

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 accounted for about 90% of the primary tin consumed domestically in 2016. The major uses for tin in the United States were tinsplate, 22%; chemicals, 20%; solder, 16%; alloys, 9%; babbitt, bronze/brass, and tinning, 9%; and other, 24%. Based on the average Platts Metals Week New York Dealer price for tin, the estimated value of imported refined tin was \$560 million, and the estimated value of old scrap recovered domestically was \$167 million.

Salient Statistics—United States:	2012	2013	2014	2015	2016^e
Production, secondary:					
Old scrap ^e	11,200	10,600	10,100	10,600	10,100
New scrap	2,440	2,150	1,900	1,900	2,000
Imports for consumption:					
Tin, refined	36,900	34,900	35,600	33,600	31,300
Tin, waste and scrap, gross weight	72,500	63,700	49,700	32,700	27,100
Exports:					
Tin, refined and tin alloys	5,560	5,870	5,700	3,350	1,900
Tin, waste and scrap, gross weight	10,300	5,020	7,480	2,530	3,930
Shipments from Government stockpile	—	—	—	—	—
Consumption, reported:					
Primary	24,500	25,700	24,200	23,900	23,600
Secondary	3,240	4,730	3,250	2,940	2,870
Consumption, apparent ¹	41,900	40,000	39,600	40,700	40,400
Price, average, cents per pound: ²					
New York dealer	990	1,041	1,023	756	770
Metals Week composite	1,283	1,352	NA	NA	NA
London Metal Exchange, cash	957	1,012	994	729	745
Kuala Lumpur	958	1,012	993	NA	NA
Stocks, consumer and dealer, yearend	6,910	6,520	6,970	7,090	6,250
Net import reliance ³ as a percentage of apparent consumption	72	73	74	74	75

Recycling: About 12,000 tons of tin from old and new scrap was recycled in 2015, accounting for about 30% of apparent consumption. Of this, about 10,000 tons was recovered from old scrap at 2 detinning plants and about 75 secondary nonferrous metal-processing plants.

Import Sources (2012–15): Peru, 29%; Indonesia, 18%; Malaysia, 18%; Bolivia, 16%; and other, 19%.

Tariff: Item	Number	Normal Trade Relations 12–31–16
Unwrought tin:		
Tin, not alloyed	8001.10.0000	Free.
Tin alloys, containing, by weight:		
5% or less lead	8001.20.0010	Free.
More than 5% but not more than 25% lead	8001.20.0050	Free.
More than 25% lead	8001.20.0090	Free.
Tin waste and scrap	8002.00.0000	Free.

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

Government Stockpile:**Stockpile Status—9–30–16⁴**

Material	Inventory	Disposal Plan FY 2016	Disposals FY 2016
Tin	4,041	—	—

Events, Trends, and Issues: Apparent consumption of tin in the United States increased slightly in 2016 compared with consumption in 2015. Peru remained the primary supplier of tin to the United States, and recycling rates of tin remained essentially unchanged from those in 2015. Tin prices, which had trended downward since April 2014,

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increased significantly during 2016. The New York dealer price averaged 623 cents per pound in January and increased to an average of 912 cents per pound in September. The London Metal Exchange (LME) price averaged 649 cents per pound in January and increased to 888 cents per pound in September.

The price increases are attributed to a reduction in tin smelting in China owing to decreased availability of tin concentrates, expectations that production would remain at lower levels in the near term, and the resulting overall supply tightness. In China, tin smelters were forced to shut down in July and August for environmental inspections; however, most restarted in September, encouraged by higher tin prices. In the first 8 months of 2016, Burma, China's leading supplier of tin concentrate, exported 329,000 tons of tin concentrates containing an estimated 39,000 tons of tin. Industry analysts believe that in July and August, however, approximately one-third of the concentrate shipped was from government stock sales. Two of the three major mining sites were reportedly running at minimal production, and there was difficulty in finding new resources in the Man Maw mining area. In the first half of 2016, Indonesia exported 29,650 tons of tin, a 25% decrease from exports in the same period in 2015. This decrease was attributed to flooding in the first quarter of 2016, stricter regulations, and the closure of smelters during 2015. In August 2016, however, higher prices spurred producers in Indonesia to resume production of refined tin, and the State-owned producer announced plans to ramp up production and relist its brand on the LME. As an indication of increased interest in tin with higher prices, the Indonesia Commodity and Derivatives Exchange traded 7,515 tons of refined tin in September, the highest monthly total since June 2015.

World Mine Production and Reserves: Reserves for Burma, China, Congo (Kinshasa), Peru, and Vietnam were revised based on new information from Government and Industry sources.

	Mine production		Reserves ⁵
	2015	2016 ^e	
United States	—	—	—
Australia	7,000	7,000	370,000
Bolivia	20,000	20,000	400,000
Brazil	25,000	26,000	700,000
Burma	34,300	33,000	110,000
China	110,000	100,000	1,100,000
Congo (Kinshasa)	6,400	5,200	110,000
Indonesia	52,000	55,000	800,000
Laos	900	900	NA
Malaysia	3,800	4,000	250,000
Nigeria	2,500	2,200	NA
Peru	19,500	18,000	100,000
Russia	NA	NA	350,000
Rwanda	2,000	1,800	NA
Thailand	100	70	170,000
Vietnam	5,400	5,400	11,000
Other countries	100	100	180,000
World total (rounded)	289,000	280,000	4,700,000

World Resources: Identified resources of tin in the United States, 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, Indonesia, and Russia, are extensive and, if developed, could 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, alternative 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 old scrap + imports – exports + adjustments for Government and industry stock changes.

²Source: Platts Metals Week.

³Defined as imports – exports + adjustments for Government and industry stock changes, excluding imports and exports of waste and scrap.

⁴See [Appendix B](#) for definitions.

⁵See [Appendix C](#) for resource and reserve definitions and information concerning data sources.