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 or 1989, respectively. Twenty-five firms accounted for over 95% of the primary tin consumed domestically in 2022. The major uses for tin in the United States were chemicals, 23%; tinplate, 22%; alloys, 11%; solder, 10%; babbitt, brass and bronze, and tinning, 7%; bar tin, 2%; and other, 25%. Based on the average S&P Global Platts Metals Week New York dealer price for tin, the estimated value of imported refined tin in 2022 was $1.3 billion, and the estimated value of tin recovered from old scrap domestically in 2022 was $330 million.

Salient Statistics—United States:	2018	2019	2020	2021	2022[e]
Production, secondary:[e]					
Old scrap	9,890	10,500	9,550	9,030	10,000
New scrap	8,100	8,100	8,000	7,600	8,000
Imports for consumption:					
Refined	36,800	34,100	31,600	38,100	34,000
Tin alloys, gross weight	1,430	1,020	843	1,100	720
Tin waste and scrap, gross weight	47,700	30,400	20,700	18,600	11,000
Exports:					
Refined	941	1,300	519	1,290	1,400
Tin alloys, gross weight	885	1,200	1,130	630	470
Tin waste and scrap, gross weight	5,980	2,470	1,200	2,800	2,900
Shipments from Government stockpile, gross weight[1]	13	18	-7	437	—
Consumption, apparent, refined[2]	42,300	43,200	40,600	47,800	43,000
Price, average, cents per pound:[3]					
New York dealer	936	868	799	1,580	1,600
London Metal Exchange (LME), cash	914	846	777	1,478	1,500
Stocks, consumer and dealer, yearend	10,100	10,300	10,400	8,900	8,600
Net import reliance[4] as a percentage of apparent consumption, refined	77	76	76	81	77

Recycling: About 18,000 tons of tin from old and new scrap was estimated to have been recycled in 2022. Of this, about 10,000 tons was recovered from old scrap at 1 detinning plant and about 22 secondary nonferrous-metal-processing plants, accounting for 22% of apparent consumption.

Import Sources (2018–21): Refined tin: Peru, 25%; Indonesia, 24%; Bolivia, 17%; Malaysia, 16%; and other, 18%. Waste and scrap: Canada, 98%; Mexico, 1%; and other, 1%.

Tariff: Item	Number	Normal Trade Relations 12–31–22
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]

		FY 2022		FY 2023	
Material	Inventory as of 9–30–22	Potential acquisitions	Potential disposals	Potential acquisitions	Potential disposals
Tin (gross weight)	3,578	—	4,000	—	688

Events, Trends, and Issues: The estimated amount of tin recycled domestically in 2022 increased by 8% compared with that in 2021. The estimated annual average New York dealer price for refined tin in 2022 was 1,600 cents per pound, a slight increase compared with that in 2021. The estimated annual average LME cash price for refined tin in 2022 was 1,500 cents per pound, unchanged from that in 2021. In 2022, the monthly average New York dealer tin price decreased from March to October.

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TIN

In May, a copper products manufacturer based in Germany purchased a United States metals recycling company capable of processing scrap, including tin, at the rate of 100,000 tons per year. Also in May, a company announced plans to build a $340 million electronic-waste and nonferrous-metals recycling plant in Fort Wayne, IN. The facility will have the capacity to recycle up to 45,000 tons per year of feedstock; construction was expected to begin in 2023 and conclude by 2025. In June, construction began on a secondary smelter for complex recyclable materials in Richmond County, GA. The facility will have the capacity to process up to 90,000 tons per year of recyclables and will recover multiple metals, including tin. The facility, which would cost approximately $320 million to construct, was expected to begin operations in the first half of 2024.

Throughout the year, smelters were temporarily closed in China owing to coronavirus disease 2019 (COVID-19) pandemic-related mitigation measures and annual maintenance. Intermittent truck driver strikes in Spain caused disruptions and halted shipments of tin and tungsten concentrates. In 2022, mining began from a new pit at the Penouta Mine in northwestern Spain, a deposit containing a measured and indicated resource of 76.3 million tons at 443 parts per million tin. In March, the indicated and inferred resources at the Mpama South deposit in Congo (Kinshasa) were updated to 105,000 tons of contained tin. Additionally, the company mining the deposit announced an expansion to begin in late 2023 that would increase its tin production to approximately 20,000 tons per year.

World Mine Production and Reserves: Reserves for Australia, China, Malaysia, Peru, and Russia were revised based on company and Government reports.

	Mine production		Reserves[6]
	2021	2022[e]	
United States	—	—	—
Australia	8,772	9,700	[7]570,000
Bolivia	19,628	18,000	400,000
Brazil	15,517	18,000	420,000
Burma	[e]36,900	31,000	700,000
China	[e]90,000	95,000	720,000
Congo (Kinshasa)	[e]16,700	20,000	130,000
Indonesia	[e]70,000	74,000	800,000
Laos	[e]1,980	1,900	NA
Malaysia	5,000	5,000	NA
Nigeria	[e]1,600	1,700	NA
Peru	26,995	29,000	130,000
Russia	3,000	2,700	430,000
Rwanda	[e]2,000	2,200	NA
Vietnam	[e]5,400	5,200	11,000
Other countries	1,180	1,100	310,000
World total (rounded)	305,000	310,000	4,600,000

World Resources:[6] 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.

[e]Estimated. NA Not available. — Zero.

[1]Defined as change in total inventory from prior yearend inventory. If negative, increase in inventory.

[2]Defined as production from old scrap + refined tin imports – refined tin exports ± adjustments for Government and industry stock changes.

[3]Source: S&P Global Platts Metals Week.

[4]Defined as refined imports – refined exports ± adjustments for Government and industry stock changes.

[5]See Appendix B for definitions.

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

[7]For Australia, Joint Ore Reserves Committee-compliant or equivalent reserves were 300,000 tons.