

GYPSUM

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: In 2020, domestic production of crude gypsum was estimated to be 22 million tons with a value of about \$190 million. The leading crude gypsum-producing States were estimated to be Iowa, Kansas, Nevada, Oklahoma, and Texas. Overall, 47 companies produced or processed gypsum in the United States at 52 mines in 16 States. The majority of domestic consumption, which totaled approximately 41 million tons, was used by agriculture, cement production, and manufacturers of wallboard and plaster products. Small quantities of high-purity gypsum, used in a wide range of industrial processes, accounted for the remaining tonnage. At the beginning of 2020, the production capacity of 63 operating gypsum panel manufacturing plants in the United States was about 34.1 billion square feet¹ per year. Total wallboard sales were estimated to be 26.0 billion square feet.

Salient Statistics—United States:	2016	2017	2018	2019	2020^e
Production:					
Crude	19,800	20,700	21,100	21,200	22,000
Synthetic ²	16,700	20,700	16,600	14,400	13,000
Calcined ³	17,900	17,800	17,500	17,500	17,000
Wallboard products sold, million square feet ¹	24,400	25,000	23,700	25,200	26,000
Imports, crude, including anhydrite	4,340	4,800	5,210	6,140	5,900
Exports, crude, not ground or calcined	43	36	36	37	32
Consumption, apparent ⁴	40,800	46,200	42,900	41,700	40,900
Price, average, dollars per metric ton:					
Crude, free on board (f.o.b.) mine	8	7.5	8.2	8.6	8.6
Calcined, f.o.b. plant	30	30	32	35	35
Employment, mine and calcining plant, number ^e	4,500	4,500	4,500	4,500	4,500
Net import reliance ⁵ as a percentage of apparent consumption	11	10	12	15	14

Recycling: Approximately 700,000 tons of gypsum scrap that was generated by wallboard manufacturing was recycled onsite. The recycling of wallboard from new construction and demolition sources also took place, although those amounts are unknown. Recycled gypsum was used primarily for agricultural purposes and feedstock for the manufacture of new wallboard. Other potential markets for recycled gypsum include athletic field marking, cement production (as a stucco additive), grease absorption, sludge drying, and water treatment.

Import Sources (2016–19): Mexico, 38%; Spain, 31%; Canada, 28%; and other, 3%.

Tariff:	Item	Number	Normal Trade Relations 12–31–20
	Gypsum; anhydrite	2520.10.0000	Free.

Depletion Allowance: 14% (domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: U.S. gypsum production increased by 4% compared with that of 2019. Apparent consumption decreased slightly compared with that of 2019. U.S. gypsum imports decreased by an estimated 4% compared with those of 2019. Exports, although very low compared with imports and often subject to wide fluctuations, decreased by 14%.

Demand for gypsum depends principally on construction industry activity, particularly in the United States, where the majority of gypsum consumed is used for agriculture, building plasters, the manufacture of portland cement, and wallboard products. The construction of wallboard manufacturing plants designed to use synthetic gypsum from coal flue gas desulfurization (FGD) units as feedstock has resulted in less mining of natural gypsum. The availability of inexpensive natural gas, however, has limited the additional construction of FGD units and, therefore, the use of synthetic gypsum in wallboard. Despite disruptions caused by the COVID-19 pandemic, the production of gypsum through the second quarter of 2020 was not affected.

GYPSUM

The United States, the world's leading crude gypsum producer, produced an estimated 22 million tons. Iran was the second-leading producer with an estimated 16 million tons of crude production, followed by China with 16 million tons. Increased use of wallboard in Asia, coupled with new gypsum product plants, spurred increased production in that region. As wallboard becomes more widely used, worldwide gypsum production is expected to increase.

World Mine Production and Reserves: Reserves for Brazil, France, and Pakistan were revised based on Government and other public data.

	Mine production		Reserves ⁶
	2019	2020 ^e	
United States	21,200	22,000	700,000
Algeria	2,500	2,500	NA
Brazil	3,000	3,200	450,000
Canada	3,000	3,000	450,000
China	15,500	16,000	NA
France	3,000	3,000	350,000
Germany	3,300	3,200	NA
India	2,700	2,700	37,000
Iran	16,000	16,000	NA
Japan	4,300	4,700	NA
Mexico	5,400	5,400	NA
Oman	9,100	11,000	NA
Pakistan	1,670	2,200	6,000
Russia	5,500	3,800	NA
Saudi Arabia	3,300	3,300	NA
Spain	7,000	7,000	NA
Thailand	9,790	9,300	1,700
Turkey	10,000	10,000	200,000
Other countries	<u>22,000</u>	<u>22,000</u>	<u>NA</u>
World total (rounded)	148,000	150,000	Large

World Resources:⁶ Reserves are large in major producing countries, but data for most are not available. Domestic gypsum resources are adequate but unevenly distributed. Large imports from Canada augment domestic supplies for wallboard manufacturing in the United States, particularly in the eastern and southern coastal regions. Imports from Mexico supplement domestic supplies for wallboard manufacturing along portions of the United States western seaboard. Large gypsum deposits occur in the Great Lakes region, the midcontinent region, and several Western States. Foreign resources are large and widely distributed; 78 countries were thought to produce gypsum in 2020.

Substitutes: In such applications as stucco and plaster, cement and lime may be substituted for gypsum; brick, glass, metallic or plastic panels, and wood may be substituted for wallboard. Gypsum has no practical substitute in the manufacturing of portland cement. Synthetic gypsum generated by various industrial processes, including FGD of smokestack emissions, is very important as a substitute for mined gypsum in wallboard manufacturing, cement production, and agricultural applications (in descending order by tonnage). In 2020, synthetic gypsum was estimated to account for about 40% of the total domestic gypsum supply.

^eEstimated. NA Not available.

¹The standard unit used in the U.S. wallboard industry is square feet; multiply square feet by 9.29×10^{-2} to convert to square meters. Source: The Gypsum Association.

²Synthetic gypsum used; the majority of these data were obtained from the American Coal Ash Association.

³From domestic crude and synthetic gypsum.

⁴Defined as domestic crude production + synthetic used + imports – exports.

⁵Defined as imports – exports.

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