

Mineral Industry Surveys

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LEAD IN AUGUST 2022

Domestic mine production (recoverable) of lead in August was 19,900 metric tons (t). Average daily mine production in August was 641 t, 12% less than production in the previous month and 19% less than that in August 2021.

Secondary refined lead production in August was 79,800 t, essentially unchanged from production in the previous month and 3% more than that in August 2021 (fig. 1; tables 1, 2).

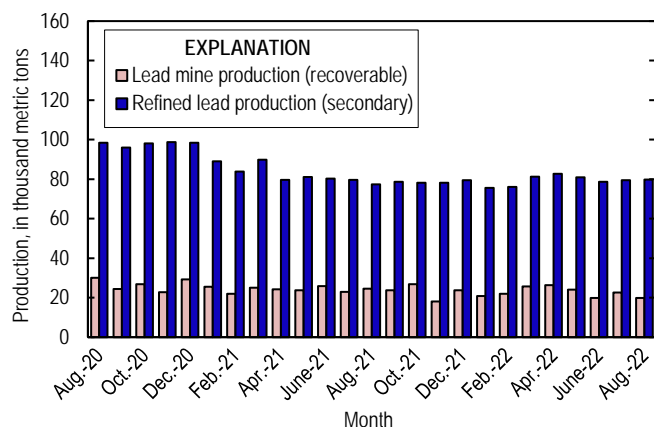


Figure 1. U.S. production of lead from August 2020 through August 2022.

The United States is a significant exporter of lead concentrates. U.S. exports of lead in ores and concentrates through August 2022 were 179,000 t, 24% more than those for the same period in 2021. The leading destinations in August were Republic of Korea (23%), China (21%), the Netherlands (18%), Canada (15%), and Japan (13%) (table 8). U.S. imports of unwrought lead through August were 465,000 t, 15% more than those for the same period in 2021. Leading import sources in August were China (39%), the Republic of Korea (23%), Canada (16%), and Mexico (9%) (table 10).

Prices and Stocks

The average London Metal Exchange, Ltd. (LME) cash price for lead in August was \$0.94 per pound, 5% more than that in the previous month and 14% less than that in August 2021 (table 3). The S&P Global Platts Metals Week (Platts) average North

American Market price for lead in August 2022 was \$1.13 per pound, 4% more than that in the previous month and 9% lower than that in August 2021.

The North American premium to the LME cash price in August 2022 averaged 18.5 cents per pound, unchanged from that in July 2022 and 32% more than that in August 2021 (fig. 2, table 3).

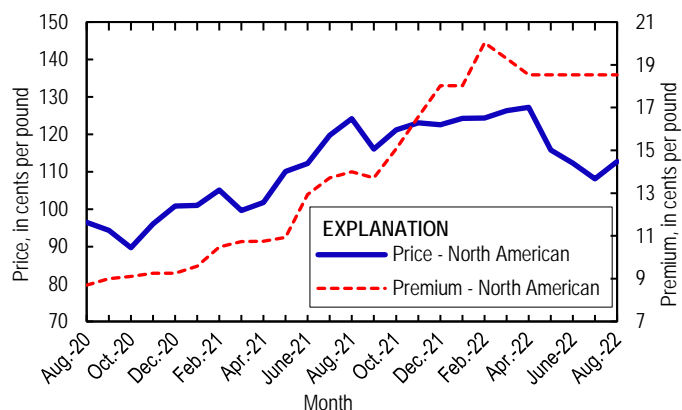


Figure 2. Average monthly North American price and premium for refined lead metal from August 2020 through August 2022. Source: S&P Global Platts Metals Week.

The Platts average U.S. used lead-acid batteries (Midwest) price in August 2022 was 22.7 cents per pound, 4% less than that in July and 27% less than that in August 2021 (table 3). Most secondary lead is recovered from used lead-acid batteries.

Global LME lead stocks at the end of August 2022 were 37,500 t, 4% less than those at the end of July 2022 and 28% less than those at the end of August 2021 (table 11).

