

ANTIMONY

(Data in metric tons of contained antimony unless otherwise noted)

Domestic Production and Use: In 2022, no marketable antimony was mined in the United States. A mine in Nevada that had extracted about 800 tons of stibnite ore from 2013 through 2014 was placed on care-and-maintenance status in 2015 and had no reported production in 2022. Primary antimony metal and oxide were produced by one company in Montana using imported feedstock. Secondary antimony production was derived mostly from antimonial lead recovered from spent lead-acid batteries. The estimated value of secondary antimony produced in 2022 was about \$60 million. Recycling supplied about 15% of estimated domestic consumption, and the remainder came mostly from imports. In the United States, the leading uses of antimony were as follows: flame retardants, 40%; metal products, including antimonial lead and ammunition, 36%; and nonmetal products, including ceramics and glass and rubber products, 24%.

<u>Salient Statistics—United States:</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022^e</u>
Production:					
Mine (recoverable antimony)	—	—	—	—	—
Smelter:					
Primary	331	377	254	379	400
Secondary	4,090	4,140	^e 4,250	^e 4,250	4,200
Imports for consumption:					
Ore and concentrates	96	121	105	31	30
Oxide	19,200	17,200	15,000	19,100	19,000
Unwrought, powder	5,760	6,030	5,200	6,970	6,500
Waste and scrap ¹	202	17	6	13	60
Exports:					
Ore and concentrates ¹	38	9	10	9	67
Oxide	1,750	1,570	1,230	1,530	2,100
Unwrought, powder	313	296	296	824	1,300
Waste and scrap ¹	9	14	11	136	35
Consumption, apparent ²	27,300	25,900	23,200	28,300	27,000
Price, metal, average, dollars per pound ³	3.81	3.04	2.67	5.31	6.30
Net import reliance ⁴ as a percentage of apparent consumption	84	83	81	84	83

Recycling: The bulk of secondary antimony is recovered at secondary lead smelters as antimonial lead, most of which was generated by, and then consumed by, the lead-acid battery industry.

Import Sources (2018–21): Ore and concentrates: China, 46%; Italy, 34%; India, 12%; Belgium, 5%; and other, 3%. Oxide: China,⁵ 74%; Belgium, 10%; Bolivia, 5%; Thailand, 3%; and other, 8%. Unwrought metal and powder: China,⁵ 30%; India, 28%; Vietnam, 13%; Burma, 12%; and other, 17%. Total metal and oxide: China,⁵ 63%; Belgium, 8%; India, 7%; and other, 22%.

<u>Tariff:</u>	<u>Item</u>	<u>Number</u>	<u>Normal Trade Relations</u>
			<u>12–31–22</u>
	Ore and concentrates	2617.10.0000	Free.
	Antimony oxide	2825.80.0000	Free.
	Antimony and articles thereof:		
	Unwrought antimony; powder	8110.10.0000	Free.
	Waste and scrap	8110.20.0000	Free.
	Other	8110.90.0000	Free.

Depletion Allowance: 22% (domestic), 14% (foreign).

Government Stockpile:⁶

<u>Material</u>	<u>Inventory</u> as of 9–30–22	<u>FY 2022</u>		<u>FY 2023</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>
Antimony	90.16	1,100	—	1,100	—

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Events, Trends, and Issues: China continued to be the leading global antimony producer in 2022 and accounted for 55% of global mine production. The supply of antimony raw materials and downstream production of antimony products was constrained in 2022 as a result of various temporary mine shutdowns to mitigate the spread of the coronavirus disease 2019 (COVID-19). The antimony price reached a high of \$7.03 per pound in March 2022 and the estimated average price was \$6.30 per pound in 2022 compared with the annual average price of \$5.31 per pound in 2021.

World Mine Production and Reserves: Reserves for Australia and China were revised based on Government reports.

	Mine production		Reserves ⁷
	<u>2021</u>	<u>2022^e</u>	
United States	—	—	⁸ 60,000
Australia	4,000	4,000	⁹ 120,000
Bolivia	2,600	2,500	310,000
Burma	4,600	4,000	140,000
Canada	2	2	78,000
China	61,000	60,000	350,000
Guatemala	80	80	NA
Iran	400	400	NA
Kazakhstan	100	100	NA
Kyrgyzstan	—	—	260,000
Mexico	750	800	18,000
Pakistan	66	70	26,000
Russia (recoverable)	20,000	20,000	350,000
Tajikistan	16,800	17,000	50,000
Turkey	1,300	1,300	100,000
Vietnam	310	300	NA
World total (rounded) ¹⁰	112,000	110,000	>1,800,000

World Resources:⁷ U.S. resources of antimony are mainly in Alaska, Idaho, Montana, and Nevada. Principal identified world resources are in Australia, Bolivia, Burma, China, Mexico, Russia, South Africa, and Tajikistan. Additional antimony resources may occur in Mississippi Valley-type lead deposits in the Eastern United States.

Substitutes: Selected organic compounds and hydrated aluminum oxide are substitutes as flame retardants. Chromium, tin, titanium, zinc, and zirconium compounds substitute for antimony chemicals in enamels, paint, and pigments. Combinations of calcium, copper, selenium, sulfur, and tin are substitutes for alloys in lead-acid batteries.

^eEstimated. NA Not available. — Zero.

¹Gross weight.

²Defined as primary production + secondary production from old scrap + imports of antimony in oxide and unwrought metal, powder – exports of antimony in oxide and unwrought metal, powder ± adjustments for Government stock changes.

³Antimony minimum 99.65%, cost, insurance, and freight. Source: Argus Media group, Argus Metals International.

⁴Defined as imports of antimony in oxide and unwrought metal, powder – exports of antimony in oxide and unwrought metal, powder ± adjustments for Government stock changes.

⁵Includes Hong Kong.

⁶See Appendix B for definitions.

⁷See Appendix C for resource and reserve definitions and information concerning data sources.

⁸Company-reported probable reserves for the Stibnite Gold Project in Idaho.

⁹For Australia, Joint Ore Reserves Committee-compliant or equivalent reserves were 22,000 tons.

¹⁰In addition to the countries listed, antimony may have been produced in other countries, but available information was inadequate to make reliable estimates of output.