

## ANTIMONY

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

**Domestic Production and Use:** In 2023, no marketable antimony was mined in the United States. Primary antimony metal and oxide were produced by one company in Montana using imported feedstock; data were not available. Secondary antimony production was derived mostly from antimonial lead recovered from spent lead-acid batteries. The estimated value of secondary antimony produced in 2023 was about \$49 million. Recycling supplied about 18% of estimated domestic apparent consumption, and the remainder came mostly from imports. In the United States, the leading uses of antimony were metal products, including antimonial lead and ammunition, 43%; flame retardants, 35%; and nonmetal products, including ceramics and glass and rubber products, 22%.

<b><u>Salient Statistics—United States:</u></b>	<b><u>2019</u></b>	<b><u>2020</u></b>	<b><u>2021</u></b>	<b><u>2022</u></b>	<b><u>2023<sup>e</sup></u></b>
Production:					
Mine (recoverable antimony)	—	—	—	—	—
Smelter:					
Primary	377	254	NA	NA	NA
Secondary	4,140	3,520	4,050	4,100	4,000
Imports for consumption:					
Ore and concentrates	121	105	31	29	8
Oxide	17,200	15,000	19,100	16,900	14,000
Unwrought, powder	6,670	5,520	7,480	8,300	8,300
Waste and scrap <sup>1</sup>	17	6	13	71	5
Exports:					
Ore and concentrates <sup>1</sup>	9	10	9	53	30
Oxide	1,570	1,230	1,530	2,420	1,800
Unwrought, powder	370	393	921	1,820	2,100
Waste and scrap <sup>1</sup>	14	11	136	26	3
Consumption, apparent <sup>2</sup>	26,100	22,400	28,200	25,100	22,000
Price, metal, average, dollars per pound <sup>3</sup>	3.90	2.67	5.31	6.18	5.60
Net import reliance <sup>4</sup> as a percentage of apparent consumption	84	84	86	84	82

**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 (2019–2022):** Ore and concentrates: Italy, 36%; China, 35%; India, 15%; Belgium, 9%; and other, 5%. Oxide: China,<sup>5</sup> 76%; Belgium, 11%; Bolivia, 5%; France, 3%; and other, 5%. Unwrought metal and powder: China,<sup>5</sup> 26%; India, 23%; Vietnam, 12%; Burma, 10%; and other, 29%. Total metal and oxide: China,<sup>5</sup> 63%; Belgium, 8%; India, 6%; Bolivia, 4%, and other, 19%.

<b><u>Tariff:</u></b>	<b><u>Item</u></b>	<b><u>Number</u></b>	<b><u>Normal Trade Relations</u></b>
			<b><u>12–31–23</u></b>
	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:**<sup>6</sup>

<b><u>Material</u></b>	<b><u>FY 2023</u></b>		<b><u>FY 2024</u></b>	
	<b><u>Potential acquisitions</u></b>	<b><u>Potential disposals</u></b>	<b><u>Potential acquisitions</u></b>	<b><u>Potential disposals</u></b>
Antimony	1,100	—	1,100	—

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**Events, Trends, and Issues:** China's antimony mine production has fallen significantly over the past several years. However, China continued to be the leading global antimony producer in 2023 and accounted for 48% of global antimony mine production. The world's leading antimony-producing mine was a gold-antimony mine with 23,000-ton-per-year capacity in Russia. The mine had significantly reduced antimony production in 2021 through 2023 because gold production was maximized. The antimony price in 2023 decreased, and the estimated average price was \$5.60 per pound in the first 11 months of 2023 compared with the annual average price of \$6.18 per pound in 2022.

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

	Mine production		Reserves <sup>7</sup>
	<u>2022</u>	<u>2023<sup>e</sup></u>	
United States	—	—	<sup>8</sup> 60,000
Australia	2,290	2,300	<sup>9</sup> 140,000
Bolivia	3,000	3,000	310,000
Burma	<sup>e</sup> 4,600	4,600	140,000
Canada	<sup>e</sup> 2	2	78,000
China	<sup>e</sup> 40,000	40,000	640,000
Guatemala	24	24	NA
Iran	<sup>e</sup> 500	500	NA
Kazakhstan	<sup>e</sup> 300	300	NA
Kyrgyzstan	40	40	260,000
Laos	<sup>e</sup> 220	220	NA
Mexico	<sup>e</sup> 700	700	18,000
Pakistan	<sup>e</sup> 79	80	26,000
Russia	4,300	4,300	350,000
Tajikistan	21,000	21,000	50,000
Turkey	<sup>e</sup> 5,800	6,000	99,000
Vietnam	<u>250</u>	<u>250</u>	<u>NA</u>
World total (rounded) <sup>10</sup>	83,100	83,000	>2,000,000

**World Resources:**<sup>7</sup> 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.

<sup>e</sup>Estimated. NA Not available. — Zero.

<sup>1</sup>Gross weight.

<sup>2</sup>Defined as secondary production from old scrap + imports of antimony in oxide and unwrought metal, powder – exports of antimony in oxide and unwrought metal, powder.

<sup>3</sup>Antimony minimum 99.65%, cost, insurance, and freight. Source: Argus Media group, Argus Non-Ferrous Markets.

<sup>4</sup>Defined as imports of antimony in oxide and unwrought metal, powder – exports of antimony in oxide and unwrought metal, powder.

<sup>5</sup>Includes Hong Kong.

<sup>6</sup>See Appendix B for definitions.

<sup>7</sup>See Appendix C for resource and reserve definitions and information concerning data sources.

<sup>8</sup>Company-reported probable reserves for the Stibnite Gold Project in Idaho.

<sup>9</sup>For Australia, Joint Ore Reserves Committee-compliant or equivalent reserves were 20,000 tons.

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