as a Percent of Apparent Consumption**
- 1994: E
- 1995: E
- 1996: E
- 1997: E
- 1998: E

**Recycling**: Insignificant.

**Import Sources (1994-97)**: Mexico, 33%; United Kingdom, 19%; Canada, 9%; China, 8%; and other, 31%.

**Tariff**: Item | Number | Normal Trade Relations (NTR) 12/31/98 | Non-NTR 12/31/98
--- | --- | --- | ---
Kaolin and other kaolinic clays, whether or not calcined | 2507.00.0000 | 6.5¢/t | $2.46/t.
Bentonite | 2508.10.0000 | 7.9¢/t | $3.20/t.
Fuller’s and decolorizing earths | 2508.20.0000 | 4.9¢/t | $1.48/t.
Fire clay | 2508.30.0000 | 9.8¢/t | $1.97/t.
Common blue and other ball clays | 2508.40.0010 | 9.4¢/t | $1.97/t.
Other clays | 2508.40.0050 | 9.4¢/t | $1.97/t.
Chamotte or dinas earth | 2508.70.0000 | Free | Free.
Activated clays and earths | 3802.90.2000 | 2.5% ad val. | 0.6¢ per kg +.
Expanded clays and mixtures | 6806.20.0000 | 1% ad val. | 30% ad val.

**Depletion Allowance**: Kaolin, ball clay, bentonite, fuller’s earth, and fire clay, 14% (Domestic), 14% (Foreign); clay used for extraction of alumina or aluminum compounds, 22% (Domestic); clay and shale used for making brick, tile, and lightweight aggregate, 7.5% (Domestic), 7.5% (Foreign); clay used in making drainage and roofing tile, flowerpots, and kindred products, 5% (Domestic), 5% (Foreign).

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CLAYS

Government Stockpile: None.

Events, Trends, and Issues: The total tonnage of clays sold or used by domestic producers increased slightly in 1998. There was an increase in sales and/or use for ball clay, bentonite, common clay, fuller’s earth, and kaolin. Imports for consumption increased to 75,000 tons. Mexico and the United Kingdom were the major sources for imported clays. Exports increased to 5.1 million tons. Canada, Finland, Japan, and the Netherlands were major markets for exported clays. U.S. apparent consumption was estimated to be 38 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.

*Estimated.  E Net exporter.  NA Not available.
1Excludes Puerto Rico.
2Refractory uses only.
3Data may not add to total shown because of independent rounding.
4Data on stocks are not available and are assumed to be zero for apparent consumption and net import reliance calculations.
5Defined as imports - exports + adjustments for Government and industry stock changes.
6See Appendix B.