

TIN

(Data in metric tons of tin content, unless otherwise noted)

Domestic Production and Use: Tin has not been mined domestically since 1993. Production of tin at the only U.S. tin smelter, at Texas City, TX, stopped in 1989. Twenty-five firms used about 92% of the primary tin consumed domestically in 2002. The major uses were as follows: cans and containers, 27%; electrical, 23%; construction, 10%; transportation, 10%; and other, 30%. On the basis of the New York composite price, the estimated values of some critical items were as follows: primary metal consumed, \$243 million; imports for consumption, refined tin, \$243 million; and secondary production (old scrap), \$43 million.

Salient Statistics—United States:	1998	1999	2000	2001	2002^e
Production:					
Secondary (old scrap)	8,500	7,750	6,560	6,700	6,500
Secondary (new scrap)	7,800	8,650	9,140	7,190	7,000
Imports for consumption, refined tin	44,000	47,500	44,900	37,500	37,000
Exports, refined tin	5,020	6,770	6,640	4,350	3,500
Shipments from Government stockpile excesses	12,200	765	12,000	12,000	12,000
Consumption, reported:					
Primary	37,100	38,000	38,100	34,200	37,000
Secondary	8,620	8,890	8,940	6,990	9,000
Consumption, apparent	60,600	59,700	57,200	48,250	54,000
Price, average, cents per pound:					
New York market	261	255	255	211	188
New York composite	373	366	370	315	298
London	251	245	246	203	177
Kuala Lumpur	246	241	244	201	178
Stocks, consumer and dealer, yearend	10,500	10,700	11,200	14,800	13,000
Net import reliance ¹ as a percentage of apparent consumption	85	85	88	86	79

Recycling: About 14,000 tons of tin from old and new scrap was recycled in 2002. Of this, about 7,000 tons was recovered from old scrap at 3 detinning plants and 65 secondary nonferrous metal processing plants.

Import Sources (1998-2001): Peru, 27%; China, 23%; Indonesia, 14%; Brazil, 12%; Bolivia, 12%; and other, 12%.

Tariff: Most major imports of tin, including unwrought metal, waste and scrap, and unwrought tin alloys, enter duty free.

Depletion Allowance: 22% (Domestic), 14% (Foreign).

Government Stockpile: The Defense National Stockpile Center (DNSC) continued its active longtime tin sales program. The Annual Materials Plan for tin for fiscal year 2003 remained at 12,000 tons. DNSC will continue to have two long-term negotiated "contract" sales totaling 10,000 tons for the year. The remaining 2,000 tons will be sold using the Basic Ordering Agreement (BOA). Under the BOA approach, DNSC posts the amount of tin that it wants to sell on its Web site every Tuesday. Interested parties submit a quote, and DNSC makes a sales determination by the end of the business day. BOA sales began in June 2002. In fiscal year 2002, DNSC had only one long-term sale, and that was in July. Tin is warehoused at four depots, with the largest inventories at Hammond, IN, and Point Pleasant, WV. The other sites are New Haven, IN, and Baton Rouge, LA.

Stockpile Status—9-30-02²

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposal plan FY 2002	Disposals FY 2002
Pig tin	45,416	8,392	45,416	12,000	8,878

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Events, Trends, and Issues: The Steel Recycling Institute announced that the steel can (tin-plated) recycling rate in the United States was 58% in 2001, the same as in 2000. Tin, as well as steel, is recovered in can recycling.

Tin prices continued to decline in 2002. Industry observers attributed lower prices to an oversupply of tin in the market. World tin consumption also was believed to have declined somewhat during the year because many countries experienced an economic slowdown.

The world tinplate industry continued to be characterized by more mergers and consolidations. In most cases, this trend resulted in the loss of tin mill capacity. During the past 2 years, several domestic steel producers that make tinplate have declared bankruptcy, thus raising concerns about the status of future domestic tinplate sources.

World Mine Production, Reserves, and Reserve Base: Reserves and reserve base estimates for Australia, China, Malaysia, and Thailand have been revised based on new information from those countries.

	Mine production		Reserves ³	Reserve base ³
	<u>2001</u>	<u>2002^e</u>		
United States	—	—	20,000	40,000
Australia	9,600	9,000	110,000	300,000
Bolivia	12,500	12,200	450,000	900,000
Brazil	14,000	13,000	540,000	2,500,000
China	79,000	90,500	1,700,000	3,500,000
Indonesia	51,000	50,000	800,000	900,000
Malaysia	4,970	6,000	1,000,000	1,200,000
Peru	38,200	71,000	710,000	1,000,000
Portugal	1,200	1,000	70,000	80,000
Russia	4,500	5,000	300,000	350,000
Thailand	2,500	1,700	170,000	200,000
Other countries	<u>4,680</u>	<u>5,000</u>	<u>180,000</u>	<u>200,000</u>
World total (may be rounded)	222,000	231,000	6,100,000	11,000,000

World Resources: U.S. resources of tin, primarily in Alaska, were insignificant compared with those of the rest of the world. Sufficient world resources, principally in western Africa, southeastern Asia, Australia, Bolivia, Brazil, China, and Russia are available to sustain recent annual production rates well into the 21st century.

Substitutes: Aluminum, glass, paper, plastic, or tin-free steel substitute for tin in cans and containers. Other materials that substitute for tin are epoxy resins for solder; aluminum alloys, copper-base alloys, and plastics for bronze; plastics for bearing metals that contain tin; and compounds of lead and sodium for some tin chemicals.

^eEstimated. — Zero.

¹Defined as imports - exports + adjustments for Government and industry stock changes.

²See Appendix B for definitions.

³See Appendix C for definitions.