

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 over 90% of the primary tin consumed domestically in 2020. The major uses for tin in the United States were tinplate, 21%; chemicals, 18%; solder, 15%; alloys, 10%; babbitt, brass and bronze, and tinning, 10%; and other, 26%. Based on the average Platts Metals Week New York dealer price for tin, the estimated value of imported refined tin in 2020 was \$557 million, and the estimated value of tin recovered from old scrap domestically in 2020 was \$174 million.

Salient Statistics—United States:	2016	2017	2018	2019	2020^e
Production, secondary: ^e					
Old scrap	10,000	10,000	9,900	9,900	10,000
New scrap	8,000	8,000	8,000	8,000	8,000
Imports for consumption:					
Tin, refined	32,200	34,300	36,800	34,100	32,000
Tin, alloys, gross weight	1,910	1,550	1,430	1,020	700
Tin, waste and scrap, gross weight	27,200	52,100	47,700	30,400	23,000
Exports:					
Tin, refined	1,150	1,560	941	1,300	500
Tin, alloys, gross weight	1,040	966	885	1,200	1,100
Tin, waste and scrap, gross weight	4,570	3,460	5,980	2,470	1,300
Shipments from Government stockpile, gross weight	—	2	13	1	—
Consumption, apparent, refined ¹	41,800	42,400	42,300	42,600	41,000
Price, average, cents per pound: ²					
New York dealer	839	937	936	868	790
London Metal Exchange (LME), cash	815	911	914	846	770
Stocks, consumer and dealer, yearend	6,370	6,660	10,100	10,200	11,000
Net import reliance ³ as a percentage of apparent consumption, refined	76	76	77	77	75

Recycling: About 18,000 tons of tin from old and new scrap was estimated to have been recycled in 2020. Of this, about 10,000 tons was recovered from old scrap at 2 detinning plants and about 75 secondary nonferrous metal-processing plants, accounting for 24% of apparent consumption.

Import Sources (2016–19): Refined tin: Indonesia, 24%; Malaysia, 21%; Peru, 20%; Bolivia, 17%; and other, 18%. Waste and scrap: Canada, 99%; and other, 1%.

Tariff:	Item	Number	Normal Trade Relations 12–31–20
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:⁴

Material	FY 2020			FY 2021	
	Inventory as of 9–30–20	Potential acquisitions	Potential disposals	Potential acquisitions	Potential disposals
Tin (gross weight)	4,015	40	—	—	4,034

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Events, Trends, and Issues: The estimated amount of tin recycled in 2020 remained essentially unchanged compared with that in 2019. Estimated annual average tin prices based on the first 11 months in 2020 were 790 and 770 cents per pound for the New York dealer price and LME cash price, respectively—a 9% decrease for both prices compared with those in 2019. In 2020, the monthly average New York dealer tin price peaked in November at 856 cents per pound, from a low monthly average price of 705 cents per pound in April.

Decline in global tin use began in 2019 and continued through 2020, likely exacerbated by the global COVID-19 pandemic that has caused disruptions in mining and manufacturing industries around the world. Solder remains the largest global use of tin. Owing to pandemic-related consumption of canned foods, tinplate usage is expected to increase despite years of stagnation. The use of tin in chemicals and tin alloys is expected to decline from that in 2019, matching the overall decline in demand for many durable goods in 2020.

Chinese demand for tin in the third quarter of 2020 reached 2019 levels, despite pandemic-related declines in the first half of 2020. China struggled to source an adequate supply of tin as global mine production only partially recovered in the third quarter. In Burma, further issues with mine flooding and border restrictions imposed because of the COVID-19 pandemic have tightened traditional tin ore sources. In late 2020, China's Yunnan Tin Company Limited began operations at a new smelter in Yunnan Province. The new smelter will replace an existing, and soon-to-be decommissioned, facility in the same Province.

World Mine Production and Reserves: Reserves for Australia, Brazil, Congo (Kinshasa), Malaysia, Peru, and Russia were revised based on information from company and Government reports.

	Mine production		Reserves ⁵
	<u>2019</u>	<u>2020^e</u>	
United States	—	—	—
Australia	7,740	6,800	⁶ 430,000
Bolivia ^e	17,000	15,000	400,000
Brazil	14,000	13,000	420,000
Burma	42,000	33,000	100,000
China	84,500	81,000	1,100,000
Congo (Kinshasa) ^e	12,200	17,000	160,000
Indonesia	77,500	66,000	800,000
Laos ^e	1,400	1,200	NA
Malaysia	3,610	3,300	150,000
Nigeria ^e	5,800	6,000	NA
Peru	19,900	18,000	140,000
Russia	1,800	2,500	280,000
Rwanda	2,300	1,200	NA
Vietnam	5,500	4,900	11,000
Other countries	<u>549</u>	<u>400</u>	<u>350,000</u>
World total (rounded)	296,000	270,000	4,300,000

World Resources:⁵ 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.

^eEstimated. NA Not available. — Zero.

¹Defined as production (old scrap) + refined tin imports – refined tin exports + adjustments for Government and industry stock changes. Excludes imports and exports of alloys, and waste and scrap.

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.

⁶For Australia, Joint Ore Reserves Committee-compliant reserves were 250,000 tons.