

## LEAD

(Data in thousand metric tons, lead content, unless otherwise specified)

**Domestic Production and Use:** Lead was produced domestically by five lead mines in Missouri plus as a byproduct at two zinc mines in Alaska and two silver mines in Idaho. The value of recoverable lead from ore mined in 2024 was an estimated \$670 million compared with \$660 million in 2023. Nearly all lead concentrate production has been exported since the last primary lead refinery closed in 2013. The value of the secondary lead produced in 2024 was \$2.4 billion, 4% less than that in 2023. The lead-acid battery industry accounted for an estimated 86% of reported U.S. lead consumption during 2024. Lead-acid batteries were primarily used as starting-lighting-ignition (SLI) batteries for automobiles, as industrial-type batteries for standby power for computer and telecommunications networks, and for motive power.

<b><u>Salient Statistics—United States:</u></b>	<b><u>2020</u></b>	<b><u>2021</u></b>	<b><u>2022</u></b>	<b><u>2023</u></b>	<b><u>2024<sup>e</sup></u></b>
Production:					
Mine, lead in concentrates	306	294	273	270	300
Mine, recoverable lead	297	286	264	263	290
Primary refinery	—	—	—	—	—
Secondary refinery, old scrap	1,090	1,050	1,010	1,010	1,000
Imports for consumption:					
Lead in concentrates	(1)	1	(1)	(1)	(1)
Refined metal, unwrought	382	614	652	519	420
Exports:					
Lead in concentrates	265	262	255	246	270
Refined metal, unwrought (gross weight)	17	22	26	23	24
Consumption, apparent <sup>2</sup>	1,450	1,640	1,630	1,500	1,400
Price, average, North American, cents per pound <sup>3</sup>	91.3	113.0	116.5	114.1	110
Net import reliance <sup>4</sup> as a percentage of apparent consumption, refined metal	25	36	38	33	28

**Recycling:** In 2024, an estimated 1 million tons of secondary lead was produced, an amount equivalent to 70% of apparent domestic consumption. Nearly all secondary lead was recovered from old scrap, mostly lead-acid batteries.

**Import Sources (2020–23):** Refined metal: Canada, 32%; Republic of Korea, 16%; Mexico, 14%; Australia, 11%; and other, 27%.

<b><u>Tariff:</u></b>	<b><u>Item</u></b>	<b><u>Number</u></b>	<b><u>Normal Trade Relations</u></b>
			<b><u>12–31–24</u></b>
	Lead ores and concentrates, lead content	2607.00.0020	1.1¢/kg on lead content.
	Refined lead	7801.10.0000	2.5% on the value of the lead content.
	Antimonial lead	7801.91.0000	2.5% on the value of the lead content.
	Alloys of lead	7801.99.9030	2.5% on the value of the lead content.
	Other unwrought lead	7801.99.9050	2.5% on the value of the lead content.

**Depletion Allowance:** 22% (domestic), 14% (foreign).

**Government Stockpile:** None.

## LEAD

**Events, Trends, and Issues:** During the first 9 months of 2024, the average North American price for lead was 110 cents per pound, 4% less than the annual average price of 114.1 cents per pound in 2023. Global stocks of lead in LME-approved warehouses were 199,000 tons at the end of September, 49% more than those at yearend 2023.

In 2024, domestic mine production of recoverable lead increased by 10% from that in 2023, and production of secondary lead was essentially unchanged from that in 2023. Estimated U.S. apparent consumption of refined lead decreased by 7% from that in 2023, and the net import reliance decreased to 28% from 33%. In the first 9 months of 2024, 20 million spent SLI lead-acid batteries were exported, an 11% increase from 18.5 million batteries exported in the same period in 2023.

According to the International Lead and Zinc Study Group,<sup>5</sup> global refined lead production in 2024 was forecast to increase by 2.4% to 13.5 million tons and refined lead consumption to increase by 0.2% to 13.1 million tons.

**World Mine Production and Reserves:** Reserves for China and Russia were revised based on Government reports.

	Mine production		Reserves <sup>6</sup>
	<u>2023</u>	<u>2024<sup>e</sup></u>	
United States	270	300	4,600
Australia	430	430	<sup>7</sup> 35,000
Bolivia	60	60	1,600
China	1,960	1,900	22,000
India	226	220	1,900
Iran	<sup>e</sup> 60	60	2,000
Mexico	183	180	5,600
Peru	273	270	5,000
Russia	<sup>e</sup> 218	220	8,900
Sweden	72	70	1,700
Tajikistan	<sup>e</sup> 39	40	NA
Turkey	<sup>e</sup> 68	70	1,600
Other countries	<u>511</u>	<u>520</u>	<u>5,900</u>
World total (rounded)	4,370	4,300	96,000

**World Resources:**<sup>6</sup> Identified world lead resources total more than 2 billion tons. In recent years, significant lead resources have been identified in association with zinc and (or) silver or copper deposits in Australia, China, Ireland, Mexico, Peru, Portugal, Russia, and the United States (Alaska).

**Substitutes:** Substitution by plastics has reduced the use of lead in cable covering and cans. Tin has replaced lead in solder for potable water systems. The electronics industry has moved toward lead-free solders and flat-panel displays that do not require lead shielding. Steel and zinc are common substitutes for lead in wheel weights.

<sup>e</sup>Estimated. NA Not available. — Zero.

<sup>1</sup>Less than ½ unit.

<sup>2</sup>Defined as primary refined production + secondary refined production from old scrap + refined imports – refined exports.

<sup>3</sup>Source: S&P Global Platts Metals Week.

<sup>4</sup>Defined as refined imports – refined exports.

<sup>5</sup>Source: International Lead and Zinc Study Group, 2024, ILZSG session/forecasts: Lisbon, Portugal, International Lead and Zinc Study Group press release, September 30, [4] p.

<sup>6</sup>See Appendix C for resource and reserve definitions and information concerning data sources.

<sup>7</sup>For Australia, Joint Ore Reserves Committee-compliant or equivalent reserves were 10 million tons.