

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 77% of the primary tin consumed domestically in 2003. 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, \$283 million; imports for consumption, refined tin, \$290 million; and secondary production (old scrap), \$31 million.

Salient Statistics—United States:	1999	2000	2001	2002	2003^e
Production:					
Secondary (old scrap)	7,750	6,560	6,700	*3,590	*4,000
Secondary (new scrap)	8,650	9,140	7,200	*6,410	*7,000
Imports for consumption, refined tin	47,500	44,900	37,500	42,200	37,000
Exports, refined tin	6,770	6,640	4,350	2,940	4,020
Shipments from Government stockpile excesses	765	12,000	12,000	8,960	9,000
Consumption, reported:					
Primary	38,000	38,100	34,200	34,000	36,000
Secondary	8,890	8,940	7,630	5,830	8,460
Consumption, apparent	59,700	57,200	48,250	*52,330	*44,980
Price, average, cents per pound:					
New York market	255	255	211	195	224
New York composite	366	370	315	292	357
London	245	246	203	184	214
Kuala Lumpur	241	244	201	184	214
Stocks, consumer and dealer, yearend	10,700	10,400	9,620	9,100	10,100
Net import reliance ¹ as a percentage of apparent consumption	85	88	86	*93	*91

Recycling: About 11,000 tons of tin from old and new scrap was recycled in 2003. Of this, about 4,000 tons was recovered from old scrap at 3 detinning plants and 70 secondary nonferrous metal processing plants.

Import Sources (1999-2002): Peru, 34%; China, 28%; Bolivia, 13%; Brazil, 12%; Indonesia, 12%; and other, 1%.

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 longtime tin sales program. The DNSC Annual Materials Plan for tin for fiscal year 2003 (October 1, 2002, to September 30, 2003) remained at 12,000 tons. DNSC will continue to have at least one long-term negotiated "contract" sale for each fiscal year. The remaining tonnage will be sold using the DNSC 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 2003, DNSC had only one long-term sale, and that was in June. Tin is in Federal depots at four locations: Baton Rouge, LA; Hammond, IN; New Haven, IN; and Point Pleasant, WV.

Stockpile Status—9-30-03²

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposal plan FY 2003	Disposals FY 2003
Pig tin	35,663	8,382	35,663	12,000	9,753

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Events, Trends, and Issues: The Steel Recycling Institute, a business unit of the American Iron and Steel Institute, announced that the steel can (tin-plated) recycling rate in the United States was 59% in 2002, compared with 58% in 2001. Tin, as well as steel, is recovered in can recycling.

Tin prices stabilized in 2003, trading in a narrow range of about \$3.00 to \$3.35 per pound through the end of summer. World tin consumption was believed to have declined somewhat during the year because many countries continued to experience 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 3 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:

	Mine production		Reserves ³	Reserve base ³
	<u>2002</u>	<u>2003^e</u>		
United States	—	—	20,000	40,000
Australia	6,270	9,000	110,000	300,000
Bolivia	15,200	13,200	450,000	900,000
Brazil	13,000	14,000	540,000	2,500,000
China	80,000	90,000	1,700,000	3,500,000
Indonesia	54,000	61,000	800,000	900,000
Malaysia	4,200	4,500	1,000,000	1,200,000
Peru	65,400	65,000	710,000	1,000,000
Portugal	1,000	1,100	70,000	80,000
Russia	2,900	2,000	300,000	350,000
Thailand	1,100	2,000	170,000	200,000
Vietnam	4,700	2,500	NA	NA
Other countries	<u>1,000</u>	<u>1,000</u>	<u>180,000</u>	<u>200,000</u>
World total (rounded)	249,000	265,000	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. NA Not available. — Zero. *Production data for old and new scrap for 2002 and 2003 are reversed in this table, and entries for apparent consumption and net import reliance reflect this. Refer to the 2005 (and subsequent) Mineral Commodity Summaries for revised entries. (Explanation posted November 30, 2005.)

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

²See Appendix B for definitions.

³See Appendix C for definitions.