SAND AND GRAVEL (INDUSTRIAL)[1]

(Data in thousand metric tons unless otherwise specified)

Domestic Production and Use: In 2025, industrial sand and gravel sold or used was an estimated 120 million tons valued at an estimated $4.5 billion. The quantity of industrial sand and gravel sold or used decreased by 5%, and the value decreased by 16% compared with that in 2024. Industrial sand and gravel was produced by 131 companies from 207 operations in 38 States. The leading producing States were, in descending order of production, Texas, Wisconsin, Oklahoma, and Louisiana. Combined production from these States accounted for 77% of total domestic sales and use. Approximately 81% of the U.S. tonnage was used as hydraulic-fracturing sand (frac sand) and well-packing and cementing sand, and 7% as glassmaking sand. Other common uses were, in decreasing quantity of use, fillers, foundry sand, filtration sand and gravel, and recreational sand, which accounted for 7% combined. Other minor uses were, in decreasing quantity of use, chemicals, abrasives, silicon and ferrosilicon, ceramics, traction sand, and metallurgical sand, which accounted for 1% combined. Other unspecified uses accounted for 4% combined.

Salient Statistics—United States:	**2021**	**2022**	**2023**	**2024**	**2025[e]**
Sold or used	91,200	121,000	136,000	131,000	120,000
Imports for consumption	350	338	211	272	210
Exports[2]	5,350	6,290	7,050	7,700	8,000
Consumption, apparent[3]	86,200	115,000	129,000	123,000	120,000
Price, average value, dollars per metric ton	40.80	45.40	42.90	40.90	36
Employment, quarry and mill, number[e]	5,300	6,000	6,100	6,200	6,200
Net import reliance[4] as a percentage of apparent consumption	E	E	E	E	E

Recycling: Recycled cullet (pieces of glass) represents a significant proportion of reused silica. About 33% of glass containers are recycled. Some abrasive and foundry sands are recycled or reclaimed.

Import Sources (2021–24): Canada, 84%; Vietnam, 5%; Republic of Korea, 4%; Taiwan, 3%; and other, 4%.

Tariff: Item	**Number**	**Normal Trade Relations 12–31–25**
Sand containing 95% or more silica and not more than 0.6% iron oxide	2505.10.1000	Free.

Depletion Allowance: Common varieties, 5% (domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: The most important driving force in the industrial sand and gravel industry remained the production and sale of frac sand. U.S. apparent consumption of industrial sand and gravel was estimated to be 120 million tons in 2025, a 6% decrease from that in 2024. An oversupply of frac sand led to lower prices, which caused some operations to decrease production or idle operations. Imports of industrial sand and gravel in 2025 were an estimated 210,000 tons, a 22% decrease from those in 2024. U.S. exports of industrial sand and gravel were an estimated 8 million tons, a 4% increase from those in 2024. The United States remained a net exporter of industrial sand and gravel.

Onshore rig counts for oil and gas production are often used as an indicator of frac sand consumption. However, frac sand used per well has increased in recent years owing to an increase of both the average length of wells and proppant intensity (proppant per meter of lateral length). In the first 10 months of 2025, the average active onshore rig count[5] was 549, a 6% decrease compared with the average onshore active rig count of 582 during the same period in 2024. The active onshore rig count[5] at the end of October 2025 was 525, an 8% decrease compared with the active onshore rig count of 573 at the beginning of 2025.

The industrial sand and gravel industry continued to be concerned with safety and health regulations and environmental restrictions in 2025, especially those concerning crystalline silica exposure. Local shortages of industrial sand and gravel were expected to persist owing to land development priorities, local zoning regulations, and logistical issues. Increased efforts to reduce cost, emissions, and the risk of exposure to crystalline silica have led to an increase of in-basin “dry sand” and undried “wet sand” being sold or used as frac sand instead of conventional “dry sand” from out-of-basin sources. In 2025, petroleum coke-based lightweight proppant increased in use as a substitute for frac sand, driven by its lower cost and potential to improve well recovery.

Prepared by **Robert C. Goodin [(703) 648–7710, rgoodin@usgs.gov]**

SAND AND GRAVEL (INDUSTRIAL)

On July 1, 2025, Texas, which was the leading producing state of industrial sand and gravel in 2025, began treating frac sand as a taxable processed material, ending its long-standing sales tax exemption.

In 2025, multiple companies that produced industrial sand and gravel were acquired by or merged with other companies.

The United States was the world's leading producer and consumer of industrial sand and gravel based on estimated world production figures. Collecting definitive data on industrial sand and gravel production for most nations is difficult because of the wide range of terminology and specifications used by different countries. The United States remained a major exporter of industrial sand and gravel, shipping it to almost every region of the world.

World Mine Production and Reserves: Production in 2024 for Italy was revised significantly based on country reports.

	Mine production[e]		Reserves[6]
	2024	2025	
United States	[7]131,000	120,000	Large. Industrial sand and gravel deposits are widespread.
Argentina	4,300	4,500	
Australia	5,500	5,600	
Bulgaria	8,770	8,800	
Canada	3,800	3,800	
China	91,000	92,000	
France	[7]12,600	13,000	
Germany	9,170	9,200	
India	11,900	12,000	
Indonesia	3,540	3,500	
Italy	[7]13,500	13,000	
Malaysia	6,000	6,000	
Mexico	2,700	2,700	
Netherlands	68,000	68,000	
Poland	5,900	5,900	
Russia	7,300	7,300	
Saudi Arabia	2,100	2,100	
Spain	6,330	6,300	
Turkey	[7]13,700	14,000	
United Kingdom	4,700	4,700	
Other countries	22,700	23,000	
World total (rounded)	434,000	430,000	

World Resources:[6] Sand and gravel resources of the world are large. However, because of their geographic distribution, environmental restrictions, and quality requirements for some uses, extraction of these resources is sometimes uneconomical. Quartz-rich sand and sandstone, the main sources of industrial silica sand, occur throughout the world.

Substitutes: Alternative materials that can be used for glassmaking, foundry, and molding sands are chromite, olivine, staurolite, and zircon sands. Alternative materials that can be used for abrasive sands are garnet, olivine, and slags. Although costlier and mostly used in deeper wells, alternative materials that can be used as proppants are sintered bauxite and kaolin-based ceramic proppants. Petroleum coke can be used as proppants, situationally offering lower costs and enhanced recovery.

[e]Estimated. E Net exporter.

[1]See also the Sand and Gravel (Construction) chapter.

[2]Modified from the previous Mineral Commodity Summaries to only include data for the following Schedule B number: 2505.10.0000.

[3]Defined as production (sold or used) + imports – exports.

[4]Defined as imports – exports.

[5]Source: Baker Hughes Co., 2025, North American rig count report—New report: Baker Hughes Co. (Accessed November 25, 2025, at https://rigcount.bakerhughes.com/na-rig-count.)

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

[7]Reported.