

MERCURY

(Data in metric tons of mercury content, unless otherwise noted)¹

Domestic Production and Use: Mercury, recovered solely as a byproduct, was produced at eight gold mining operations in California, Nevada, and Utah. Other gold mines in those States were thought to have recovered mercury, but data were not available to make reliable estimates. In response to decreasing primary production and the stringent restrictions placed on the disposal of mercury-containing products, secondary production continued to increase. Several companies in the eastern and central United States recovered mercury from a variety of secondary sources, such as batteries, electrical apparatus, fluorescent light tubes, instruments, dental amalgams, and chlor-alkali wastewater sludges. The value of mercury used in the United States was estimated at \$3 million. It was estimated that 35% of domestic consumption was used in the production of chlorine and caustic soda, 26% for electric and electronic applications, 10% for measuring instruments, 7% for dental supplies, and 22% for other.

Salient Statistics—United States:	1992	1993	1994	1995	1996^e
Production: Mine	64	W	W	W	W
Secondary, industrial	176	350	466	534	550
Imports for consumption	92	40	129	377	550
Exports	977	389	316	179	100
Shipments from Government stocks: ²					
National Defense Stockpile	267	543	86	—	—
U.S. Department of Energy	103	—	—	—	—
Consumption: Reported	621	558	483	436	400
Apparent	W	W	W	W	W
Price, average value, dollars per flask,					
New York, dealer	201.39	187.00	194.45	247.39	260.00
Stocks, industry, yearend ³	436	384	469	352	300
Net import reliance ⁴ as a percent of apparent consumption	W	W	W	W	W

Recycling: Secondary mercury from old scrap was equivalent to about two-thirds of apparent domestic consumption in 1996.

Import Sources (1992-95): Russia, 46%; Canada, 33%; Kyrgyzstan, 7%; Germany, 6%; and other, 8%.

Tariff: Item	Number	Most favored nation (MFN) 12/31/96	Non-MFN⁵ 12/31/96
Mercury	2805.40.0000	1.7% ad val.	5.7% ad val.

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

Government Stockpile: In addition to the quantities shown below, 146 tons of secondary mercury was held by the U.S. Department of Energy at Oak Ridge, TN.

Stockpile Status—9-30-96

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposals Jan.-Sept. 96
Mercury	4,410	—	4,410	—

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Events, Trends, and Issues: Consumption declined for the fourth consecutive year because of the gradual elimination of mercury from many products and processes. Mercury use in consumer batteries has dropped to less than one metric ton per year since its use has been restricted to alkaline button cells for hearing aids, pagers, and other small electronic devices. Military and medical equipment still use mercuric-oxide batteries because of the lack of acceptable substitutes. State and Federal studies are continuing the development of effective substitutes for mercury in switches, electrical devices, and dental amalgams; however, commercial production of these new products is not expected for several years. One of the few exceptions is a new low-mercury fluorescent light tube that became available in 1995. The 4-foot tube contains only 10 milligrams of mercury, compared with 22.8 milligrams in the previous year or with an industry average of 38.4 milligrams per tube in 1990. The low-mercury content in these new tubes should allow for their disposal as nonhazardous waste.

Ever stricter environmental restrictions and the advancement of new technology is expected to further reduce the future use of mercury in many devices. As production of primary mercury in the United States continues to be contingent on the mining of other minerals, secondary production will become an even more important component of domestic supply.

Sales from the National Defense Stockpile remained suspended pending completion of an analysis of the potential impact to the environment resulting from sales.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves ⁶	Reserve base ⁶
	1995	1996 ^e		
United States	W	W	3,000	4,000
Algeria	292	250	2,000	3,000
China	550	500	(⁷)	(⁷)
Mexico	15	15	5,000	9,000
Italy	—	—	—	69,000
Kyrgyzstan	170	200	7,500	13,000
Spain	1,497	1,400	76,000	90,000
Ukraine	40	50	2,500	4,000
Other countries	256	385	30,000	48,000
World total (may be rounded)	2,820	2,800	130,000	240,000

World Resources: World mercury resources are estimated at nearly 600,000 tons, principally in Kyrgyzstan, Russia, Slovenia, Spain, and Ukraine. These are sufficient for another century or more, especially with declining consumption rates.

Substitutes: Lithium, nickel-cadmium, and zinc-air batteries are substitutes for mercury-zinc batteries. Indium compounds substitute for mercury in alkaline batteries. Diaphragm and membrane cells replace mercury cells in the electrolytic production of chlorine and caustic soda. Ceramic composites can replace dental amalgams; organic compounds have replaced mercury fungicides in latex paint. Digital instruments have replaced mercury thermometers in many applications.

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

¹One metric ton (1,000 kilograms) = 29.0082 flasks.

²Metal sold from the National Defense Stockpile and surplus secondary mercury released from U.S. Department of Energy stocks.

³Consumer stocks only.

⁴Defined as imports - exports + adjustments for Government and industry stock changes.

⁵See Appendix B.

⁶See Appendix C for definitions.

⁷Included in "Other countries."