

TIN

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

Domestic Production and Use: Tin has not been mined or smelted in the United States since 1993 and 1989, respectively. Twenty-five firms used about 84% of the primary tin consumed domestically in 2007. The major uses were as follows: cans and containers, 26%; electrical, 24%; construction, 10%; transportation, 10%; and other, 30%. On the basis of the average New York composite price, the estimated values of some critical items were as follows: primary metal consumed, \$655 million; imports for consumption, refined tin, \$791 million; and secondary production (old scrap), \$226 million.

Salient Statistics—United States:	2003	2004	2005	2006^e	2007^e
Production:					
Secondary (old scrap)	5,500	5,240	11,800	12,000	12,200
Secondary (new scrap)	3,570	3,590	2,280	3,000	2,800
Imports for consumption, refined tin	37,100	47,600	37,500	43,300	42,600
Exports, refined tin	3,690	3,650	4,330	5,500	5,100
Shipments from Government stockpile excesses	8,880	10,600	8,368	8,409	8,600
Consumption, reported:					
Primary	32,900	36,700	32,200	34,600	35,300
Secondary	4,510	7,990	9,170	10,000	9,700
Consumption, apparent	48,700	58,800	54,700	57,500	58,600
Price, average, cents per pound:					
New York market	232	409	361	419	661
New York composite	340	547	483	565	842
London	222	385	334	398	628
Kuala Lumpur	222	385	334	398	628
Stocks, consumer and dealer, yearend	7,960	8,980	8,270	9,000	8,700
Net import reliance ¹ as a percentage of apparent consumption	89	92	78	79	79

Recycling: About 15,000 tons of tin from old and new scrap was recycled in 2007. Of this, about 12,000 tons was recovered from old scrap at 2 detinning plants and 87 secondary nonferrous metal processing plants.

Import Sources (2003-06): Peru, 45%; Bolivia, 15%; China, 14%; Indonesia, 10%; and other, 16%.

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

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

Government Stockpile: The Defense National Stockpile Center (DNSC), Defense Logistics Agency, continued its tin sales program by offering material for sale under the Negotiated format (long-term sales) and the Basic Ordering Agreement (BOA) format (spot market sales). The DNSC Annual Materials Plan for tin sales for fiscal year 2007 (October 1, 2006, through September 30, 2007) remained at 12,000 tons, although current inventory levels are approximately 8,600 tons. DNSC plans one long-term negotiated "contract" sale for fiscal year 2007 and weekly offerings under the DNSC 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. Tin is held in Federal depots at two locations—Hammond, IN; and New Haven, IN.

Stockpile Status—9-30-07²

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposal plan FY 2007	Disposals FY 2007
Pig tin	8,623	—	8,623	12,000	8,409

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Events, Trends, and Issues: Apparent consumption of tin in the United States increased an estimated 2% in 2007 compared with that of 2006. The average monthly dealer price of tin rose steadily during the first 7 months of 2007, rising from \$5.31 per pound in January to \$6.93 per pound in July. These represented generally higher prices than prevailed in 2006.

Developments accelerated in major tin-consuming countries in moving to new lead-free solders that usually contain greater amounts of tin than do leaded solders.

Tin producers responded to the higher tin prices and strong demand of the past several years with tin mine and tin smelter openings and expansions. Several closed or partially disabled tin mines were reopened. China continued to be the leading tin producer, from both mines and smelters. Indonesia, the world's second leading tin producer, was wracked by a series of events that served to interrupt tin output and create market uncertainty.

The world tinplate industry continued to experience major mergers and consolidations. The dominant one in 2007 involved the merger of one of Europe's leading steel producers and tinplate makers into one of India's leading suppliers of the same items. Worldwide, more than 5 million metric tons of steel cans, which were mostly made from tinplate, were recycled in 2005, representing an average recycling rate of 65%.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves ³	Reserve base ³
	<u>2006</u>	<u>2007^e</u>		
United States	—	—	—	40,000
Australia	2,000	2,200	150,000	300,000
Bolivia	18,000	18,000	450,000	900,000
Brazil	12,000	12,000	540,000	2,500,000
China	125,000	130,000	1,700,000	3,500,000
Congo (Kinshasa)	2,800	3,000	NA	NA
Indonesia	90,000	85,000	800,000	900,000
Malaysia	3,000	3,000	1,000,000	1,200,000
Peru	38,000	38,000	710,000	1,000,000
Portugal	200	200	70,000	80,000
Russia	3,000	4,000	300,000	350,000
Thailand	200	200	170,000	200,000
Vietnam	3,500	3,500	NA	NA
Other countries	4,000	4,000	180,000	200,000
World total (rounded)	302,000	300,000	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. World resources, principally in western Africa, southeastern Asia, Australia, Bolivia, Brazil, China, and Russia, are sufficient to sustain recent annual production rates well into the future.

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.

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

²See Appendix B for definitions.

³See Appendix C for definitions.