

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 80% of the primary tin consumed domestically in 2004. 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, \$468 million; imports for consumption, refined tin, \$567 million; and secondary production (old scrap), \$85 million.

Salient Statistics—United States:	2000	2001	2002	2003	2004^e
Production:					
Secondary (old scrap)	6,560	6,700	¹ 6,760	¹ 5,420	6,000
Secondary (new scrap)	9,140	7,200	¹ 3,790	¹ 2,460	3,000
Imports for consumption, refined tin	44,900	37,500	42,200	37,100	40,000
Exports, refined tin	6,640	4,350	2,940	3,690	4,600
Shipments from Government stockpile excesses	12,000	12,000	8,960	8,880	9,000
Consumption, reported:					
Primary	38,100	34,200	34,000	32,900	33,000
Secondary	8,940	7,630	5,830	4,490	5,000
Consumption, apparent	57,200	48,300	¹ 55,700	¹ 48,700	50,400
Price, average, cents per pound:					
New York market	255	211	195	232	412
New York composite	370	315	292	340	643
London	246	203	184	222	422
Kuala Lumpur	244	201	184	222	386
Stocks, consumer and dealer, yearend	10,400	9,620	8,910	7,950	8,000
Net import reliance ² as a percentage of apparent consumption	88	86	¹ 88	¹ 89	88

Recycling: About 9,000 tons of tin from old and new scrap was recycled in 2004. Of this, about 6,000 tons was recovered from old scrap at 3 detinning plants and 77 secondary nonferrous metal processing plants.

Import Sources (2000-03): Peru, 41%; China, 18%; Bolivia, 15%; Brazil, 12%; and other, 14%.

Tariff: Most major imports of tin, including unwrought metal, waste and scrap, and unwrought tin alloys, enters the United States duty free.

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

Government Stockpile: The Defense National Stockpile Center (DNSC) continued its long-term tin sales program. The DNSC Annual Materials Plan for tin sales for fiscal year 2004 (October 1, 2003, through September 30, 2004) 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 2004, DNSC had only one long-term sale, and that was in July. Tin is held in Federal depots at three locations: Hammond, IN; New Haven, IN; and Point Pleasant, WV.

Stockpile Status—9-30-04³

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposal plan FY 2004	Disposals FY 2004
Pig tin	25,100	9,760	25,100	12,000	8,880

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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 60% in 2003 compared with 59% in 2002. Tin, as well as steel, is recovered in can recycling.

The price of tin experienced a fairly steady rise throughout 2004. Industry observers believed that the world tin supply-demand relationship was in a net supply deficit.

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 future domestic tinplate sources.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves ⁴	Reserve base ⁴
	<u>2003</u>	<u>2004^e</u>		
United States	—	—	20,000	40,000
Australia	6,500	1,200	110,000	300,000
Bolivia	15,000	16,900	450,000	900,000
Brazil	14,200	14,000	540,000	2,500,000
China	50,000	100,000	1,700,000	3,500,000
Indonesia	70,000	70,000	800,000	900,000
Malaysia	3,400	3,500	1,000,000	1,200,000
Peru	38,000	40,200	710,000	1,000,000
Portugal	1,000	500	70,000	80,000
Russia	2,000	2,500	300,000	350,000
Thailand	800	800	170,000	200,000
Vietnam	4,600	NA	NA	NA
Other countries	<u>1,000</u>	<u>1,000</u>	<u>180,000</u>	<u>200,000</u>
World total (rounded)	207,000	250,000	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.

¹Production data for old and new scrap for 2002 and 2003 were reversed in the 2004 Mineral Commodity Summaries and are correctly shown here; revised entries for apparent consumption and net import reliance reflect this.

²Defined as imports - exports + adjustments for Government and industry stock changes.

³See [Appendix B](#) for definitions.

⁴See [Appendix C](#) for definitions.