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TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES¹

(Metric tons, lead content, unless otherwise specified)

	2021 ²		2022		
	January– December	January– August	July	August	January– August
Production:					
Mine (recoverable)	286,000	194,000	22,600	19,900	181,000
Secondary refinery, reported by smelters/refineries	975,000	661,000	79,500	79,800	634,000
Consumption of refined lead, apparent ^{e, 3}	1,570,000	1,050,000	113,000	154,000	1,080,000
Imports for consumption:					
Ore and concentrate	839	801	--	--	38
Bullion	79	61	--	--	--
Unwrought	613,000	405,000	35,300	77,900	465,000
Exports:					
Ore and concentrate	262,000	144,000	39,800	43,200	179,000
Bullion (gross weight)	1,940	1,570	198	20	1,370
Unwrought (gross weight)	21,500	14,500	1,920	3,270	17,400
S&P Global Platts Metals Week North American Market price (cents per pound)	113.04	109.21	108.14	112.75	118.88

^eEstimated. -- Zero.

¹Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

²May include revisions to previously published data.

³Secondary refinery production plus imports for consumption of unwrought lead minus domestic exports of unwrought lead.

TABLE 2
MINE AND SECONDARY REFINERY PRODUCTION OF LEAD
IN THE UNITED STATES¹

(Metric tons)

Period	Mine		Secondary refinery ^c
	Lead in concentrate	Recoverable	
2021:			
August	25,300	24,600	77,300
September	24,400	23,700	78,700
October	27,500	26,800	78,200
November	18,500	18,000	78,200
December	24,400	23,700	79,400
January–December	294,000	286,000	975,000
2022:			
January	21,500	20,900	75,500
February	22,600	22,000	76,100
March	26,400	25,700	81,200
April	27,100	26,400	82,700
May	24,800	24,100	80,900
June	20,300	19,800	78,600
July	23,200	22,600	79,500
August	21,700	19,900	79,800
January–August	188,000	181,000	634,000

^cEstimated.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 3
MONTHLY AVERAGE LEAD PRICES

	North American Market ¹	London Metal Exchange (LME) cash		Used lead-acid batteries ²
	¢/lb	¢/lb	\$/t	¢/lb
2021:				
August	124.16	110.16	2,428.52	31.30
September	116.09	102.37	2,256.86	30.19
October	121.16	106.09	2,338.83	28.31
November	123.03	106.46	2,346.94	26.20
December	122.54	104.52	2,304.20	25.38
January–December	113.04	100.00	2,204.58	30.06
2022:				
January	124.26	106.23	2,341.99	24.63
February	124.32	104.29	2,299.16	24.50
March	126.29	106.99	2,358.79	24.40
April	127.21	108.68	2,396.05	24.50
May	115.80	97.27	2,144.48	24.90
June	112.28	93.75	2,066.73	24.50
July	108.14	89.61	1,975.54	23.75
August	112.75	94.22	2,077.24	22.70
January–August	118.88	100.13	2,207.50	24.23

¹S&P Global Platts Metals Week North American Market price. Reflects the LME lead cash price plus the Platts premium for 99.97% lead.

²S&P Global Platts Metals Week assessment for used lead-acid automotive batteries (50% lead) picked up in U.S. Midwest, suitable for delivery to secondary smelters within 30 days.

Source: S&P Global Platts Metals Week.

TABLE 4
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN AUGUST 2022¹

(Metric tons, gross weight)

Item	Stocks July 31, 2022	Net receipts	Consumption	Stocks August 31, 2022
Battery-lead	W	67,300	64,700	W
Other ²	W	6,260	7,150	W
Total	10,800	73,600	71,800	12,500
Percent change from preceding month ³	XX	6.4	2.9	16.2

W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes soft lead, solder, drosses and residues, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap.

³Based on unrounded data; preceding monthly data may have been revised.

TABLE 5
LEAD, TIN, AND ANTIMONY RECOVERED FROM
LEAD-BASE SCRAP IN AUGUST 2022¹

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	67,800	W	--
Remelt lead	W	--	--
Antimonial lead	11,300	W	W
Other ²	W	--	--
Total lead-base	79,800	173	W

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 6
U.S. APPARENT CONSUMPTION OF LEAD¹

(Metric tons)

Period	Production	Imports ^{2, 3}	Exports ^{2, 3}	Apparent consumption ⁴
2021: ^P				
August	77,300	67,100	2,130	142,000
September	78,700	58,000	2,100	135,000
October	78,200	54,700	1,790	131,000
November	78,200	37,400	1,850	114,000
December	79,400	58,000	1,320	136,000
January–December	975,000	613,000	21,500	1,570,000
2022:				
January	75,500	72,100	1,700	146,000
February	76,100	53,300	1,530	128,000
March	81,200	55,900	1,730	135,000
April	82,700	37,400	1,590	119,000
May	80,900	59,000	3,730	136,000
June	78,600	74,300	1,910	151,000
July	79,500	35,300	1,920	113,000
August	79,800	77,900	3,270	154,000
January–August	634,000	465,000	17,400	1,080,000

^PPreliminary.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Import and export data are for Harmonized Tariff Schedule of the United States (HTS) codes 7801.10.0000, 7801.91.0000, 7801.99.9030, 7801.99.9050.

