

LEAD

(Data in thousand metric tons of lead content, unless noted)

Domestic Production and Use: The value of recoverable mined lead in 1995, based on the average U.S. producer price, was \$345 million. Seven lead mines in Missouri plus lead-producing mines in Alaska, Colorado, Idaho, and Montana yielded most of the total. Primary lead was processed at two smelter-refineries in Missouri, a smelter in Montana, and a refinery in Nebraska. More than 90% of secondary production came from 18 plants with annual capacities of 6,000 tons or more. Lead was consumed at about 200 manufacturing plants. Transportation was the major end use, with about 85% consumed in batteries, fuel tanks, solder, seals, and bearings. Electrical, electronic, and communications uses (including batteries), ammunition, TV glass, construction (including radiation shielding), and protective coatings accounted for approximately 8% of consumption. The balance was used in ballast and weights, ceramics and crystal glass, tubes and containers, type metal, foil, wire, and specialized chemicals.

Salient Statistics—United States:	1991	1992	1993	1994	1995^e
Production: Mine, lead in concentrates	477	407	362	370	390
Primary refinery:					
From domestic ore	324	284	310	328	340
From imported materials ¹	22	21	25	23	25
Secondary refinery, old scrap	830	861	838	858	870
Imports for consumption, lead in concentrates	12	5	1	1	3
Exports, lead in concentrates	88	72	42	39	10
Imports for consumption, metal, wrought and unwrought	122	198	202	237	240
Exports, metal, wrought and unwrought	102	70	59	54	60
Shipments from Government stockpile excesses, metal	—	—	35	63	40
Consumption: Reported	1,250	1,240	1,290	1,450	1,400
Apparent	1,230	1,270	1,360	1,470	1,450
Price, average, cents per pound: U.S.	33.5	35.1	31.7	37.2	42.0
London	25.3	24.5	18.4	24.8	27.0
Stocks, metal, producers, consumers, yearend	81	103	95	77	80
Employment: Mine and mill (peak)	2,300	1,700	1,500	1,300	1,300
Primary smelter, refineries	700	600	600	600	600
Secondary smelters, refineries	1,700	1,700	1,800	1,800	1,800
Net import reliance ² as a percent of apparent consumption	6	10	15	18	15

Recycling: Recovery of lead from scrap batteries was approximately 825,000 tons (816,000 tons in 1994).

Import Sources (1991-94): Lead in concentrates: Mexico, 51%; Canada, 29%; Peru, 13% and other, 7%. Metal, wrought and unwrought: Canada, 67%; Mexico, 21%; Peru, 7%; Australia, 2%; and other, 3%. Total lead content: Canada, 67%; Mexico, 21%; Peru, 8%; Australia, 2%; and other, 2%.

Tariff:	Item	Number	Most favored nation (MFN)³ 12/31/95	Non-MFN⁴ 12/31/95
	Unwrought (Refined)	7801.10.0000	3.3% ad val.	10.0% ad val.

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

Government Stockpile:

Stockpile Status—9-30-95

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposals Jan.-Sept. 95
Lead	422	2	422	25

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Events, Trends, and Issues: During 1995, prices for lead increased moderately in the U.S. market. The average North American producer price for the first 10 months of the year was about 2.5% more than the average for the final 3 months of 1994. By contrast, average London Metal Exchange prices declined by slightly more than 6% during the same period compared with the average for the final 3 months of 1994. U.S. mine production rose about 5% as a result of increased output by one of the major producers. Primary and secondary refinery production increased by approximately 4% and 2%, respectively, the latter principally owing to the opening of a new and enlarged secondary smelter-refinery by one of the major producers at midyear. U.S. consumption declined slightly following a record year in which demand was heavy for both original equipment and replacement lead-acid batteries in the automotive industry.

On June 23, 1995, the U.S. Environmental Protection Agency (EPA) issued its final rule on National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting. This rulemaking will affect secondary lead smelters that use blast, reverberatory, rotary, or electric furnaces to recover lead, primarily from used lead-acid automotive-type batteries. The EPA rule was pursuant to the Clean Air Act, as amended in 1990, and covered the emission of several chemicals identified in the Clean Air Act as hazardous air pollutants. EPA also published information in July and September 1995 on the identification of lead-based paint hazards, lead-contaminated dust, and lead-contaminated soil. This information was designed to serve as guidance until the promulgation of final rules on such identification.

U.S. Government stockpile disposals of lead from the National Defense Stockpile continued during the year. The Defense National Stockpile Center (DNSC) revised its fiscal year 1995 Annual Materials Plan (AMP) in April 1995 to reflect an increase in the quantity of lead projected for disposal. The revision, covering the period October 1, 1994 to September 30, 1995, increased the maximum quantity that may be sold to about 54,430 metric tons from the original AMP of 32,000 metric tons. As part of the fiscal year 1995 sales, the DNSC initiated solicitation in May 1995, on the sale of 16,350 metric tons of lead on a negotiated long-term basis. For the fiscal year 1996 AMP beginning October 1, 1995, DNSC designated a limit of 54,300 metric tons of lead that may be sold during the period October 1, 1995 through September 30, 1996.

A company in Atlanta, GA, opened a new lead-acid battery recycling facility at Columbus, GA, in mid-June. The facility is designed to recycle about 9 million batteries annually, replacing an older plant at the Columbus site that had the capacity to recycle only about one-fourth as many batteries.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves ⁵	Reserve base ⁵
	1994	1995 ^e		
United States	370	390	8,000	20,000
Australia	537	540	19,000	34,000
Canada	172	170	4,000	13,000
China	340	350	7,000	11,000
Mexico	170	150	1,000	2,000
Morocco	73	70	500	1,000
Peru	220	200	2,000	3,000
South Africa	96	100	2,000	3,000
Sweden	113	100	500	1,000
Other countries	710	700	24,000	36,000
World total (may be rounded)	2,800	2,800	68,000	120,000

World Resources: In recent years, significant lead resources have been demonstrated in association with zinc and/or silver or copper in Alaska, Australia, Canada, China, India, Mexico, Pakistan, and South Africa. Identified lead resources of the world total over 1.5 billion tons.

Substitutes: Substitution of plastics has reduced the use of lead in building construction, electrical cable covering, and cans and containers. Aluminum, tin, iron, and plastics compete with lead in other packaging and protective coatings, and tin has replaced lead in solder for new or replacement potable water systems in the United States.

^eEstimated.

¹Included in imports for calculating net import reliance (see footnote 2).

²Defined as imports - exports + adjustments for Government and industry stock changes.

³No tariff for Mexico and 0.9% ad val. for Canada.

⁴See Appendix B.

⁵See Appendix C for definitions.