

Mineral Industry Surveys

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LEAD IN AUGUST 2019

Domestic mine production (recoverable) of lead in August was 24,700 metric tons (t). Average daily mine production in August was 796 t, 12% more than that in the previous month and essentially unchanged from that in August 2018. Total secondary refined lead production in August was 97,600 t, essentially unchanged from that in the previous month and August 2018 (fig. 1; tables 1, 2).

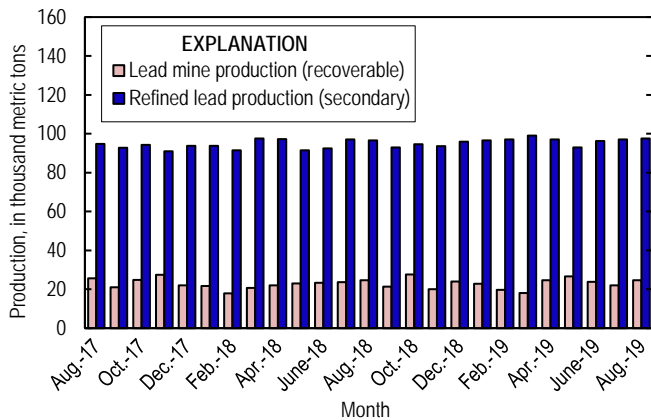


Figure 1. U.S. production of lead from August 2017 through August 2019. Source: U.S. Geological Survey.

The United States is a significant exporter of lead concentrates. U.S. exports of lead in ores and concentrates for the year through August were 134,000 t, 13% less than that for the same period in 2018. Leading destinations were Canada (26%), China (19%), the Republic of Korea (19%), Italy (12%), and Mexico (12%) (table 8).

Prices and Stocks

The average London Metal Exchange, Ltd. (LME) cash price for lead in August was 92.7 cents per pound, 4% more than that in the previous month and slightly less than that in August 2018 (table 3). The Platts Metals Week average North American

Market price for lead in August 2019 was 101.7 cents per pound, 3% more than that in the previous month and slightly less than that in August 2018. The North American premium to the LME cash price in August 2019 averaged about 9.02 cents per pound, essentially unchanged from that in July 2019 and slightly less than that in August 2018 (fig. 2, table 3).

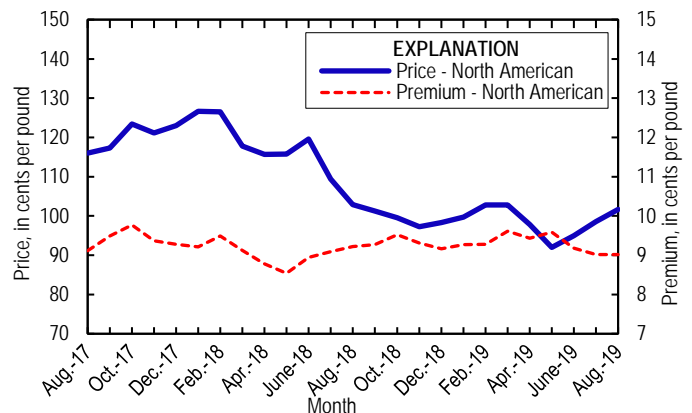


Figure 2. Average monthly North American price and premium for refined lead metal from August 2017 through August 2019. Source: Platts Metals Week.

The Platts average U.S. used lead-acid batteries (Midwest) price in August 2019 was 33.8 cents per pound, essentially unchanged from that in July and 9% less than that in August 2018 (table 3). Most secondary lead is recovered from used lead-acid batteries.

Global LME lead stocks at the end of August 2019 were 77,525 t, slightly less than those at the end of July 2019 and 37% less than those at the end of August 2018 (table 11).

