

## 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 2017. The major uses for tin in the United States were chemicals, 21%; tinplate, 18%; solder, 17%; alloys, 10%; babbitt, bronze and brass, and tinning, 10%; and other, 24%. Based on the average Platts Metals Week New York dealer price for tin, the estimated value of imported refined tin was \$596 million, and the estimated value of tin recovered from old scrap domestically was \$220 million.

<b>Salient Statistics—United States:</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017<sup>e</sup></b>
Production, secondary:					
Old scrap <sup>e</sup>	10,600	10,100	10,100	10,300	10,300
New scrap	2,150	1,900	1,120	1,050	2,000
Imports for consumption:					
Tin, refined	34,900	35,600	33,600	32,200	32,400
Tin, alloys, gross weight	1,390	1,570	2,720	1,910	1,520
Tin, waste and scrap, gross weight	63,700	49,700	32,700	27,200	55,200
Exports:					
Tin, refined	2,990	2,920	807	1,150	1,600
Tin, alloys, gross weight	2,870	2,790	2,540	1,040	940
Tin, waste and scrap, gross weight	5,020	7,480	2,530	4,570	3,460
Shipments from Government stockpile	—	—	—	—	—
Consumption, reported:					
Primary	25,700	24,200	23,900	25,900	23,300
Secondary	4,730	3,240	2,940	2,600	2,650
Consumption, apparent, refined <sup>1</sup>	42,900	42,400	42,700	42,100	40,900
Price, average, cents per pound: <sup>2</sup>					
New York dealer	1,041	1,023	839	838	950
Metals Week composite	1,352	NA	NA	NA	NA
London Metal Exchange, cash	1,012	994	729	815	920
Kuala Lumpur	1,012	993	NA	NA	NA
Stocks, consumer and dealer, yearend	6,520	6,970	7,090	6,510	6,580
Net import reliance <sup>3</sup> as a percentage of apparent consumption	75	76	76	76	75

**Recycling:** About 12,300 tons of tin from old and new scrap was estimated to have been recycled in 2017. Of this, about 10,300 tons was recovered from old scrap at 2 detinning plants and about 75 secondary nonferrous metal-processing plants, accounting for 25% of apparent consumption.

**Import Sources (2013–16):** Peru, 25%; Indonesia, 20%; Malaysia, 20%; Bolivia, 17%; and other, 18%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Normal Trade Relations 12–31–17</b>
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:** The Defense Logistics Agency Strategic Materials announced potential disposals of 804 tons of tin for fiscal year 2018. There were no disposals in fiscal year 2017.

#### Stockpile Status—9–30–17<sup>4</sup>

<b>Material</b>	<b>Inventory</b>	<b>Disposal Plan FY 2017</b>	<b>Disposals FY 2017</b>
Tin	4,040	—	—

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**Events, Trends, and Issues:** Apparent consumption of tin in the United States was estimated to have decreased slightly in 2017 compared with consumption in 2016. Peru remained the primary supplier of tin to the United States, and the estimated amount of tin recycled in 2017 increased by 8% from that in 2016. Tin prices for the first 8 months in 2017 averaged about 937 and 902 cents per pound for the New York dealer price and London Metal Exchange price, respectively.

The monthly average New York dealer tin price increased significantly during 2016, beginning at 650 cents per pound in January and increasing to about 990 cents per pound in December, and has ranged between about 900 and 970 cents per pound during the first 10 months of 2017.

China's imports of tin in concentrate from Burma had reportedly increased, despite a decline in gross weight, as a result of improved processing equipment in the Man Maw mining area. In 2017, the average tin content of concentrate imported from Burma was estimated to be around 23%, compared with the 2016 average tin content of 13%. China also announced that in April 2017 it granted the first tolling license that would allow tin smelters to import tin concentrate and reexport metal without paying import or export taxes. In August 2017, the Government of Russia announced plans to develop two tin deposits in eastern Russia, and approved a tax exemption on tin produced in Russia until 2022. Russia's Ministry of Energy projected that these and other Government-instituted incentives could improve Russia's tin production tenfold.

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

	Mine production		Reserves <sup>5</sup>
	<u>2016</u>	<u>2017<sup>e</sup></u>	
United States	—	—	—
Australia	6,640	7,000	<sup>6</sup> 490,000
Bolivia	17,000	18,000	400,000
Brazil	25,000	25,500	700,000
Burma	54,000	50,000	113,000
China	92,000	100,000	1,100,000
Congo (Kinshasa)	5,500	5,800	150,000
Indonesia	52,000	50,000	800,000
Laos	1,300	1,000	NA
Malaysia	4,000	4,000	250,000
Nigeria	2,290	2,400	NA
Peru	18,800	18,000	105,000
Russia	1,100	1,000	350,000
Rwanda	2,200	1,800	NA
Thailand	100	70	170,000
Vietnam	5,500	5,400	11,000
Other countries	<u>242</u>	<u>200</u>	<u>180,000</u>
World total (rounded)	288,000	290,000	4,800,000

**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, 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 content 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.

<sup>e</sup>Estimated. NA Not available. — Zero.

<sup>1</sup>Defined as production (old scrap) + imports – exports + adjustments for Government and industry stock changes, excluding imports and exports of waste and scrap.

<sup>2</sup>Source: Platts Metals Week.

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

<sup>4</sup>See [Appendix B](#) for definitions.

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

<sup>6</sup>For Australia, Joint Ore Reserves Committee-compliant reserves were about 260,000 tons.