LIME1

(Data in thousand metric tons, unless otherwise noted)²

<u>Domestic Production and Use</u>: In 2002, 18.4 million metric tons (20.3 million short tons) of quicklime and hydrate was produced (excluding commercial hydrators) in 34 States and Puerto Rico. Production was valued at about \$1.18 billion, an apparent increase of about \$20 million from 2001 levels. Five companies accounted for about 70% of the total output. Principal producing States, each with production over 1 million tons, were Alabama, Kentucky, Missouri, Nevada, Ohio, Pennsylvania, and Texas. These seven States produced about 11.6 million tons (12.8 million short tons), or 63% of the total output. Major markets for lime were steelmaking, flue gas desulfurization, mining, construction, pulp and paper, precipitated calcium carbonate, and water treatment.

Salient Statistics—United States:	<u> 1998</u>	<u> 1999</u>	<u>2000</u>	<u>2001</u>	2002e
Production ³	20,100	19,700	19,600	18,900	18,400
Imports for consumption	231	140	113	115	176
Exports	56	59	73	96	101
Consumption, apparent	20,300	19,800	19,600	19,000	18,500
Quicklime average value, dollars per ton at plant	57.60	57.30	57.50	58.10	60.60
Hydrate average value, dollars per ton at plant	78.90	80.20	85.00	80.70	90.00
Stocks, yearend	NA	NA	NA	NA	NA
Employment, mine and plant, number	5,600	5,600	5,600	5,500	5,400
Net import reliance ⁴ as a percentage of					
apparent consumption	1	(⁵)	(⁵)	(⁵)	(⁵)

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 in order to avoid duplication.

Import Sources (1998-2001): Canada, 89%; Mexico, 9%; and other, 2%.

Tariff: Item	Number	Normal Trade Relations 12/31/02
Quicklime	2522.10.0000	Free.
Slaked lime	2522.20.0000	Free.
Hydraulic lime	2522.30.0000	Free.
Calcined dolomite	2518.20.0000	3% ad. val.

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

Government Stockpile: None.

LIME

Events, Trends, and Issues: In response to recommendations made by the U.S. International Trade Commission, as part of a Section 201 investigation under the Trade Act of 1974, the President imposed tariffs for 3 years ranging from 8% to 30% on various types of imported steel, excluding imports from free-trade partners. As a result of the protections supplied by the tariffs, according to weekly statistics of the American Iron and Steel Institute, adjusted year-to-date steel production through October 28, 2002, increased by 4.8% compared with the same period in 2001. The capability utilization rate of steel mills was 90.1% compared with 76.8% in the same period in 2001. This higher rate of utilization despite the modest gains in production indicates that a significant amount of steelmaking capacity has been lost or is idle. The steel industry is lime's largest market at about 29% of consumption.

World Lillie Froduction and Lilli	estone iveselves and iv	eserve base.	
	Production		Reserves and reserve base ⁶
	<u>2001</u>	2002 ^e	
United States	18,900	18,400	Adequate for all
Belgium	1,750	1,700	countries listed.
Brazil	6,270	6,300	
Canada	2,550	2,200	
China	22,000	23,000	
France	2,400	2,400	
Germany	7,000	7,000	
Italy ⁷	3,500	3,500	
Japan (quicklime only)	8,100	7,500	
Mexico	6,500	6,500	
Poland	2,200	2,200	
Romania	1,700	1,700	
Russia	8,000	8,000	

World Lime Production and Limestone Reserves and Reserve Base:

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

1,606

2,500

23,000

118.000

<u>Substitutes</u>: 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 and lime kiln dust and fly ash 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.

1,600 2,500

21,500

116,000

South Africa (sales)

World total (rounded)

United Kingdom

Other countries

eEstimated. NA Not available.

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

²To convert metric tons to short tons, multiply metric tons by 1.1023.

³Sold or used by producers.

⁴Defined as imports - exports + adjustments for Government and industry stock changes; stock changes are assumed to be zero for apparent consumption and net import reliance calculations.

⁵Less than 1/2 unit.

⁶See Appendix C for definitions.

⁷Includes hydraulic lime.