

SALT

(Data in thousand metric tons, unless noted)

Domestic Production and Use: Domestic production of salt increased an estimated 9% in 1995, with total value exceeding an estimated \$960 million. Twenty-seven companies operated 67 plants in 14 States. The estimated percentage of salt sold or used, by type, was salt in brine, 46%; rock salt, 36%; vacuum pan, 9%; and solar salt, 9%.

The chemical industry consumed about 39% of total salt sales, with salt brine representing about 88% of the type of salt used for feedstock. Chlorine and caustic soda manufacture was the main consuming sector within the chemical industry. Salt for highway deicing accounted for 35% of U.S. demand. The remaining markets for salt, in declining order, were distributors, 10%; food and agricultural, 6%; general industrial, 6%; primary water treatment, 1%; and other, 3%.

Salient Statistics—United States:¹	1991	1992	1993	1994	1995^e
Production	36,300	36,000	39,200	39,800	43,300
Sold or used by producers	35,900	34,800	38,200	39,500	42,300
Imports for consumption	6,190	5,390	5,870	9,630	8,000
Exports	1,780	992	688	742	825
Consumption, apparent	40,300	39,200	43,400	48,400	49,500
Price, average value of bulk, pellets and packaged salt, dollars per ton, f.o.b. mine and plant:					
Vacuum and open pan salt	114.75	113.20	111.97	114.24	115.00
Solar salt	27.78	32.56	34.51	34.77	37.00
Rock salt	19.25	19.63	20.28	22.33	22.00
Salt from brine	5.45	4.35	5.24	5.40	6.00
Stocks, producer, yearend ^{e 2}	414	1,230	1,000	300	1,000
Employment, mine and plant	4,150	4,150	4,150	4,150	4,150
Net import reliance ³ as a percent of apparent consumption	11	11	12	18	15

Recycling: None.

Import Sources (1991-94): Canada, 46%; Mexico, 25%; Bahamas, 13%; Chile, 10%; and other, 6%.

Tariff:	Item	Number	Most favored nation (MFN) 12/31/95	Non-MFN⁴ 12/31/95
	Iodized salt	2501.00.0000	Free	26% ad val.

Depletion Allowance: 10% (Domestic), 10% (Foreign).

Government Stockpile: None.

Events, Trends, and Issues: After 18 months of continuous flooding, the Retsof, NY, rock salt mine, which was the largest underground room-and-pillar mine in the Western Hemisphere, officially closed on September 11, 1995. In anticipation of a potential supply shortage during the winter months of 1996, about 2.3 million tons of rock salt were stockpiled on the surface ready for use. The company planned to replace the mine, which had an annual capacity of 3.6 millions tons, with another underground rock salt mine of similar capacity at Hampton Corners in Groveland, NY. The new mine was scheduled to be operational in 1997.

A mine accident occurred at an underground rock salt operation in the St. Magdalen Islands, Quebec, Canada. Ocean water entered the mine around the mine shaft and continued to flood until mine engineers stabilized the waterflow. Efforts were still underway by yearend to save the mine, which had an annual capacity of about 1.2 million tons.

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A vacuum pan salt facility at Manistee, MI, closed in November after many years of production. To counter this loss, a new refined salt operation was announced in Tennessee where high-quality salt will be recovered as a byproduct from a titanium dioxide facility. Discharged waste containing iron chloride and hydrochloric acid will be treated with soda ash to produce iron carbonate, which can be used in water treatment chemicals, and sodium chloride.

The domestic chloralkali industry, which uses substantial quantities of salt, operated at nearly 100% of production capacity throughout the year. Most of the output was for polyvinyl chloride and vinyl chloride monomer manufacture, particularly for shipment overseas. Despite the negative discussions about the harmful affects of chlorine in the environment, consumption remained strong with demand forecast to grow 1.5% to 2.0% annually.

A downturn in Japanese synthetic soda ash production slated for 1996 probably will not result in a decline in salt usage as Japanese chlorine manufacturers increase capacity, thereby requiring additional salt supplies in the near future.

The outlook for the domestic salt industry is optimistic for the next few years depending on the severity of this winter's weather. Many climatologists were forecasting below-normal temperatures and the likelihood of adverse conditions that would require deicing salt.

World Production, Reserves, and Reserve Base:

	Production		Reserves and reserve base ⁵
	1994	1995 ^e	
United States ¹ (sold or used)	39,500	42,300	Large. Economic and subeconomic deposits of salt are substantial in principal salt-producing countries. The oceans comprise an inexhaustible supply of salt.
Australia	7,800	8,000	
Brazil	5,250	5,500	
Canada	11,500	11,100	
China	29,700	30,000	
France	5,440	5,500	
Germany	12,700	13,000	
India	9,500	9,500	
Italy	3,100	3,500	
Mexico	7,460	7,500	
Poland	3,800	3,800	
Russia	3,000	3,400	
Spain	3,400	3,500	
Ukraine	3,500	3,500	
United Kingdom	5,700	5,600	
Other countries	<u>28,700</u>	<u>29,300</u>	
World total (may be rounded)	180,000	185,000	

World Resources: World resources of salt are practically unlimited. Domestic resources of rock salt and salt from brine are in the Northeast, Central Western, and southern Gulf Coast States. Saline lakes and solar evaporation salt facilities are near populated regions in the Western United States. Almost every country in the world has salt deposits or solar evaporation operations of various sizes.

Substitutes: There are no economic substitutes or alternates for salt. Calcium chloride and calcium magnesium acetate, hydrochloric acid, and potassium chloride can be substituted for salt in deicing, certain chemical processes, and food flavoring, but at a higher cost.

^eEstimated.

¹Excludes Puerto Rico.

²Reported stock data are incomplete. For apparent consumption and net import reliance calculations, changes in annual stock totals are assumed to be the difference between salt production and salt sold or used.

³Defined as imports - exports + adjustments for Government and industry stock changes.

⁴See Appendix B.

⁵See Appendix C for definitions.