

GYPSUM

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: In 2012, domestic production of crude gypsum was estimated to be 9.9 million tons with a value of about \$69.3 million. The leading crude gypsum-producing States were, in descending order, Oklahoma, Texas, Iowa, Nevada, and California, which together accounted for 58% of total output. Overall, 47 companies produced gypsum in the United States at 54 mines and plants in 34 States. Approximately 90% of domestic consumption, which totaled approximately 22 million tons, was accounted for by manufacturers of wallboard and plaster products. Approximately 1.5 million tons for cement production and agricultural applications and small amounts of high-purity gypsum for a wide range of industrial processes accounted for the remaining tonnage. At the beginning of 2012, the production capacity of operating wallboard plants in the United States was about 33 billion square feet¹ per year.

Salient Statistics—United States:	2008	2009	2010	2011	2012^e
Production:					
Crude	12,300	10,400	8,840	8,900	9,900
Synthetic ²	9,660	8,120	10,700	11,800	11,800
Calcined ³	17,900	13,800	12,100	11,900	12,100
Wallboard products sold (million square feet ¹)	20,700	18,300	17,200	17,200	17,500
Imports, crude, including anhydrite	7,330	4,220	3,330	3,330	3,400
Exports, crude, not ground or calcined	149	156	360	316	500
Consumption, apparent ⁴	29,100	22,600	22,500	23,700	24,600
Price:					
Average crude, f.o.b. mine, dollars per metric ton	8.70	8.50	6.90	7.00	7.00
Average calcined, f.o.b. plant, dollars per metric ton	42.60	35.00	29.70	30.00	30.00
Employment, mine and calcining plant, number ^e	5,400	4,500	4,500	4,500	4,500
Net import reliance ⁵ as a percentage of apparent consumption	25	18	13	13	12

Recycling: Some of the more than 4 million tons of gypsum scrap that was generated by wallboard manufacturing, wallboard installation, and building demolition was recycled. The 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 (2008–11): Canada, 60%; Mexico, 31%; Spain, 8%; and other, 1%.

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

Depletion Allowance: 14% (Domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: U.S. gypsum production increased 11% compared with that of 2011 as the housing and construction markets increased in activity. Apparent consumption increased by 4% compared with that of 2011. The world's leading gypsum producer, China, produced more than five times the amount produced in the United States, the world's fourth ranked producer. Iran is thought to rank second in world production and supplied much of the gypsum needed for construction in the Middle East. Spain, the leading European producer, ranked third in the world and supplied crude gypsum and gypsum products to much of Western Europe. An increased use of wallboard in Asia, coupled with new gypsum product plants, spurred increased production in that region. As more cultures recognize the economy and efficiency of wallboard use, worldwide production of gypsum is expected to increase.

Demand for gypsum depends principally on the strength of the construction industry, particularly in the United States, where about 95% of consumed gypsum is used for building plasters, the manufacture of portland cement, and wallboard products. If the construction of wallboard manufacturing plants designed to use synthetic gypsum from flue gas desulfurization (FGD) units as feedstock continues, this will result in less mining of natural gypsum. The availability of inexpensive natural gas, however, may limit the increase of future FGD units and, therefore, the production of synthetic gypsum. Gypsum imports increased slightly compared with those of 2011. Exports, although very low compared with imports and often subject to wide fluctuations, increased by 56%.

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World Mine Production and Reserves: Reserves for Brazil, India, and Poland were revised based on information from those countries.

	Mine production		Reserves ⁶
	<u>2011</u>	<u>2012^e</u>	
United States	8,900	9,900	700,000
Algeria	1,650	1,650	NA
Argentina	1,340	1,200	NA
Australia	3,500	3,000	NA
Brazil	2,750	2,800	230,000
Canada	2,560	2,200	450,000
China	48,000	48,000	NA
France	2,300	2,300	NA
Germany	2,020	2,050	NA
India	2,700	2,750	69,000
Iran	13,000	14,000	NA
Italy	4,130	4,100	NA
Japan	5,600	5,700	NA
Mexico	3,840	3,850	NA
Poland	1,200	1,200	55,000
Russia	3,000	3,100	NA
Saudi Arabia	2,100	2,300	NA
Spain	11,500	11,500	NA
Thailand	9,900	10,000	NA
Turkey	3,200	3,000	NA
United Kingdom	1,700	1,700	NA
Other countries	<u>14,500</u>	<u>14,900</u>	<u>NA</u>
World total (rounded)	149,000	150,000	Large

World Resources: 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 U.S. 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; 87 countries produced gypsum in 2012.

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 flue gas desulfurization of smokestack emissions, is very important as a substitute for mined gypsum in wallboard manufacturing, cement production, and agricultural applications (in descending tonnage order). In 2012, synthetic gypsum accounted for approximately 54% of the total domestic gypsum supply.

^eEstimated. NA Not available.

¹The Gypsum Association; multiply square feet by 9.29×10^{-2} to convert to square meters.

²Data refer to the amount sold or used, not produced.

³From domestic crude and synthetic.

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

⁵Defined as imports – exports.

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