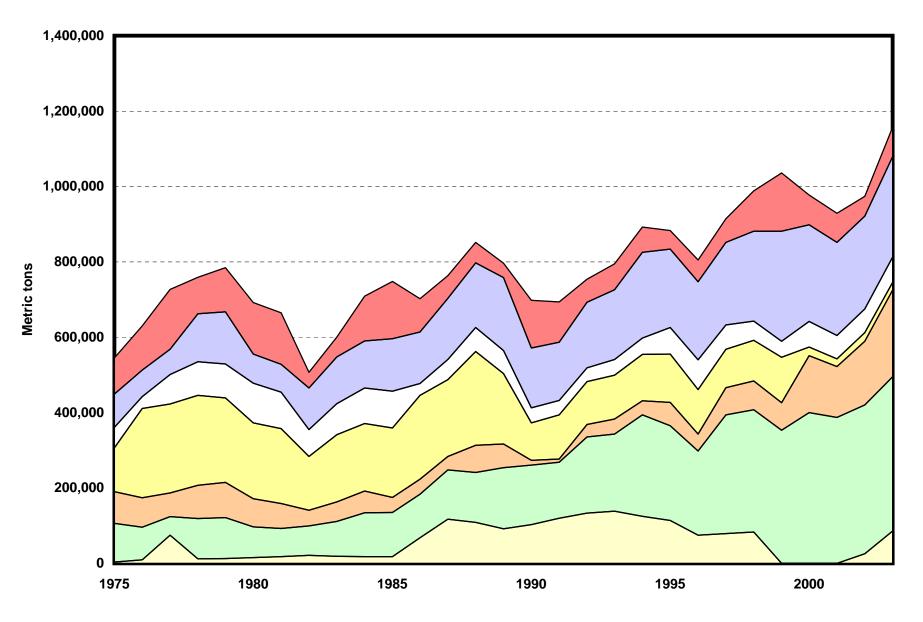
# BALL CLAY END-USE STATISTICS<sup>1</sup> U.S. GEOLOGICAL SURVEY

[Metric tons] Last modification: September 15, 2005

	Fillers, extenders,	Floor and wall		•	Í			Trade	Apparent
Year	and binders	tile	Ceramics	Pottery	Refractories	Sanitaryware	Miscellaneous	adjustments	consumption
1975	3,430	103,000	83,900	116,000	54,300	88,200	96,300	-35,300	510,000
1976	9,140	86,400	78,700	237,000	30,800	71,100	117,000	-35,400	594,000
1977	74,700	49,300	62,900	236,000	77,800	67,400	159,000	-10,700	715,000
1978	11,800	107,000	88,000	239,000	88,700	128,000	96,400	-34,100	725,000
1979	13,000	108,000	94,100	224,000	90,200	138,000	117,000	-30,400	754,000
1980	14,900	82,200	74,200	201,000	106,000	76,600	137,000	-64,500	628,000
1981	18,000	74,500	66,100	199,000	97,000	73,300	137,000	-83,400	581,000
1982	21,000	78,100	41,500	143,000	71,000	111,000	41,200	-49,800	457,000
1983	18,900	92,700	51,600	178,000	82,700	124,000	52,500	-51,800	549,000
1984	17,800	116,000	58,300	179,000	94,100	125,000	119,000	-70,500	639,000
1985	17,700	117,000	39,800	185,000	97,400	139,000	152,000	-113,000	634,000
1986	67,700	116,000	40,000	222,000	31,800	136,000	88,500	-40,300	661,000
1987	117,000	131,000	35,200	204,000	53,400	162,000	60,900	-31,400	732,000
1988	109,000	132,000	72,700	248,000	64,200	171,000	54,600	-46,400	806,000
1989	92,000	162,000	62,600	187,000	60,900	194,000	37,800	-48,500	748,000
1990	103,000	158,000	12,000	100,000	40,000	158,000	127,000	23,400	720,000
1991	120,000	148,000	9,000	117,000	38,000	155,000	107,000	32,800	727,000
1992	133,000	202,000	33,300	114,000	36,100	174,000	61,900	51,400	806,000
1993	138,000	205,000	39,800	116,000	42,000	185,000	69,200	56,700	852,000
1994	125,000	269,000	37,300	123,000	43,300	228,000	67,100	46,800	940,000
1995	114,000	251,000	62,200	128,000	70,800	208,000	48,900	83,400	966,000
1996	74,900	223,000	45,500	118,000	78,900	207,000	57,800	50,400	856,000
1997	78,600	315,000	72,400	102,000	64,600	219,000	62,600	55,800	970,000
1998	82,900	325,000	76,000	108,000	50,600	239,000	107,000	4,670	993,000
1999	W	353,000	72,900	121,000	42,200	292,000	155,000	54,800	1,090,000
2000	W	400,000	151,000	22,700	68,500	256,000	78,600	64,500	1,040,000
2001	W	387,000	135,000	20,500	62,200	247,000	76,900	11,600	940,000
2002	25,100	395,000	169,000	23,100	63,100	246,000	52,200	19,400	993,000
2003	85,800	409,000	230,000	21,000	66,600	267,000	78,100	26,800	1,180,000

W Withheld to avoid disclosing company proprietary data; data included in the miscellaneous category. 
<sup>1</sup>Compiled by G.R. Matos and R.L. Virta.

## **End Uses of Ball Clay**



□ Fillers, extenders, and binders □ Floor and wall tile □ Ceramics □ Pottery □ Refractories □ Sanitaryware ■ Miscellaneous

### **Ball Clay End-Use Worksheet Notes**

#### **Data Source**

The source of data for the ball clay end-use worksheet is the Minerals Yearbook, an annual collection, compilation, and analysis of mineral industry data, published by the U.S. Bureau of Mines and the U.S. Geological Survey.

#### **End Use**

End use is defined as the use of the mineral commodity in a particular industrial sector or product. For ball clay sold or used by producers, end-uses categories are fillers, extenders, and binders; floor and wall tile; ceramics; pottery; refractories; sanitaryware; and miscellaneous uses. The trade adjustments category includes imports for which ball clay applications are unknown and discrepancies of exports reported by producers and exports reported by the U.S. Census Bureau.

Sales of ball clay for filler, extenders, and binders are relatively small and often depend on spot markets for sales. This results in large variations from year-to-year in sales tonnages. Ball clay also competes with many other minerals as filler and extender, so sales gain and lose relative to these other minerals. In the mid-1990s, ball clay lost its animal feed binder market as a result of a health-related issue, causing a large decline in end-use sales afterwards.

Other markets, particularly sanitaryware and tile are influenced by housing starts and commercial construction trends so sales of ball clay generally follow these trends. For 2000 to 2002, a large portion of pottery sales is included in the ceramics category. The long decline in domestic clay-based pottery is due to competition from alternative products, primarily plastics and imported goods.

W in the spreadsheet indicates information withheld to avoid disclosing company proprietary data; data are included in the miscellaneous category. A negative number in the trade adjustments category indicates net exports of ball clay. Data are rounded to no more than three significant digits; data may not add to totals shown.

#### References

- U.S. Bureau of Mines, 1977–96, Minerals Yearbook, v. I, 1975–94.
- U.S. Geological Survey, 1997–2005, Minerals Yearbook, v. I, 1995–2003.

#### **Recommended Citation Format:**

- (1) If taken from CD version:
- U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, *in* Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, one CD-ROM. (Also available online at http://pubs.usgs.gov/ds/2005/140/.)
- (2) If taken from online version:
- U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, *in* Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, available online at http://pubs.usgs.gov/ds/2005/140/. (Accessed [date].)

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