

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 2009. The major uses were as follows: cans and containers, 26%; electrical, 24%; construction, 11%; transportation, 11%; and other, 28%. On the basis of the average New York composite price, the estimated values of some critical items in 2009 were as follows: primary metal consumed, \$769 million; imports for consumption, refined tin, \$824 million; and secondary production (old scrap), \$183 million.

Salient Statistics—United States:	2005	2006	2007	2008	2009^e
Production:					
Secondary (old scrap)	11,800	11,600	11,200	12,000	10,000
Secondary (new scrap)	2,280	2,340	2,800	2,600	2,100
Imports for consumption, refined tin	37,500	43,300	46,600	51,600	45,000
Exports, refined tin	4,330	5,490	5,100	4,700	4,060
Shipments from Government stockpile excesses	8,368	8,409	4,540	60	—
Consumption, reported:					
Primary	32,200	42,600	43,000	46,000	42,000
Secondary	9,170	11,900	11,000	10,000	8,000
Consumption, apparent	54,700	57,500	57,500	59,400	49,500
Price, average, cents per pound:					
New York market	361	419	680	865	636
New York composite	483	565	899	1,130	831
London	334	398	692	838	616
Kuala Lumpur	334	398	692	838	616
Stocks, consumer and dealer, yearend	8,270	9,000	8,700	8,200	9,600
Net import reliance ¹ as a percentage of apparent consumption	78	79	81	80	80

Recycling: About 12,000 tons of tin from old and new scrap was recycled in 2009. Of this, about 10,000 tons was recovered from old scrap at 2 detinning plants and 84 secondary nonferrous metal processing plants.

Import Sources (2005-08): Peru, 47%; Bolivia, 15%; China, 14%; Indonesia, 10%; and other, 14%.

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: On June 4, 2008, the Office of the Undersecretary of Defense suspended tin sales pending further research as a result of the Defense National Stockpile Center (DNSC)'s reconfiguration. As a result of this suspension, the DNSC made no tin sales in calendar year 2009. As of September 30, 2009, DNSC held 4,020 tons of tin in inventory. The fiscal year 2009 Annual Materials Plan (AMP) for tin was set at 6,000 tons and the fiscal year 2010 AMP was set at 4,000 tons. The DNSC inventory was stored in the Hammond, IN, depot and was all "long horn" brand tin. When tin was last offered for sale, it was available via the basic ordering agreement and negotiated sales procedures.

Stockpile Status—9-30-09²

Material	Uncommitted inventory	Authorized for disposal	Disposal plan FY 2009	Disposals FY 2009
Pig tin	4,020	4,020	6,000	—

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Events, Trends, and Issues: Apparent consumption of tin in the United States declined by 17% in 2009 compared with that of 2008. The average monthly composite price of tin generally rose during the year, but, overall, prices in 2009 were substantially lower than those in 2008. Lower prices in 2009 were attributed to decreased demand worldwide owing to the global economic slowdown.

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

Despite the 2009 decline in prices, tin producers continued to respond to the higher tin prices of recent years with tin mine and tin smelter openings and expansions, including ones in Australia, Bolivia, Canada, and Thailand. Tin exploration activity increased, especially in Australia and Canada. In some countries, like Bolivia, old tin tailings were being evaluated for reclamation of tin.

China continued as the world's leading tin producer from both mine and smelter sources, but experienced sporadic difficulty in obtaining feedstock for its smelters. Indonesia, the world's second leading tin producer from both mine and smelter sources, continued to experience production difficulties, some related to a Government shutdown of possibly illegal production sites.

World Mine Production and Reserves:

	Mine production		Reserves ³
	<u>2008</u>	<u>2009^e</u>	
United States	—	—	—
Australia	1,800	2,000	150,000
Bolivia	17,000	16,000	450,000
Brazil	12,000	12,000	540,000
China	110,000	115,000	1,700,000
Congo (Kinshasa)	12,000	12,000	NA
Indonesia	96,000	100,000	800,000
Malaysia	2,200	2,000	500,000
Peru	39,000	38,000	710,000
Portugal	100	100	70,000
Russia	1,500	2,000	300,000
Thailand	100	100	170,000
Vietnam	3,500	3,500	NA
Other countries	<u>4,000</u>	<u>4,000</u>	<u>180,000</u>
World total (rounded)	299,000	307,000	5,600,000

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](#). Reserve base estimates were discontinued in 2009; see [Introduction](#).