³Source: U.S. Census Bureau.

⁴Smelter production plus imports for consumption minus domestic exports.

TABLE 7
U.S. EXPORTS OF LEAD, BY CLASS¹

(Metric tons, gross weight, unless otherwise specified)

Class	2021 ²		2022		
	January– December	January– August	July	August	January– August
Ores and concentrate (lead content)	262,000	144,000	39,800	43,200	179,000
Bullion	1,940	1,570	198	20	1,370
Unwrought:					
Refined lead	907	800	742	797	2,740
Refined lead containing antimony as the principal alloying element	830	647	26	163	600
Lead alloys	18,400	12,400	1,150	1,620	11,200
Other	1,430	659	--	689	2,850
Total	21,500	14,500	1,920	3,270	17,400
Wrought:					
Bars, rods, profiles, and wire	886	494	60	78	621
Pipes and tubes, including fittings	61	51	1	2	23
Plates, sheets, strip, foil	4,230	3,030	461	401	3,290
Other	6,080	4,170	304	405	2,420
Total	11,200	7,740	826	887	6,360
Powders and flakes	337	193	3	28	183
Tetraethyl lead and tetramethyl lead	213	148	6	82	240
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	35,400,000	21,900,000	2,530,000	2,910,000	22,600,000
Lead waste and scrap obtained from lead-acid storage batteries	--	--	220	--	2,450
Other lead waste and scrap	37,600	25,200	2,920	3,310	24,300

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

Source: U.S. Census Bureau.

TABLE 8
U.S. EXPORTS OF LEAD ORES AND CONCENTRATES, BY COUNTRY OR LOCALITY¹

(Metric tons, lead content)

Country or locality	2021 ²		2022		
	January– December	January– August	July	August	January– August
Canada	34,300	21,900	2,130	6,280	25,700
China	107,000	63,800	26,100	9,240	60,500
Germany	14,500	7,290	--	--	7,980
Italy	14,500	7,190	--	--	7,640
Japan	24,600	9,680	11,600	5,560	20,800
Korea, Republic of	37,900	20,000	--	9,780	35,000
Mexico	22,200	7,510	--	3,820	12,000
Netherlands	3,980	3,980	--	7,960	7,960
Philippines	81	81	--	--	--
Thailand	430	194	--	--	--
Vietnam	2,120	2,120	--	514	1,190
Total	262,000	144,000	39,800	43,200	179,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

Source: U.S. Census Bureau.

TABLE 9
U.S. IMPORTS FOR CONSUMPTION OF LEAD, BY CLASS¹

(Metric tons, gross weight, unless otherwise specified)

Class	2021 ²		2022		
	January– December	January– August	July	August	January– August
Ores and concentrate (lead content)	839	801	--	--	38
Bullion (lead content)	79	61	--	--	--
Unwrought:					
Refined lead	487,000	320,000	29,500	71,800	380,000
Refined lead containing antimony as the principal alloying element (lead content)	33,200	22,100	3,570	2,180	41,700
Lead alloys (lead content)	18,600	11,500	778	1,800	15,300
Other (lead content)	74,400	52,100	1,480	2,070	28,100
Total	613,000	405,000	35,300	77,900	465,000
Wrought:					
Bars, rods, profiles, and wire	6,540	4,940	280	239	4,460
Pipes and tubes, including fittings	33	31	2	--	12
Plates, sheets, strip, foil	1,040	731	60	114	585
Other	3,810	1,910	251	470	3,600
Total	11,400	7,610	594	823	8,660
Powders and flakes	62	41	--	--	41
Tetraethyl lead and tetramethyl lead	102	30	(3)	27	127
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	5,170,000	4,900,000	42,500	69,800	378,000
Lead waste and scrap obtained from lead-acid storage batteries (lead content)	2,640	1,700	138	103	1,130
Other lead waste and scrap (lead content)	2,100	1,280	335	219	2,050

