

STONE (CRUSHED)¹

(Data in million metric tons unless otherwise noted)

Domestic Production and Use: In 2022, 1.5 billion tons of crushed stone valued at more than \$21 billion was produced by an estimated 1,340 companies operating 3,290 quarries and 170 sales and (or) distribution yards in 50 States. Leading States were, in descending order of production, Texas, Florida, Missouri, Pennsylvania, Ohio, Georgia, North Carolina, Tennessee, Kentucky, and Indiana, which together accounted for about 55% of total crushed stone output. Of the total domestic crushed stone produced in 2022, about 70% was limestone and dolomite; 15%, granite; 6%, traprock; 5%, miscellaneous stone; 3%, sandstone and quartzite; and the remaining 1% was divided, in descending order of tonnage, among marble, volcanic cinder and scoria, calcareous marl, slate, and shell. An estimated 74% of crushed stone was used as a construction aggregate, mostly for road construction and maintenance; 17% for cement manufacturing; 5% for lime manufacturing; 1% for agricultural uses; and the remaining 3% for other chemical, special, and miscellaneous uses and products.

The output of crushed stone in the United States shipped for consumption in the first 9 months of 2022 was 1.14 billion tons, an increase of 3% compared with that in the same period in 2021. Third-quarter shipments for consumption increased by 3% compared with those in the same period in 2021. Additional production information, by quarter, for each State, geographic division, and the United States is reported by the U.S. Geological Survey in its quarterly Mineral Industry Surveys for construction sand and gravel and crushed stone.

Salient Statistics—United States:	2018	2019	2020	2021	2022^e
Production	1,390	1,460	1,440	1,500	1,500
Recycled material	30	31	32	33	33
Imports for consumption	21	24	20	19	18
Exports	(2)	(2)	(2)	(2)	(2)
Consumption, apparent ³	1,440	1,510	1,490	1,550	1,600
Price, average unit value, dollars per metric ton	11.61	12.33	12.69	13.21	14.00
Employment, quarry and mill, number ⁴	68,500	69,000	68,000	68,900	69,000
Net import reliance ⁵ as a percentage of apparent consumption	1	2	1	1	1

Recycling: Road surfaces made of asphalt concrete and portland cement concrete surface layers, which contain crushed stone aggregate, were recycled on a limited but increasing basis in most States. In 2022, asphalt and portland cement concrete road surfaces were recycled in all 50 States.

Import Sources (2018–21): Mexico, 53%; Canada, 28%; The Bahamas, 13%; Honduras, 5%; and other, 1%.

Tariff:	Item	Number	Normal Trade Relations 12–31–22
Chalk:			
	Crude	2509.00.1000	Free.
	Other	2509.00.2000	Free.
	Limestone, except pebbles and gravel	2517.10.0020	Free.
	Crushed or broken stone	2517.10.0055	Free.
	Marble granules, chippings and powder	2517.41.0000	Free.
	Stone granules, chippings and powders	2517.49.0000	Free.
	Limestone flux; limestone and other calcareous stone	2521.00.0000	Free.

Depletion Allowance: For some special uses, 14% (domestic and foreign); if used as ballast, concrete aggregate, riprap, road material, and similar purposes, 5% (domestic and foreign).

Government Stockpile: None.

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Events, Trends, and Issues: U.S. crushed stone production was about 1.50 billion tons in 2022, essentially unchanged compared with 1.50 billion tons in 2021. Apparent consumption increased to 1.6 billion tons. Consumption of crushed stone increased in 2022 because of growth in the private and public construction markets. Usually, commercial and heavy-industrial construction activity, infrastructure funding, labor availability, new single-family housing unit starts, and weather affect rates of crushed stone production and consumption. Long-term increases in construction aggregates demand are influenced by activity in the public and private construction sectors, as well as by construction work related to infrastructure improvements around the Nation. The underlying factors that would support a rise in prices of crushed stone are expected to be present in 2023, especially in and near metropolitan areas.

The crushed stone industry continued to be concerned with environmental, health, safety, and zoning regulations. On November 15, 2021, the Infrastructure Investment and Jobs Act was signed into law. The legislation reauthorizes surface transportation programs for 5 years and invests \$110 billion in additional funding to repair roads and bridges and support major, transformational projects. Shortages in some urban and industrialized areas are expected to continue to increase owing to local zoning regulations and land-development alternatives. These issues are expected to continue and to cause new crushed stone quarries to be located away from large population centers. Resultant regional shortages of crushed stone and higher fuel costs could result in higher-than-average price increases in industrialized and urban areas.

World Mine Production and Reserves:

	Mine production		Reserves⁶
	<u>2021</u>	<u>2022^e</u>	
United States	1,500	1,500	Adequate, except where special types are needed or where local shortages exist.
Other countries ⁷	<u>NA</u>	<u>NA</u>	
World total	NA	NA	

World Resources:⁶ Stone resources are plentiful throughout the world. The supply of high-purity limestone and dolomite suitable for specialty uses is limited in many geographic areas. The largest resources of high-purity limestone and dolomite in the United States are in the central and eastern parts of the country.

Substitutes: Crushed stone substitutes for roadbuilding include sand and gravel, and iron and steel slag. Substitutes for crushed stone used as construction aggregates include construction sand and gravel, iron and steel slag, sintered or expanded clay or shale, perlite, or vermiculite. Increasingly, recycled asphalt and portland cement concretes are being substituted for virgin aggregate, although the percentage of total aggregate supplied by recycled materials remained very small in 2022.

^eEstimated. NA Not available.

¹See also the Sand and Gravel (Construction) and Stone (Dimension) chapters.

²Less than ½ unit.

³Defined as production + recycled material + imports – exports.

⁴Including office staff. Source: Mine Safety and Health Administration.

⁵Defined as imports – exports.

⁶See Appendix C for resource and reserve definitions and information concerning data sources.

⁷No reliable production information is available for most countries owing to the wide variety of ways in which countries report their crushed stone production. Some countries do not report production for this mineral commodity. Production information for some countries is available in the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International.