

Mineral Industry Surveys

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LEAD IN JUNE 2023

Domestic mine production (recoverable) of lead in June was 25,000 metric tons (t). Average daily mine production in June was 833 t, 7% more than the production in the previous month and 22% more than that in June 2022. Secondary refined lead production in June 2023 was 80,900 t, unchanged from the production in the previous month and 3% more than that in June 2022 (fig. 1; tables 1, 2).

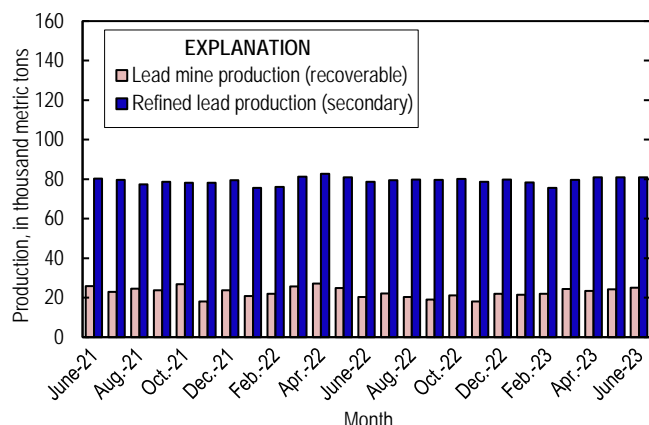


Figure 1. U.S. production of lead from June 2021 through June 2023.

The United States is a significant exporter of lead concentrates. U.S. exports of lead in ores and concentrates through June 2023 were 93,100 t, 10% more than that for the same period in 2022. The destinations in June were China (32%), Mexico (24%), the Republic of Korea (24%), and Canada (20%) (table 8). U.S. imports of unwrought lead through June were 263,000 t, 25% less than those for the same period in 2022. Leading import sources in June 2023 were Canada (48%), Mexico (22%), and the Republic of Korea (15%) (table 10).

Prices and Stocks

The average London Metal Exchange, Ltd. (LME) cash price for lead in June was 96.1 cents per pound, essentially unchanged from that in the previous month and slightly more than that in June 2022 (table 3). The S&P Global Platts Metals Week (Platts) average North American Market price for lead in June

2023 was \$1.14 per pound, unchanged from that in the previous month and slightly more than that in June 2022.

The North American premium to the LME cash price in June 2023 averaged 18.2 cents per pound, 5% less than that in May 2023 and slightly less than that in June 2022 (fig. 2, table 3).

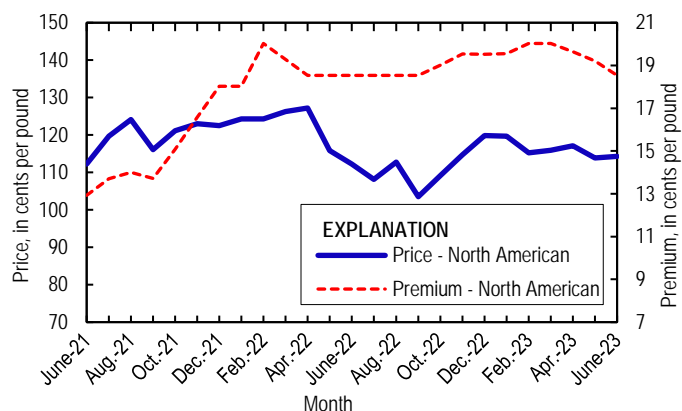


Figure 2. Average monthly North American price and premium for refined lead metal from June 2021 through June 2023. Source: S&P Global Platts Metals Week.

The Platts average U.S. used lead-acid batteries (Midwest) price in June 2023 was 20.5 cents per pound, unchanged from that in May 2023 and 16% less than that in June 2022 (table 3). Most secondary lead is recovered from used lead-acid batteries.

Global LME lead stocks at the end of June 2023 were 41,375 t, 14% more than those at the end of May 2023 and 5% more than those at the end of June 2022 (table 11).