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 10
U.S. IMPORTS FOR CONSUMPTION OF UNWROUGHT LEAD, BY COUNTRY OR LOCALITY¹

(Metric tons, lead content)

Material and country or locality of origin	2021 ²		2022		
	January– December	January– August	July	August	January– August
Refined lead:					
Australia	38,900	18,500	2,630	1,550	50,700
Austria	203	--	--	--	--
Azerbaijan	719	517	--	--	--
Belgium	23,100	18,400	--	--	--
Brazil	2,150	1,530	--	--	3,960
Cambodia	--	--	101	--	101
Canada	93,000	57,500	6,660	7,040	59,800
Chile	3,090	3,090	--	--	--
China	16,500	--	2,120	30,000	64,500
Colombia	--	--	--	--	201
Congo (Kinshasa)	711	--	--	--	1,160
Dominican Republic	255	230	--	--	--
Ecuador	4,000	2,550	400	350	5,550
France	3,850	2,500	--	--	--
Germany	51,900	46,000	--	--	--
Ghana	5,140	3,060	597	596	3,630
India	23	23	1,100	26	1,610
Indonesia	--	--	--	407	407
Israel	571	571	--	--	--
Italy	3,370	2,590	--	--	--
Kazakhstan	26,400	13,900	--	2,720	11,400
Korea, Republic of	54,000	43,500	--	17,700	77,400
Malaysia	124	124	--	--	--
Mexico	74,700	49,500	5,450	6,910	55,400
Nigeria	11,000	4,560	1,220	2,370	19,000
Pakistan	--	--	9,190	1,650	10,800
Panama	150	--	--	--	300
Peru	547	473	--	100	918
Poland	49	49	--	--	--
Russia	37,900	21,100	--	149	8,820
Serbia	302	302	--	--	--
Singapore	--	--	--	--	(4)
South Africa	1,700	1,080	--	202	500
Spain	2,680	2,260	--	--	675
Sweden	10,400	8,960	--	--	--
Switzerland	1	--	--	--	--
Ukraine	176	176	--	--	--
United Kingdom	19,600	16,600	--	--	3,060
Total	487,000	320,000	29,500	71,800	380,000
Other unwrought lead:³					
Argentina	--	--	--	--	274
Australia	6,580	4,680	--	--	662
Brazil	99	--	--	--	--
Canada	101,000	68,600	3,830	5,610	71,600
Chile	199	--	--	--	--
Colombia	67	67	--	--	--
Dominican Republic	751	456	--	--	--
Ecuador	556	289	45	21	380
Egypt	949	949	--	--	--
Germany	3	--	--	--	--
Ghana	249	--	--	--	46
Hungary	--	--	29	--	29
India	478	280	--	--	695
Korea, Republic of	50	50	--	--	--
Mexico	10,200	7,940	380	259	2,860

See footnotes at end of table.

TABLE 10—Continued
U.S. IMPORTS FOR CONSUMPTION OF UNWROUGHT LEAD, BY COUNTRY OR LOCALITY¹

(Metric tons, lead content)

Material and country or locality of origin	2021 ²		2022		
	January– December	January– August	July	August	January– August
Other unwrought lead—Continued: ³					
Nigeria	--	--	74	124	788
Pakistan	16	16	--	--	--
Panama	490	297	--	--	--
Russia	172	172	--	--	80
Sweden	--	--	--	--	(4)
United Kingdom	4,150	1,840	1,470	--	7,560
Venezuela	217	135	--	27	109
Total	126,000	85,800	5,830	6,040	85,100
Grand total	613,000	405,000	35,300	77,900	465,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

³Includes the lead content (Quantity 2) of Harmonized Tariff Schedule of the United States (HTS) codes 7801.91.0000, 7801.99.9030, 7801.99.9050. Excludes bullion.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 11
LONDON METAL EXCHANGE (LME) STOCKS OF LEAD, END OF PERIOD

(Metric tons)

Period	Asia	Europe	Total
2021:			
August	30,075	22,175	52,250
September	31,800	19,200	51,000
October	41,325	13,675	55,000
November	47,300	9,475	56,775
December	47,725	6,650	54,375
2022:			
January	47,150	5,325	52,475
February	40,000	4,300	44,300
March	34,525	4,200	38,725
April	34,025	4,100	38,125
May	35,100	3,700	38,800
June	36,700	2,800	39,500
July	36,300	2,575	38,875
August	35,200	2,300	37,500

Source: London Metal Exchange, Ltd.