

ANTIMONY

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

Domestic Production and Use: There was no antimony mine production in the United States in 2013. Primary antimony metal and oxide was produced by one company in Montana, using imported feedstock. The estimated domestic distribution of primary antimony consumption was as follows: metal products, including antimonial lead and ammunition, 35%; nonmetal products, including ceramics and glass and rubber products, 35%; and flame retardants, 30%.

Salient Statistics—United States:	2009	2010	2011	2012	2013^e
Production:					
Mine (recoverable antimony)	—	—	—	—	—
Smelter:					
Primary	W	W	W	W	W
Secondary	3,020	3,520	3,230	3,730	3,500
Imports for consumption, ores and concentrates, oxide, and metal	20,200	26,200	23,500	22,600	25,000
Exports of metal, alloys, oxide, and waste and scrap ¹	2,100	2,540	4,170	4,710	4,500
Consumption, apparent ²	21,200	27,000	22,700	21,700	24,000
Price, metal, average, cents per pound ³	236	401	650	565	465
Stocks, yearend	1,420	1,560	1,430	1,430	1,400
Employment, plant, number (yearend) ^e	27	27	24	24	24
Net import reliance ⁴ as a percentage of apparent consumption	86	87	86	83	85

Recycling: Traditionally, the bulk of secondary antimony has been 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 (2009–12): Metal: China, 74%; Mexico, 10%; India, 7%; and other, 9%. Ore and concentrate: Italy, 60%; China, 20%; Bolivia, 13%; and other, 7%. Oxide: China, 70%; Belgium, 9%; Bolivia, 9%; Mexico, 8%; and other, 4%. Total: China, 71%; Mexico, 9%; Belgium, 8%; Bolivia, 5%; and other, 7%.

Tariff: Item	Number	Normal Trade Relations 12–31–13
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: In 2013, domestic antimony production was derived mostly from the recycling of lead-acid batteries. Recycling supplied only a minor portion of estimated domestic consumption, and the remainder came from imports. Only one domestic smelter in Montana processed imported concentrates and oxides to make antimony products, and during the first 3 quarters of 2013 produced 336 tons of antimony metal.⁵ The company that operated the smelter was substantially increasing its antimony production capacity in Mexico by acquiring and expanding historically productive antimony mines and reaching supply agreements to acquire feedstock for its expanding mills and smelter. The company expected to produce about 300 tons of antimony metal at its smelter in Mexico in 2013, about 78% more than that in 2012, and planned to further increase production in 2014.

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In late 2012, an antimony mine in central Newfoundland, Canada, that had been the leading antimony producer in North America, was shut down owing to ore depletion. In late 2013, a Canadian exploration company acquired a number of claims near the closed mine and intended to complete a soil geochemical survey and prospecting program to determine if further development would be economically feasible.

China was the leading antimony producer in the world. The Chinese Government considered antimony to be one of the protected and strategic minerals, and mine production of antimony was controlled. In 2013, the Ministry of Land and Resources (MLR) allocated a total production quota of 98,000 tons (metal content) of mined antimony, compared with 74,400 tons in 2012. However, estimates of Chinese antimony mine production, as reported by the state-run China Nonferrous Metals Industry Association (CNIA), were greater than the official quotas. The MLR has refused any exploration or new mining applications related to antimony since 2009. Owing to the mining restrictions and increased smelting capacity, China's imports of antimony concentrates have increased substantially since 2009.

During the first 10 months of 2013, exports of antimony metal and antimony oxide from China decreased by 32% and 22% respectively compared with those in 2012, reportedly owing to decreased foreign demand. China's antimony metal production capacity was estimated to be 200,000 tons per year, but capacity utilization was thought to be relatively low. Late in 2013, 15 antimony smelters in China's Hunan Province announced plans to merge into a single company by early 2014, reportedly to consolidate production capacity. In November, the China State Reserve Bureau purchased 10,500 tons of antimony for the national stockpile, an increase from 4,500 tons in 2012. An official antimony industry association, a subsidiary of the CNIA, was expected to be established in 2014. One of the goals of the association was to help Chinese antimony producers develop more value-added downstream products instead of selling primary materials. In China, the flame retardant sector was the leading consumer of antimony and accounted for about 50% of the total, followed by battery alloys, plastic stabilizers, and glass.

The price of antimony trended downward during the first three quarters of 2013 and then increased during the fourth quarter. The antimony price started the year averaging \$5.00 per pound in January, declined to \$4.30 per pound in July, and increased to an average of \$4.70 per pound in November.

Several new antimony mine projects were being evaluated and developed in Armenia, Australia, Canada, China, Georgia, Italy, Laos, Russia, and Turkey.

World Mine Production and Reserves:

	Mine production		Reserves ⁶
	2012	2013 ^e	
United States	—	—	—
Bolivia	4,000	5,000	310,000
China	145,000	130,000	950,000
Russia (recoverable)	6,500	6,500	350,000
South Africa	3,800	4,200	27,000
Tajikistan	2,000	4,700	50,000
Other countries	13,000	13,000	150,000
World total (rounded)	174,000	163,000	1,800,000

World Resources: U.S. resources of antimony are mainly in Alaska, Idaho, Montana, and Nevada. Principal identified world resources are in 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: Compounds of chromium, tin, titanium, zinc, and zirconium substitute for antimony chemicals in paint, pigments, and enamels. Combinations of cadmium, calcium, copper, selenium, strontium, sulfur, and tin can be used as substitutes for hardening lead. Selected organic compounds and hydrated aluminum oxide are widely accepted substitutes as flame retardants.

^eEstimated. W Withheld to avoid disclosing company proprietary data. — Zero.

¹Gross weight, for metal, alloys, waste, and scrap.

²Domestic mine production + 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 - exports + adjustments for Government and industry stock changes.

⁵U.S. Antimony Corp., 2013, Antimony, gold and silver, zeolite production information: Thompson Falls, MT, U.S. Antimony Corp. (Accessed December 20, 2013, at http://www.usantimony.com/2013_production.htm.)

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