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TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES¹

(Metric tons, lead content, unless otherwise specified)

	2022 ²		2023		
	January– December	January– June	May	June	January– June
Production:					
Mine (recoverable)	264,000	141,000	24,200	25,000	140,000
Secondary refinery, reported by smelters/refineries	960,000	482,000	80,900	80,900	476,000
Consumption of refined lead, apparent ^{e, 3}	1,590,000	822,000	115,000	105,000	727,000
Imports for consumption:					
Ore and concentrate	38	38	1	14	16
Bullion	--	--	--	--	--
Unwrought	651,000	352,000	37,000	27,600	263,000
Exports:					
Ore and concentrate	255,000	84,600	13,700	15,300	93,100
Bullion (gross weight)	1,550	1,150	97	34	201
Unwrought (gross weight)	25,800	12,200	2,580	3,300	13,000
S&P Global Platts Metals Week North American Market price (cents per pound)	116.53	121.69	113.86	114.27	116.01

^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	
2022:			
June	21,000	20,400	78,600
July	22,800	22,200	79,500
August	22,100	20,300	79,800
September	19,600	19,100	79,600
October	21,700	21,200	80,100
November	18,700	18,100	78,600
December	22,600 ^r	22,000 ^r	79,800
January–December	272,000 ^r	264,000	960,000
2023:			
January	22,100	21,500	78,400
February	22,500	21,900	75,600
March	25,100	24,400	79,600
April	24,100	23,400	80,900
May	24,900	24,200	80,900
June	25,700	25,000	80,900
January–June	144,000	140,000	476,000

^cEstimated. ^rRevised.

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
2022:				
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
September	103.52	84.99	1,873.66	21.56
October	109.16	90.14	1,987.32	20.00
November	114.73	95.19	2,098.65	19.30
December	119.86	100.33	2,211.80	18.50
January–December	116.53	97.64	2,152.62	22.77
2023:				
January	119.69	100.13	2,207.50	19.00
February	115.21	95.18	2,098.29	18.50
March	115.93	95.89	2,114.08	19.75
April	117.10	97.45	2,148.31	20.25
May	113.86	94.66	2,086.84	20.50
June	114.27	96.05	2,117.64	20.50
January–June	116.01	96.56	2,128.78	19.75

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 JUNE 2023¹

(Metric tons, gross weight)

Item	Stocks May 31, 2023	Net receipts	Consumption	Stocks June 30, 2023
Battery-lead	W	64,300	64,300	W
Other ²	W	6,120	6,120	W
Total	6,260	70,400	70,400	6,260
Percent change from preceding month ³	XX	0.0	0.0	0.0

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 JUNE 2023¹

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	68,900	W	--
Remelt lead	W	--	--
Antimonial lead	11,200	W	W
Other ²	W	--	--
Total lead-base	80,900	172	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 ^c	Imports ^{2, 3}	Exports ^{2, 3}	Apparent consumption ⁴
2022: ^p				
June	78,600	74,300	1,950	151,000
July	79,500	35,300	1,920	113,000
August	79,800	77,900	3,270	154,000
September	79,600	45,100	2,380	122,000
October	80,100	44,500	1,920	123,000
November	78,600	29,600	1,960	106,000
December	79,800	67,000	2,180	145,000
January–December	960,000	651,000	25,800	1,590,000
2023:				
January	78,400	57,200	1,570	134,000
February	75,600	30,600	1,630	105,000
March	79,600	35,600	2,220	113,000
April	80,900	75,500	1,740	155,000
May	80,900	37,000	2,580	115,000
June	80,900	27,600	3,300	105,000
January–June	476,000	263,000	13,000	727,000

^cEstimated. ^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	2022 ²		2023		
	January– December	January– June	May	June	January– June
Ores and concentrate (lead content)	255,000	84,600	13,700	15,300	93,100
Bullion	1,550	1,150	97	34	201
Unwrought:					
Refined lead	4,250	1,200	1,090	1,660	4,380
Refined lead containing antimony as the principal alloying element	1,640	410	86	72	537
Lead alloys	16,900	8,420	1,360	1,550	7,920
Other	2,980	2,160	43	8	195
Total	25,800	12,200	2,580	3,300	13,000
Wrought:					
Bars, rods, profiles, and wire	910	483	140	135	543
Pipes and tubes, including fittings	23	20	8	--	27
Plates, sheets, strip, foil	6,150	2,430	1,110	1,300	6,640
Other	3,400	1,720	210	583	1,580
Total	10,500	4,650	1,460	2,020	8,780
Powders and flakes	330	152	33	2	248
Tetraethyl lead and tetramethyl lead	409	151	10	21	95
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	30,900,000	17,100,000	2,580,000	2,410,000	13,500,000
Lead waste and scrap obtained from lead-acid storage batteries	6,360	2,230	2,560	2,110	13,000
Other lead waste and scrap	36,400	18,000	3,340	2,940	19,700

