

ANTIMONY

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

Domestic Production and Use: There was no domestic mine production of antimony in 2007. The only domestic source of antimony, a silver mine that produced antimony as a byproduct, closed early in 2001 with no output in that year. Primary antimony metal and oxide was produced by one company in Montana, using foreign feedstock. The estimated distribution of antimony uses was as follows: flame retardants, 40%; transportation, including batteries, 22%; chemicals, 14%; ceramics and glass, 11%; and other, 13%.

Salient Statistics—United States:	2003	2004	2005	2006	2007^e
Production:					
Mine (recoverable antimony)	—	—	—	—	—
Smelter:					
Primary	W	W	W	W	W
Secondary	5,600	3,650	3,030	3,480	3,240
Imports for consumption	26,700	33,500	22,700	23,000	22,700
Exports of metal, alloys, oxide, and waste and scrap ¹	3,680	3,810	2,140	2,140	3,060
Shipments from Government stockpile	2,070	—	—	—	—
Consumption, apparent ²	29,400	36,800	31,400	24,300	22,900
Price, metal, average, cents per pound ³	108	130	161	238	259
Stocks, yearend	6,320	2,830	2,110	2,110	2,160
Employment, plant, number ^e	30	30	10	10	10
Net import reliance ⁴ as a percentage of apparent consumption	81	90	88	86	86

Recycling: Traditionally, the bulk of secondary antimony has been recovered as antimonial lead, most of which was generated by and then consumed by the battery industry. Changing trends in that industry in recent years, however, have generally reduced the amount of secondary antimony produced; the trend to low-maintenance batteries has tilted the balance of consumption away from antimony and toward calcium as an additive.

Import Sources (2003-06): Metal: China, 70%; Peru, 12%; Mexico, 11%; and other, 7%. Ore and concentrate: Bolivia, 88%; China, 10%; and other, 2%. Oxide: China, 46%; Mexico, 38%; Belgium, 7%; and other, 9%. Total: China, 51%; Mexico, 32%; Belgium, 7%; and other, 10%.

Tariff: Item	Number	Normal Trade Relations 12-31-07
Ore and concentrates	2617.10.0000	Free.
Antimony oxide	2825.80.0000	Free.
Antimony and articles thereof, including waste and scrap	8110.00.0000	Free.

Depletion Allowance: 22% (Domestic), 14% (Foreign).

Government Stockpile: None.

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Events, Trends, and Issues: In 2007, antimony production from domestic source materials was derived entirely from the recycling of lead-acid batteries. Recycling supplied only a minor portion of estimated domestic consumption. In recent years, the number of primary antimony smelters has been reduced, as smelters in New Jersey and Texas were closed in 2004. Only one domestic smelter, in Montana, continues to make antimony products.

The price of antimony started the year at about \$2.55 per pound and remained in a narrow band most of the year, finishing August at \$2.62 per pound.

During 2007, the world's leading antimony producer, China, continued experiencing production restraints. Around the world, several new antimony mine projects were being developed.

World Mine Production, Reserves, and Reserve Base: Production and reserve estimates were introduced for Thailand because of the emergence in 2006 of several new tin operations being worked by small-scale independent miners in the northern part of the country.

	Mine production		Reserves ⁵	Reserve base ⁵
	<u>2006</u>	<u>2007^e</u>		
United States	—	—	—	90,000
Bolivia	6,600	7,000	310,000	320,000
China	110,000	110,000	790,000	2,400,000
Guatemala	1,000	1,000	NA	NA
Russia (recoverable)	3,500	4,000	350,000	370,000
South Africa	6,000	6,000	44,000	200,000
Tajikistan	2,000	2,000	50,000	150,000
Thailand	940	1,500	420,000	450,000
Other countries	<u>4,000</u>	<u>4,000</u>	<u>150,000</u>	<u>330,000</u>
World total (rounded)	134,000	135,000	2,100,000	4,300,000

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, and South Africa. 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. NA Not available. 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.

⁵[See Appendix C for definitions.](#)