

TIN

(Data in metric tons of contained tin 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 2021. The major uses for tin in the United States were chemicals, 25%; tinplate, 22%; alloys, 12%; solder, 9%; babbitt, brass and bronze, and tinning, 8%; bar tin, 2%; and other, 22%. Based on the average S&P Global Platts Metals Week New York dealer price for tin, the estimated value of imported refined tin in 2021 was \$1.2 billion, and the estimated value of tin recovered from old scrap domestically in 2021 was \$342 million.

<u>Salient Statistics—United States:</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021^e</u>
Production, secondary: ^e					
Old scrap	10,000	9,890	10,500	9,550	10,000
New scrap	8,100	8,100	8,100	8,000	8,100
Imports for consumption:					
Refined	34,300	36,800	34,100	31,600	35,000
Tin alloys, gross weight	1,550	1,430	1,020	843	1,300
Tin waste and scrap, gross weight	52,100	47,700	30,400	20,700	17,000
Exports:					
Refined	1,560	941	1,300	519	1,600
Tin alloys, gross weight	966	885	1,200	1,130	680
Tin waste and scrap, gross weight	3,460	5,980	2,470	1,200	2,500
Shipments from Government stockpile, gross weight	2	13	1	—	410
Consumption, apparent, refined ¹	42,500	42,300	43,100	41,300	45,000
Price, average, cents per pound: ²					
New York dealer	937	936	868	799	1,600
London Metal Exchange (LME), cash	911	914	846	777	1,500
Stocks, consumer and dealer, yearend	6,660	10,100	10,300	9,590	8,400
Net import reliance ³ as a percentage of apparent consumption, refined	76	77	76	77	78

Recycling: About 18,000 tons of tin from old and new scrap was estimated to have been recycled in 2021. Of this, about 10,000 tons was recovered from old scrap at 1 detinning plant and about 75 secondary nonferrous metal-processing plants, accounting for 23% of apparent consumption.

Import Sources (2017–20): Refined tin: Indonesia, 25%; Peru, 22%; Malaysia, 19%; Bolivia, 17%; and other, 17%. Waste and scrap: Canada, 99%; and other, 1%.

<u>Tariff:</u>	<u>Item</u>	<u>Number</u>	<u>Normal Trade Relations</u> <u>12–31–21</u>
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

<u>Material</u>	<u>FY 2021</u>		<u>FY 2022</u>		
	<u>Inventory</u> <u>as of 9–30–21</u>	<u>Potential</u> <u>acquisitions</u>	<u>Potential</u> <u>disposals</u>	<u>Potential</u> <u>acquisitions</u>	<u>Potential</u> <u>disposals</u>
Tin (gross weight)	3,617	—	4,034	—	4,000

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Events, Trends, and Issues: The estimated amount of tin recycled domestically in 2021 increased by 3% compared with that in 2020. The estimated annual average New York dealer price for refined tin in 2021 was 1,600 cents per pound, double that in 2020. The estimated annual average LME cash price for refined tin in 2021 was 1,500 cents per pound, a 93% increase from that in 2020. In 2021, the monthly average New York dealer tin price increased for 8 consecutive months from January through August. Supply constraints owing to shipping bottlenecks, reimposed COVID-19 pandemic shutdowns, and an increased demand for electronic and consumer goods, were largely responsible for the almost doubling of refined tin prices during 2021. In March, the United States Defense Logistics Agency began offering stockpiled tin for sale.

Throughout the year, global production struggled to maintain an adequate supply of refined tin to meet rebounding consumer demand. Pandemic-related measures, including shutdowns and border restrictions, affected refined tin production in Burma, Indonesia, Malaysia, and Rwanda. Smelters were temporarily closed for repair and annual maintenance in China and Malaysia. Shipping container shortages and bottlenecks at shipping terminals exacerbated supply constraints. Globally, consumption increased in 2021 for alloys, chemicals, solder, and tinplate while demand for lead-acid batteries remained steady.

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

	Mine production		Reserves ⁵
	<u>2020</u>	<u>2021^e</u>	
United States	—	—	—
Australia	8,120	8,300	656,000
Bolivia	14,700	18,000	400,000
Brazil	16,900	22,000	420,000
Burma ^e	29,000	28,000	700,000
China ^e	84,000	91,000	1,100,000
Congo (Kinshasa) ^e	17,300	16,000	130,000
Indonesia ^e	53,000	71,000	800,000
Laos ^e	1,400	1,600	NA
Malaysia	2,960	3,100	81,000
Nigeria ^e	5,000	1,200	NA
Peru	20,600	30,000	150,000
Russia	2,500	3,500	200,000
Rwanda ^e	1,800	2,200	NA
Vietnam ^e	5,400	6,100	11,000
Other countries	<u>782</u>	<u>930</u>	<u>310,000</u>
World total (rounded)	264,000	300,000	4,900,000

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 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 from old scrap + refined tin imports – refined tin exports + adjustments for Government and industry stock changes.

²Source: S&P Global Platts Metals Week.

³Defined as refined imports – refined exports + adjustments for Government and industry stock changes.

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 or equivalent reserves were 261,000 tons.