-- 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	2022 ²		2023		
	January– December	January– June	May	June	January– June
Canada	35,800	17,300	2,810	3,090	22,700
China	103,000	13,900	--	4,890	21,100
Germany	7,980	7,980	7,150	--	14,200
Italy	7,640	7,640	--	--	--
Japan	27,400	3,680	--	--	3,620
Korea, Republic of	46,900	25,200	--	3,680	12,700
Malaysia	243	--	--	--	--
Mexico	16,800	8,210	3,690	3,620	15,200
Netherlands	7,960	--	--	--	--
Switzerland	--	--	--	--	3,560
Vietnam	1,180	663	--	--	--
Total	255,000	84,600	13,700	15,300	93,100

-- 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	2022 ²		2023		
	January– December	January– June	May	June	January– June
Ores and concentrate (lead content)	38	38	1	14	16
Bullion (lead content)	--	--	--	--	--
Unwrought:					
Refined lead	538,000	279,000	32,900	23,100	226,000
Refined lead containing antimony as the principal alloying element (lead content)	50,800	36,000	1,200	1,170	12,000
Lead alloys (lead content)	22,000	12,700	560	968	7,450
Other (lead content)	41,000	24,500	2,300	2,380	17,800
Total	651,000	352,000	37,000	27,600	263,000
Wrought:					
Bars, rods, profiles, and wire	5,930	3,940	37	93	1,890
Pipes and tubes, including fittings	19	10	7	4	22
Plates, sheets, strip, foil	1,040	429	144	104	646
Other	5,590	2,880	173	274	1,260
Total	12,600	7,260	361	476	3,820
Powders and flakes	45	41	4	--	15
Tetraethyl lead and tetramethyl lead	165	100	12	112	170
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	621,000	266,000	84,900	33,600	514,000
Lead waste and scrap obtained from lead-acid storage batteries (lead content)	1,640	887	115	165	865
Other lead waste and scrap (lead content)	3,630	1,500	564	604	3,100

-- 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 10
U.S. IMPORTS FOR CONSUMPTION OF UNWROUGHT LEAD, BY COUNTRY OR LOCALITY^{1, 2}

(Metric tons, lead content)

Country or locality of origin	2022 ³		2023		
	January– December	January– June	May	June	January– June
Argentina	274	274	--	--	--
Australia	106,000	47,200	--	--	22,300
Brazil	3,960	3,960	437	--	2,470
Cambodia	101	--	--	--	--
Canada	172,000	108,000	14,200	13,300	81,500
China	64,500	32,400	--	--	5,070
Colombia	201	201	--	--	--
Congo (Brazzaville)	--	--	100	--	198
Congo (Kinshasa)	1,160	1,160	--	--	--
Ecuador	9,070	5,380	800	300	3,280
Ghana	6,880	2,490	1,140	1,430	4,680
Hungary	62	--	--	--	--
India	2,330	1,190	314	60	838
Indonesia	407	--	--	--	--
Kazakhstan	11,500	8,640	--	--	27,700
Korea, Republic of	120,000	59,600	10,600	4,200	67,700
Mexico	87,800	45,300	5,800	5,980	33,400
Nigeria	26,000	16,000	3,460	2,020	8,560
Norway	(4)	--	--	--	--
Pakistan	14,300	--	--	--	--
Panama	300	300	--	--	--
Peru	1,530	818	36	36	145
Russia	8,750	8,750	--	--	--
Singapore	(4)	(4)	--	--	--
South Africa	945	298	--	20	40
Spain	675	675	--	--	--
Sweden	(4)	(4)	--	--	3
Taiwan	423	--	--	--	748
Thailand	--	--	92	184	368
Turkey	--	--	--	--	18
United Kingdom	11,200	9,150	--	--	4,440
Venezuela	136	82	--	54	106
Total	651,000	352,000	37,000	27,600	263,000

-- Zero.

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

²Includes refined lead (Quantity 1) of Harmonized Tariff Schedule of the United States (HTS) code 7801.10.0000 and the lead content (Quantity 2) of HTS codes 7801.91.0000, 7801.99.9030, 7801.99.9050. Excludes bullion.

³May include revisions to previously published data.

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
2022:			
June	36,700	2,800	39,500
July	36,300	2,575	38,875
August	35,200	2,300	37,500
September	30,050	2,225	32,275
October	25,400	2,225	27,625
November	21,725	2,025	23,750
December	23,200	1,950	25,150
2023:			
January	18,700	1,525	20,225
February	23,700	1,400	25,100
March	25,050	1,325	26,375
April	31,025	1,275	32,300
May	35,225	1,225	36,450
June	40,175	1,200	41,375

Source: London Metal Exchange, Ltd.