

CLAYS

(Data in thousand metric tons unless otherwise specified)

Domestic Production and Use: Production of clays (sold or used) in the United States was estimated to be 26 million tons valued at \$1.8 billion in 2025, with about 120 companies operating clay and shale mines in 38 States. Principal domestic uses for specific clays were estimated to be as follows: ball clay (53% floor and wall tile), bentonite (48% pet waste absorbents and 22% drilling mud), common clay (43% brick, 31% lightweight aggregate, and 21% cement), fuller's earth (79% absorbents, including oil and grease absorbents, pet waste absorbents, and miscellaneous absorbents), and kaolin (56% fillers, extenders, and binders and 20% ceramics). Fire clay uses were withheld to avoid disclosing company proprietary data.

In 2025, the United States exported an estimated 640,000 tons of bentonite; Canada, Japan, and Mexico, in decreasing order, were the estimated leading destinations. About 1.6 million tons of kaolin was exported mainly as a paper coating and filler; a component in ceramic bodies; and fillers and extenders in paint, plastic, and rubber products; Mexico, Japan, and China, in decreasing order, were the estimated leading destinations. Lesser quantities of ball clay, fire clay, and fuller's earth were exported.

Salient Statistics—United States:

Production (sold or used):

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025^e</u>
Ball clay ^e	1,080	1,030	1,000	935	990
Bentonite ¹	4,580	4,580	4,340	3,990	4,100
Common clay ¹	12,800	13,000	12,600	12,900	13,000
Fire clay ¹	675	622	685	688	720
Fuller's earth ^{e, 2}	2,190	2,260	2,380	2,440	2,400
Kaolin ^e	4,390	4,390	4,600	4,640	4,800
Total ^{2, 3}	25,700	25,900	25,600	25,600	26,000

Imports for consumption:

Artificially activated clays and earths	41	58	72	68	59
Kaolin	149	200	125	176	19
Other	47	49	35	66	59
Total ³	237	306	232	310	140

Exports:

Artificially activated clays and earths	139	134	92	103	96
Ball clay	139	165	145	174	320
Bentonite	861	830	785	740	640
Clays, not elsewhere classified	186	208	194	212	400
Fire clay ⁴	210	158	133	147	130
Fuller's earth	83	87	70	71	70
Kaolin	2,330	2,020	1,510	1,640	1,600
Total ³	3,950	3,610	2,930	3,080	3,300

Consumption, apparent⁵

22,000	22,600	22,900	22,800	23,000
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Price, average unit value, ex-works, dollars per metric ton:

Ball clay	46	47	46	47	47
Bentonite	100	101	103	105	110
Common clay	17	17	18	21	21
Fire clay	12	12	15	17	17
Fuller's earth ²	90	91	90	89	88
Kaolin	151	156	160	162	170

Employment (excludes office workers), number:^e

Mine (may not include contract workers)	1,060	1,060	1,110	1,200	1,100
Mill	4,240	4,240	4,320	4,400	4,600

Net import reliance⁶ as a percentage of apparent consumption

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Recycling: Insignificant.

Import Sources (2021–24): All clay types combined: Brazil, 56%; Mexico, 24%; Canada, 3%; China 3%; and other, 14%.

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<u>Tariff:</u> Item	Number	Normal Trade Relations <u>12-31-25</u>
Kaolin and other kaolinic clays, whether or not calcined	2507.00.0000	Free.
Bentonite	2508.10.0000	Free.
Fire clay	2508.30.0000	Free.
Common blue clay and other ball clays	2508.40.0110	Free.
Decolorizing earths and fuller's earth	2508.40.0120	Free.
Other clays	2508.40.0150	Free.
Chamotte or dinas earth	2508.70.0000	Free.
Activated clays and activated earths	3802.90.2000	2.5% ad valorem.

Depletion Allowance: Ball clay, bentonite, fire clay, fuller's earth, and kaolin, 14% (domestic and foreign); clay used in the manufacture of common brick, lightweight aggregate, and sewer pipe, 7.5% (domestic and foreign); clay used in the manufacture of drain and roofing tile, flowerpots, and kindred products, 5% (domestic and foreign); clay from which alumina and aluminum compounds are extracted, 22% (domestic).

Government Stockpile: None.

Events, Trends, and Issues: The total tonnage of clays sold or used by domestic producers increased from that in 2024. Imports for all types of clay decreased to 140,000 tons compared with 310,000 tons in 2024. There has been a reduction in kaolin imports from Brazil since mid-2024. The July 2024 acquisition of a division of a major industrial mineral company that owned a large kaolin operation in Brazil may have contributed to the decrease. U.S. apparent consumption of total clays in 2025 was estimated to be 23 million tons, compared with 22.8 million tons in 2024.

World Mine Production and Reserves:⁷ Significant revisions were made to the 2024 production for some countries based on company and Government reports. Global reserves are large, but country-specific data were not available.

	Bentonite		Mine production		Kaolin	
	2024	2025 ^e	Fuller's earth		2024	2025 ^e
			2024	2025 ^e		
United States ¹	3,990	4,100	2,440	2,400	4,640	4,800
China	2,100	2,100	—	—	7,800	7,800
Czechia	185	190	—	—	2,420	2,400
Greece	1,030	1,000	49	50	—	—
India	3,700	3,700	730	730	8,370	8,400
Iran	1,300	1,300	—	—	2,100	2,100
Mexico	77	80	120	120	52	50
Russia	35	40	—	—	5,000	5,000
Senegal	—	—	190	190	—	—
Spain	120	120	693	690	403	400
Turkey	2,530	2,500	26	30	2,000	2,000
Uzbekistan	60	60	—	—	5,400	6,000
Other countries	4,290	4,300	189	190	10,900	11,000
World total (rounded) ³	19,400	20,000	24,430	24,400	49,100	50,000

World Resources:⁷ Resources of all clays are extremely large.

Substitutes: Clays compete with calcium carbonate in filler and extender applications; diatomite, organic pet litters, polymers, silica gel, and zeolites as absorbents; and various siding and roofing types in building construction.

^aEstimated. E Net exporter. — Zero.

¹Includes U.S. Geological Survey estimates.

²Does not include U.S. production of attapulgite.

³Data may not add to totals shown because of independent rounding.

⁴Includes refractory-grade kaolin.

⁵Defined as production (sold or used) + imports – exports.

⁶Defined as imports – exports.

⁷See Appendix C for resource and reserve definitions and information concerning data sources.

⁸Includes production of crude ore.