

MERCURY

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

Domestic Production and Use: Mercury was produced as a byproduct at nine gold mining operations in Nevada, California, and Utah. Other gold mines in these States were believed to have recovered mercury, but data were not available to make estimates. Several companies in the Eastern and Central United States recovered mercury from worn out or obsolete items such as batteries, electrical apparatus, fluorescent lamps, instruments, and dental amalgams. Mercury also was recovered at chlorine and caustic soda plants. The value of mercury used in the United States was estimated at \$3.6 million. It was estimated that 28% of domestic consumption was used in the production of chlorine and caustic soda, 23% for electronic and electrical applications, 16% for instruments and related products, and 33% for other uses.

Salient Statistics—United States:	1991	1992	1993	1994	1995^e
Production: Mine ²	58	64	W	W	W
Secondary, industrial	165	176	350	466	450
Imports for consumption	56	92	40	129	500
Exports	786	977	389	316	220
Shipments from Government stocks: ³					
National Defense Stockpile	103	267	543	86	—
U.S. Department of Energy	215	103	—	—	—
Consumption: Reported	554	621	558	483	480
Apparent	W	W	W	W	W
Price, average value, dollars per flask,					
New York, dealer	122.42	201.39	187.00	194.45	250.00
Stocks, industry, yearend ⁴	313	436	384	368	450
Employment, mine and mill, average (primary production)	3	—	—	—	—
Net import reliance ⁵ as a percent of apparent consumption	W	W	W	W	W

Recycling: Secondary and redistilled mercury accounted for 65% of domestic consumption in 1995.

Import Sources (1991-94): Canada, 49%; Russia, 37%; Germany, 13%; and other, 1%.

Tariff:	Item	Number	Most favored nation (MFN) 12/31/95	Non-MFN⁶ 12/31/95
	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—9-30-95

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposals Jan.-Sept. 95
Mercury	4,410	34.7	4,410	—

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Events, Trends, and Issues: Imports of mercury increased dramatically in 1995, after the temporary suspension of sales of mercury from the National Defense Stockpile (NDS) in 1994. NDS sales will not resume until the U.S. Environmental Protection Agency and the Defense Logistics Agency can determine a way to sell the mercury to ensure that its use will not lead to environmental problems.

Consumption remained nearly the same because of the gradual elimination of mercury from many products and processes. Mercury use in consumer batteries has dropped to about 5 tons 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 on the development of effective substitutes for mercury in switches, electrical devices, and dental amalgams; however, commercial production is not expected for several years.

Recovery of mercury from scrap materials has remained nearly the same for the past 2 years. Mercury is recovered from spent batteries, tilt switches, measuring devices, fluorescent light tubes, chlorine and caustic soda wastewater sludges, dental amalgams, and other products.

A new low-mercury fluorescent light tube became available in late 1995. The 1.22-meter (4-foot) tube contains only 10 milligrams of mercury compared with 22.8 milligrams in currently produced lamps. This is down from an industry average of 38.4 milligrams per tube in 1990. The low-mercury content in these lamps should allow for their disposal as nonhazardous waste.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves ⁷	Reserve base ⁷
	1994	1995 ^e		
United States	W	W	3,000	4,000
Algeria	475	450	2,000	3,000
China	500	500	(⁸)	(⁸)
Mexico	10	10	5,000	9,000
Italy	—	—	—	69,000
Kyrgyzstan	200	200	7,500	13,000
Spain	300	1,700	76,000	90,000
Ukraine	50	50	2,500	4,000
Other countries	223	200	30,000	48,000
World total (may be rounded)	1,760	3,100	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 compounds 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.

²Mercury was recovered only as a byproduct of gold mining.

³Metal sold from the National Defense Stockpile and surplus secondary mercury released from U.S. Department of Energy stocks.

⁴Consumer stocks only.

⁵Defined as imports - exports + adjustments for Government and industry stock changes.

⁶See Appendix B.

⁷See Appendix C for definitions.

⁸Included in "Other countries."