

GYPSUM

(Data in thousand metric tons, unless otherwise noted)

Domestic Production and Use: In 2003, domestic production of crude gypsum was estimated at 16.0 million tons with an estimated value of \$111 million. The top producing States were, in descending order, Oklahoma, Texas, Nevada, Iowa, California, Indiana, and Michigan, which together accounted for 73% of total output. Overall, 25 companies produced gypsum at 50 mines in 17 States, and 8 companies calcined gypsum at 61 plants in 29 States. Almost 90% of domestic consumption, which totaled approximately 33.0 million tons, was accounted for by manufacturers of wallboard and plaster products. Approximately 2.62 million tons for cement production, 1.0 million tons for agricultural applications, and small amounts of high-purity gypsum for a wide range of industrial processes, such as smelting and glassmaking, accounted for the remaining uses. At the beginning of 2003, capacity of operating wallboard plants in the United States was 38.6 billion square feet¹ per year.

Salient Statistics—United States:	1999	2000	2001	2002	2003^e
Production:					
Crude	22,400	19,500	16,300	15,700	16,000
Synthetic ²	5,200	4,950	6,820	9,380	9,500
Calcined ³	22,300	21,000	19,100	18,600	21,200
Wallboard products (million square feet ¹)	28,700	26,100	29,500	29,900	31,500
Imports, crude, including anhydrite	9,340	9,210	8,270	7,970	7,640
Exports, crude, not ground or calcined	112	161	295	341	165
Consumption, apparent ⁴	36,800	33,700	31,100	32,700	33,000
Price:					
Average crude, f.o.b. mine, dollars per ton	6.99	8.44	7.31	6.90	6.90
Average calcined, f.o.b. plant, dollars per ton	17.07	16.81	18.42	20.01	20.01
Stocks, producer, crude, yearend	1,500	1,500	1,500	1,500	1,500
Employment, mine and calcining plant, number ^e	6,000	6,000	5,900	5,900	5,900
Net import reliance ⁵ as a percentage of apparent consumption	25	27	26	23	23

Recycling: A portion of more than 4 million tons of gypsum waste generated every year by wallboard manufacturing, wallboard installation, and building demolition was recycled. The recycled gypsum was used chiefly for agricultural purposes and new wallboard. Other potential markets for recycled gypsum waste are in athletic field marking, cement production as a stucco additive, grease absorption, sludge drying, and water treatment.

Import Sources (1999-2002): Canada, 68%; Mexico, 23%; Spain, 8%; and other, 1%.

Tariff:	Item	Number	Normal Trade Relations
	Gypsum; anhydrite	2520.10.0000	<u>12/31/03</u> Free.

Depletion Allowance: 14% (Domestic and foreign).

Government Stockpile: None.

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Events, Trends, and Issues: The U.S. gypsum industry continued experiencing acquisitions, mergers, bankruptcy reorganization filings, construction of new plants, and expansion of existing capacity as a result of increased efficiency of the manufacturing facilities.

Domestic housing starts in 2003 were slightly lower compared with 2002, while construction was slightly higher. The net result was a small overall gypsum production increase for the year. Demand for gypsum depends principally on the strength of the construction industry—particularly in the United States, where more than 95% of the gypsum consumed is used for wallboard products, building plasters, and the manufacture of portland cement. Road building and repair will continue to spur gypsum consumption in the cement industry. The construction of more large wallboard plants designed to use synthetic gypsum will significantly accelerate substitution as they become operational.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves ⁶	Reserve base ⁶
	2002	2003 ^e		
United States	15,700	16,000	700,000	Large
Australia	4,000	4,000		
Austria	1,000	1,000		
Brazil	1,510	1,650	1,300,000	Large
Canada	8,850	9,000	450,000	Large
China	6,850	6,900		
Egypt	2,000	2,000		
France	3,500	3,500		
India	2,300	2,300		
Iran	11,500	11,500		
Italy	1,300	1,200		
Japan	5,900	5,700		
Mexico	6,500	6,800		
Poland	1,100	1,100		
Spain	7,500	7,500		
Thailand	6,330	6,500		
United Kingdom	1,500	1,500		
Uruguay	1,130	1,100		
Other countries	<u>12,500</u>	<u>12,500</u>		
World total (rounded)	101,000	102,000	Large	Large

Reserves and reserve base are large in major producing countries, but data are not available.

World Resources: Domestic resources are adequate but unevenly distributed. Large imports from Canada augment domestic supplies for wallboard manufacturing on the eastern seaboard of the United States, where there are no significant gypsum deposits. Large imports from Mexico augment domestic supplies for wallboard manufacturing on the U.S. western seaboard. Large deposits occur in the Great Lakes region, midcontinental region, and California. Foreign resources are large and widely distributed; more than 90 countries produce gypsum.

Substitutes: Other construction materials may be substituted for gypsum, especially cement, lime, lumber, masonry, and steel. 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 becoming very important as a substitute for mined gypsum in wallboard manufacturing, cement production, and agricultural applications (in descending tonnage order). In 2003, synthetic gypsum accounted for 26% of the total domestic gypsum supply.

^eEstimated.

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.

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

³From domestic crude.

⁴Defined as crude + total synthetic reported used + net import reliance.

⁵Defined as imports – exports + adjustments for industry stock changes.

⁶See Appendix C for definitions.