

ANTIMONY

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

Domestic Production and Use: In 2017, 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 2017. 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 2017, based on the average New York dealer price for antimony, was about \$33 million. Recycling supplied about 15% of estimated domestic consumption, and the remainder came mostly from imports. The value of antimony consumption in 2017, based on the average New York dealer price, was about \$228 million. The estimated distribution of domestic primary antimony consumption was as follows: nonmetal products, including ceramics and glass and rubber products, 31%; flame retardants, 31%; and metal products, including antimonial lead and ammunition, 38%.

Salient Statistics—United States:	2013	2014	2015	2016	2017^e
Production:					
Mine (recoverable antimony)	—	—	—	—	—
Smelter:					
Primary	W	W	W	W	W
Secondary	4,410	4,230	3,850	3,780	3,700
Imports for consumption:					
Ore and concentrates	342	378	308	119	100
Oxide, unwrought, powder, waste and scrap ¹	24,300	23,800	22,500	23,300	24,000
Exports:					
Ore and concentrates ¹	35	41	30	12	30
Oxide, unwrought, powder, waste and scrap ¹	3,970	3,240	3,200	1,950	2,200
Consumption, apparent ²	24,700	24,900	23,200	25,300	25,000
Price, metal, average, cents per pound ³	463	425	327	335	401
Stocks, yearend	1,470	1,400	1,290	1,090	1,100
Employment, plant, number (yearend) ^e	24	27	27	27	27
Net import reliance ⁴ as a percentage of apparent consumption	82	83	83	85	85

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 (2013–16): Metal: China, 62%; India, 13%; Mexico, 8%, Vietnam, 8%; and other, 9%. Ore and concentrate: Italy, 95%; Bosnia and Herzegovina, 3%; and Mexico, 2%. Oxide: China, 70%; Belgium, 11%; Bolivia, 6%; and other, 13%.

Tariff: Item	Number	Normal Trade Relations 12–31–17
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: None.

Events, Trends, and Issues: One company operated a smelter in Montana that produced antimony metal and oxides from imported intermediate products (antimony oxides and sodium antimonate), primarily from Canada and Mexico, and a smelter in Mexico that processed concentrates from Australia and Mexico. The reported sales in the first 6 months of 2017 were 36% less than that sold in the same period of 2016.

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Starting in the fourth quarter of 2014 through the first quarter of 2016, the average quarterly antimony price decreased from \$4.05 per pound to \$2.60 per pound, its lowest level since 2009. Average quarterly prices then increased for the remainder of 2016 to \$4.16 per pound in the fourth quarter of 2016. During 2017, the average quarterly antimony price was around \$4.00 per pound.

China was the leading global antimony producer. In 2016, many large producers reduced production and many small producers closed in response to price declines and stricter environmental controls from Provincial and National governments. At the beginning of 2017, the Ministry of Commerce of China lifted the export quota for antimony, which was set at 54,400 tons in 2016, and introduced an export license system in its place. In the fall of 2017, as prices recovered, some private sector antimony producers began to reopen following antipollution checks.

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

	Mine production ^e		Reserves ⁵
	<u>2016</u>	<u>2017</u>	
United States	—	—	⁶ 60,000
Australia	5,000	5,000	⁷ 140,000
Bolivia	2,670	2,600	310,000
Burma	3,000	2,000	NA
China	108,000	110,000	480,000
Guatemala	25	25	NA
Iran	200	200	NA
Kazakhstan	573	570	NA
Laos	242	240	NA
Mexico	196	200	18,000
Pakistan	114	100	NA
Russia (recoverable)	8,000	8,000	350,000
South Africa	1,200	1,200	27,000
Tajikistan	14,000	14,000	50,000
Turkey	4,000	3,500	100,000
Vietnam	643	600	NA
World total (rounded)	<u>148,000</u>	<u>150,000</u>	<u>1,500,000</u>

World Resources: U.S. resources of antimony are mainly in Alaska, Idaho, Montana, and Nevada. Principal identified world resources are in Australia, Bolivia, 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. W Withheld to avoid disclosing company proprietary data. — Zero.

¹Gross weight.

²Defined as secondary production from old scrap + net import reliance.

³New York dealer price for 99.5% to 99.6% metal, c.i.f. U.S. ports.

⁴Defined as imports of antimony in oxide, unwrought, powder, waste and scrap – exports of antimony in oxide, unwrought, powder, waste and scrap + adjustments for industry stock changes.

⁵See [Appendix C](#) for resource and reserve definitions and information concerning data sources.

⁶Company-reported probable reserves for the Stibnite Gold Project in Idaho.

⁷For Australia, Joint Ore Reserves Committee-compliant reserves were about 65,000 tons.