

LIME¹

(Data in thousand metric tons unless otherwise specified)

Domestic Production and Use: In 2024, an estimated 16 million tons of quicklime and hydrated lime was produced (excluding independent commercial hydrators²), valued at about \$3.2 billion. Lime was produced by 26 companies—17 with commercial sales and 9 that produced lime strictly for internal use (for example, sugar companies). These companies had 73 primary lime plants (plants operating quicklime kilns) in 28 States and Puerto Rico. Of the 26 companies, 5 operated only hydrating plants in nine States. In 2024, the five leading U.S. lime companies produced quicklime or hydrated in 22 States and accounted for about 80% of U.S. lime production. Principal producing States were Alabama, Missouri, Ohio, and Texas. Major markets for lime were, in descending order of consumption, steelmaking, chemical and industrial applications (such as the manufacture of fertilizer, glass, paper and pulp, and precipitated calcium carbonate, and in sugar refining), flue gas treatment, construction, water treatment, and nonferrous-metal mining.

Salient Statistics—United States:

	2020	2021	2022	2023	2024^e
Production ^{2, 3}	15,800	16,800	17,000	16,000	16,000
Imports for consumption	308	323	354	343	370
Exports	266	335	304	344	330
Consumption, apparent ⁴	15,900	16,800	17,000	16,000	16,000
Price, average value, dollars per metric ton at plant:					
Quicklime	131.4	133.4	151.3	183.1	190
Hydrated	156.0	159.6	183.1	235.0	240
Net import reliance ⁵ as a percentage of apparent consumption	<1	E	<1	E	<1

Recycling: Large quantities of lime are regenerated by paper mills. Some municipal water-treatment plants regenerate lime from softening sludge. Quicklime is regenerated from waste hydrated lime in the carbide industry. Data for these sources were not included as production to avoid double counting.

Import Sources (2020–23): Canada, 82%; Mexico, 13%; and other, 5%.

Tariff:	Item	Number	Normal Trade Relations 12–31–24
Calcined dolomite	2518.20.0000		3% ad valorem.
Quicklime	2522.10.0000		Free.
Slaked lime	2522.20.0000		Free.
Hydraulic lime	2522.30.0000		Free.

Depletion Allowance: Limestone produced and used for lime production, 14% (domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: In 2024, domestic lime production was estimated to be unchanged from that in 2023. However, some of the lime producers have increased product pricing owing to increased costs of production. Several companies were planning to accelerate their decarbonization efforts in the production of lime. In 2024, a total of 73 quicklime plants were in operation along with 10 hydrating plants. Hydrated lime is a dry calcium hydroxide powder made from reacting quicklime with a controlled amount of water in a hydrator. It is used in chemical and industrial, construction, and environmental applications.

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World Lime Production and Limestone Reserves:

	Production ⁶		Reserves ⁷
	2023	2024 ^e	
United States	16,000	16,000	Adequate for all countries with listed production.
Australia	1,970	2,000	
Belgium ⁸	1,040	1,000	
Brazil	8,100	8,100	
Bulgaria	1,310	1,300	
Canada	1,920	1,900	
China	310,000	310,000	
France	3,500	3,500	
Germany	5,700	5,700	
India	17,000	17,000	
Iran	4,000	4,000	
Italy ⁸	2,400	2,400	
Japan (quicklime only)	6,010	6,000	
Korea, Republic of	5,100	5,100	
Malaysia	1,500	1,500	
Poland (hydrated and quicklime)	1,280	1,300	
Russia (industrial and construction)	11,400	11,000	
South Africa	1,100	1,100	
Spain	1,700	1,700	
Turkey	4,060	4,100	
Ukraine	1,000	1,000	
United Kingdom	1,400	1,400	
Other countries	17,000	17,000	
World total (rounded)	424,000	420,000	

World Resources:⁷ Domestic and world resources of limestone and dolomite suitable for lime manufacture are very large.

Substitutes: Limestone is a substitute for lime in many applications, such as agriculture, fluxing, and sulfur removal. Limestone, which contains less reactive material, is slower to react and may have other disadvantages compared with lime, depending on the application; however, limestone is considerably less expensive than lime. Calcined gypsum is an alternative material in industrial plasters and mortars. Cement, cement kiln dust, fly ash, and lime kiln dust are potential substitutes for some construction uses of lime. Magnesium hydroxide is a substitute for lime in pH control, and magnesium oxide is a substitute for dolomitic lime as a flux in steelmaking.

^eEstimated. E Net exporter.

¹Data are for quicklime, hydrated lime, and refractory dead-burned dolomite. Includes Puerto Rico.

²To avoid double counting quicklime production, excludes independent commercial hydrators that purchase quicklime for hydration.

³Sold or used by producers.

⁴Defined as production + imports – exports. Includes some double counting based on nominal, undifferentiated reporting of company export sales as U.S. production.

⁵Defined as imports – exports.

⁶Only countries that produced 1 million tons or more of lime are listed separately.

⁷See Appendix C for resource and reserve definitions and information concerning data sources.

⁸Includes hydraulic lime.