

TIN

(Data in metric tons, tin content, unless otherwise specified)

Domestic Production and Use: Tin has not been mined or smelted in the United States since 1993 or 1989, respectively. Twenty-five firms accounted for over 93% of the primary tin consumed domestically in 2023. The uses for tin in the United States were tinplate, 23%; chemicals, 22%; alloys and solder, 11% each; babbitt, brass and bronze, and tinning, 7%; bar tin, 2%; and other, 24%. Based on the average S&P Global Platts Metals Week New York dealer price for tin, the estimated value of imported refined tin in 2023 was \$840 million, and the estimated value of tin recovered from old scrap domestically in 2023 was \$280 million.

Salient Statistics—United States:	2019	2020	2021	2022	2023^e
Production, secondary: ^e					
Old scrap	10,500	9,550	9,860	9,430	10,000
New scrap	8,100	8,000	7,600	3,900	6,900
Imports for consumption:					
Refined	34,100	31,600	38,100	33,200	30,000
Tin alloys, gross weight	1,020	840	1,110	740	990
Tin waste and scrap, gross weight	30,400	20,700	18,600	11,600	9,200
Exports:					
Refined	1,300	519	1,290	1,310	1,100
Tin alloys, gross weight	1,200	1,130	630	530	700
Tin waste and scrap, gross weight	2,470	1,200	2,800	30,400	38,000
Shipments from Government stockpile, gross weight ¹	18	-7	437	—	NA
Consumption, apparent, refined ²	43,200	40,600	48,500	41,400	39,000
Price, average, cents per pound: ³					
New York dealer	868	799	1,580	1,546	1,300
London Metal Exchange (LME), cash	846	777	1,478	1,423	1,200
Stocks, consumer and dealer, yearend	10,200	10,400	9,010	8,930	8,800
Net import reliance ⁴ as a percentage of apparent consumption, refined	76	76	81	77	74

Recycling: About 17,000 tons of tin from old and new scrap was estimated to have been recycled in 2023. Of this, about 10,000 tons was recovered from old scrap at 1 detinning plant and about 29 secondary nonferrous-metal-processing plants, accounting for 25% of apparent consumption.

Import Sources (2019–22): Refined tin: Peru, 27%; Bolivia, 21%; Indonesia, 20%; Malaysia, 11%; and other, 21%. Waste and scrap: Canada, 96%; Mexico, 3%; and other, 1%.

Tariff:	Item	Number	Normal Trade Relations 12–31–23
	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:⁵

Material	FY 2023		FY 2024	
	Potential acquisitions	Potential disposals	Potential acquisitions	Potential disposals
Tin (gross weight)	—	688	—	640

Events, Trends, and Issues: The estimated amount of new and old scrap tin recycled domestically in 2023 increased by 27% compared with that in 2022. The estimated annual average New York dealer price for refined tin in 2023 was 1,300 cents per pound, a 18% decrease compared with that in 2022. The estimated annual average LME

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cash price for refined tin in 2023 was 1,200 cents per pound, a 16% decrease compared with that in 2022. In 2023, the monthly average New York dealer tin price decreased from January to October, apart from June and July, when the price increased by 4% and 7%, respectively.

In March, energy supply troubles led a Bolivian tin producer to declare force majeure. The company was unable to secure sufficient coal from Peru to fully power its primary tin smelter, decreasing tin production by up to 200 tons per week. Protests along the Peruvian border have reportedly impeded trade of coal into Bolivia. In April, Burma's self-administered Wa State announced that beginning in August it would halt mining operations in areas under its control. The suspension is expected to protect mineral resources until new mining regulations are implemented. In August, all mining, processing, and raw ore transportation activities ceased. Most of Burma's tin was mined within areas administered by the Wa State.

In October 2023, Indonesia's Ministry of Energy and Mineral Resources added tin to its list of critical minerals owing to its supply, economic significance, and applications in high-tech industries. The strategic move is expected to strengthen and prioritize the sustainable management of its mineral resources, streamline the industry's regulatory framework, and improve processing practices within the sector.

World Mine Production and Reserves: Reserves for Australia, China, Congo (Kinshasa), Indonesia, and Russia were revised based on company and Government reports.

	Mine production		Reserves ⁶
	2022	2023 ^e	
United States	—	—	—
Australia	9,000	9,100	7620,000
Bolivia	17,600	18,000	400,000
Brazil	^e 17,000	18,000	420,000
Burma	^e 47,000	54,000	700,000
China	^e 71,000	68,000	1,100,000
Congo (Kinshasa)	^e 18,600	19,000	120,000
Indonesia	^e 70,000	52,000	NA
Laos	2,510	2,300	NA
Malaysia	^e 5,000	6,100	NA
Nigeria	^e 7,000	8,100	NA
Peru	28,200	23,000	130,000
Russia	^e 3,700	2,700	460,000
Rwanda	^e 3,300	3,800	NA
Vietnam	^e 5,900	5,300	11,000
Other countries	1,160	1,300	310,000
World total (rounded)	307,000	290,000	4,300,000

World Resources:⁶ Identified resources of tin in the United States, primarily in Alaska, were insignificant compared with those in 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 change in total inventory from prior yearend inventory. If negative, increase in inventory. Beginning in 2023, Government stock changes no longer available.

²Defined for 2019–22 as production from old scrap + refined tin imports – refined tin exports ± adjustments for Government and industry stock changes. Beginning in 2023, Government stock changes no longer included.

³Source: S&P Global Platts Metals Week.

⁴Defined for 2019–22 as refined imports – refined exports ± adjustments for Government and industry stock changes. Beginning in 2023, Government stock changes no longer included.

⁵See Appendix B for definitions.

⁶See Appendix C for resource and reserve definitions and information concerning data sources.

⁷For Australia, Joint Ore Reserves Committee-compliant or equivalent reserves were 320,000 tons.