ANTIMONY

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

Domestic Production and Use: There was no domestic mine production of antimony in 2004. 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 two companies, one each in Montana and Texas, using foreign feedstock. Secondary antimony was recovered, mostly in alloy form, at lead smelters; its value, based on the price of antimony metal, was about $11 million. The estimated distribution of antimony uses was as follows: flame retardants, 55%; transportation, including batteries, 18%; chemicals, 10%; ceramics and glass, 7%; and other, 10%.

Salient Statistics—United States:	2000	2001	2002	2003	2004[e]
Production:					
Mine (recoverable antimony)	W	—	—	—	—
Smelter:					
Primary	13,300	9,100	W	W	W
Secondary	7,700	5,380	5,350	5,600	4,100
Imports for consumption	41,600	37,900	28,500	26,700	24,400
Exports of metal, alloys, oxide, and waste and scrap[1]	7,120	7,610	4,250	3,680	4,440
Shipments from Government stockpile	4,540	4,620	4,630	2,070	—
Consumption, apparent[2]	39,000	42,000	34,500	32,000	27,040
Price, metal, average, cents per pound[3]	66	65	88	108	127
Stocks, yearend	6,780	4,990	5,060	6,370	3,390
Employment, plant, number[e]	40	40	35	30	30
Net import reliance[4] as a percentage of apparent consumption	90	87	84	83	85

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

Import Sources (2000-03): Metal: China, 79%; Mexico, 8%; Hong Kong, 6%; and other, 7%. Ore and concentrate: China, 47%; Australia, 19%; Mexico, 13%; Austria, 11%; and other, 10%. Oxide: China, 40%; Mexico, 29%; South Africa, 13%; Belgium, 12%; and other, 6%. Total: China, 51%; Mexico, 23%; South Africa, 9%; Belgium, 8%; and other, 9%.

Tariff: Item	Number	Normal Trade Relations 12-31-04
Ore and concentrates	2617.10.0000	Free.
Antimony and articles thereof, including waste and scrap	8110.00.0000	Free.
Antimony oxide	2825.80.0000	Free.

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

Government Stockpile: None.

Prepared by **James F. Carlin, Jr. [(703) 648-4985, jcarlin@usgs.gov, fax: (703) 648-7757]**

ANTIMONY

Events, Trends, and Issues: In 2004, 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 cut in half, as smelters in New Jersey and Texas were closed. It was announced that the Texas refinery would be closed by yearend 2004.

The price of antimony metal started the year at about $1.00 per pound and then rose steadily to about $1.35 per pound by May, after which it drifted down to about $1.15 per pound by the end of July. In August, the price spiked to about $1.48 per pound. Compared with that of recent years, the price of antimony showed considerably more strength in 2004.

During 2004, the United States and most major antimony-consuming countries experienced a continuing trend toward lower demand. The downturn was experienced in virtually all consumption categories, and industry observers attributed it partly to a lack of available material and some substitution as the price rose dramatically.

World Mine Production, Reserves, and Reserve Base: Data for reserves and reserve base have been revised from those previously published for South Africa based on information reported by the only antimony producer in South Africa.

	Mine production		Reserves[5]	Reserve base[5]
	2003	2004[e]		
United States	—	—	80,000	90,000
Bolivia	2,300	2,600	310,000	320,000
China	70,000	100,000	790,000	2,400,000
Russia (recoverable)	NA	NA	350,000	370,000
South Africa	5,300	5,300	44,000	200,000
Tajikistan	1,800	2,500	50,000	150,000
Other countries	2,200	2,000	150,000	330,000
World total (rounded)	81,600	112,000	1,800,000	3,900,000

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.

[e]Estimated. NA Not available. W Withheld to avoid disclosing company proprietary data. — Zero.
[1]Gross weight, for metal, alloys, waste, and scrap.
[2]Domestic mine production + secondary production from old scrap + net import reliance.
[3]New York dealer price for 99.5% to 99.6% metal, c.i.f. U.S. ports.
[4]Defined as imports - exports + adjustments for Government and industry stock changes.
[5]See Appendix C for definitions.