

TIN

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

Domestic Production and Use: In 1998, there was no domestic tin mine production. Production of tin at the only U.S. tin smelter, at Texas City, TX, stopped in 1989. Twenty-five firms consumed about 85% of the primary tin. The major uses were as follows: cans and containers, 30%; electrical, 20%; construction, 10%; transportation, 10%; and other, 30%. The estimated value of primary metal consumed in 1998, based on the New York composite price, was \$325 million.

Salient Statistics—United States:	1994	1995	1996	1997	1998^e
Production: Mine	—	—	—	—	—
Secondary (old scrap)	7,400	7,720	7,710	7,830	7,900
Secondary (new scrap)	4,300	3,880	3,930	4,520	4,500
Imports for consumption, refined tin	32,400	33,200	30,200	40,600	39,000
Exports, refined tin	2,560	2,790	3,670	4,660	5,000
Shipments from Government stockpile excesses	5,620	11,500	11,800	11,700	11,000
Consumption reported: Primary	33,700	35,200	36,500	36,100	39,000
Secondary	8,530	10,800	8,180	8,250	9,000
Consumption, apparent	43,300	47,000	48,400	55,300	53,000
Price, average, cents per pound:					
New York market	255	295	288	264	260
New York composite	369	416	412	381	377
London	248	282	279	256	254
Kuala Lumpur	245	278	275	252	249
Stocks, consumer and dealer, yearend	10,400	11,700	10,900	11,100	11,000
Employment, mine and primary smelter, number ^e	—	—	—	—	—
Net import reliance ¹ as a percent of apparent consumption	83	84	83	86	85

Recycling: About 12,000 tons of tin from old and new scrap was recycled in 1998. Of this, about 7,900 tons was recovered from old scrap at 7 detinning plants and 110 secondary nonferrous metal processing plants.

Import Sources (1994-97): Brazil, 26%; Indonesia, 21%; Bolivia, 20%; China, 12%; and other, 21%.

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:

Stockpile Status—9-30-98²

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposal plan FY 1998	Disposals FY 1998
Pig tin	83,835	7,762	83,835	12,000	11,981

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Events, Trends, and Issues: The Defense Logistics Agency (DLA) tin sales program emphasized its long-term activity and had only a modest spot sales effort. DLA allocated 2,000 tons of tin to sell on the spot market at monthly sales. Two long-term sales were planned for fiscal year 1998, with one in the spring and one in the fall, about 5,000 tons each time.

DLA announced that its Annual Materials Plan for fiscal year 1998 called for sales of up to 12,000 tons of stockpile tin. Stockpile tin is warehoused at seven depots, with the largest holdings at Hammond, IN, and Anniston, AL.

The Steel Recycling Institute (SRI), Pittsburgh, PA, announced that the domestic steel can recycling rate reached 60% in 1997, compared with a 58% rate in 1996. SRI continued to emphasize the importance of aerosol can recycling. It noted that 200 million Americans had access to steel can recycling programs.

The world tin industry's major research and development laboratory, based in the United Kingdom, was in its fourth full year under its new structure. It is now privatized, with funding supplied by numerous major tin producing and consuming firms rather than by the Association of Tin Producing Countries. The organization reported progress in several areas of research to develop new tin uses; among these was a tin foil capsule to replace lead foil capsules on wine bottles, and a new noncyanide-based electrolyte called "Stanzec" that yields a coating of tin and zinc, which could replace cadmium as an environmentally acceptable anticorrosion coating on steel.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves ³	Reserve base ³
	<u>1997</u>	<u>1998^e</u>		
United States	—	—	20,000	40,000
Australia	10,000	9,000	210,000	600,000
Bolivia	15,000	16,000	450,000	900,000
Brazil	19,000	20,000	1,200,000	2,500,000
China	65,000	67,000	2,100,000	3,400,000
Indonesia	47,000	48,000	750,000	820,000
Malaysia	5,000	5,000	1,200,000	1,400,000
Peru	28,000	29,000	300,000	400,000
Portugal	4,000	4,000	70,000	80,000
Russia	8,000	8,000	300,000	350,000
Thailand	1,000	1,000	940,000	1,000,000
Other countries	<u>9,000</u>	<u>9,000</u>	<u>180,000</u>	<u>200,000</u>
World total (may be rounded)	211,000	216,000	7,700,000	12,000,000

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 were available to sustain current production rates well into the next 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.

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

²See Appendix C.

³See Appendix D for definitions.