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TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES¹

(Metric tons, lead content, unless otherwise specified)

	2018 ²		2019		
	January– December	January– August	July	August	January– August
Production:					
Mine (recoverable)	271,000	177,000	22,100 ^r	24,700	183,000
Secondary refinery, reported by smelters/refineries	1,140,000	759,000	97,000 ^r	97,600	773,000
Consumption of refined lead, apparent ^{e,3}	1,630,000	1,120,000	127,000	155,000	1,100,000
Imports for consumption:					
Ore and concentrate	--	--	--	--	8
Bullion	789	476	--	--	75
Unwrought	563,000	382,000	32,000	58,500	351,000
Exports:					
Ore and concentrate	251,000	153,000	31,600	21,100	134,000
Bullion (gross weight)	2,060	1,420	213	252	708
Unwrought (gross weight)	67,200	21,900	1,770	1,130	19,700
Platts Metals Week North American Market					
price (cents per pound)	110.89	116.80	98.54	101.68	98.78

^eEstimated. ^rRevised. -- 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.

³Smelter production plus imports for consumption minus domestic exports.

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

(Metric tons)

Period	Mine		Secondary refinery ^c
	Lead in concentrate	Recoverable	
2018:			
August	25,300	24,600	96,600
September	23,300	21,300	92,900
October	28,500	27,700	94,600
November	20,600	20,100	93,600
December	24,700	24,000	96,000
January–December	280,000	271,000	1,140,000
2019:			
January	23,500	22,800	96,500 ^r
February	20,300	19,800	97,000 ^r
March	18,600	18,100	99,100 ^r
April	25,200	24,500	97,000 ^r
May	27,400	26,700	93,000 ^r
June	24,400	23,800	96,200 ^r
July	22,700 ^r	22,100 ^r	97,000 ^r
August	25,400	24,700	97,600
January–August	187,000	183,000	773,000

^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	London Metal Exchange		Used lead-acid
	American Market ¹	cash		batteries ²
	¢/lb	¢/lb	\$/t	¢/lb
2018:				
August	102.85	93.64	2,064.34	37.03
September	101.25	91.98	2,027.78	34.38
October	99.53	90.02	1,984.58	33.00
November	97.29	87.98	1,939.65	31.25
December	98.29	89.13	1,965.07	30.63
January–December	110.89	101.76	2,243.35	39.10
2019:				
January	99.70	90.43	1,993.73	30.95
February	102.78	93.51	2,061.45	29.94
March	102.78	93.17	2,054.14	31.34
April	97.80	88.37	1,948.26	33.65
May	91.99	82.40	1,816.64	32.25
June	94.96	85.78	1,891.04	31.38
July	98.54	89.52	1,973.50	33.65
August	101.68	92.66	2,042.70	33.75
January–August	98.78	89.48	1,972.68	32.11

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

²Platts 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: Platts Metals Week.

TABLE 4
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN AUGUST 2019¹

(Metric tons, gross weight)

Item	9 July 31, 2019	Net receipts	Consumption	Stocks August 31, 2019
Battery-lead	W	75,100	75,900	W
Other ²	W	5,960	5,830	W
Total	7,860 ^r	81,000	81,700	7,190
Percent change from preceding month ³	XX	-3.8	-2.9	-8.6

^rRevised. 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 2019¹

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	80,100	--	--
Remelt lead	W	--	--
Antimonial lead	16,900	W	W
Other ²	W	W	--
Total lead-base	97,600	188	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
2018: ^p				
August	96,600	39,300	4,640	131,000
September	92,900	58,700	12,600	139,000
October	94,600	38,500	12,300	121,000
November	93,600	46,100	14,000	126,000
December	96,000	38,000	6,360	128,000
January–December	1,140,000	563,000	67,200	1,630,000
2019:				
January	96,500 ^r	54,000	9,490	141,000
February	97,000 ^r	37,200	1,380	133,000 ^r
March	99,100 ^r	38,100	1,820	135,000 ^r
April	97,000 ^r	55,100	918	151,000 ^r
May	93,000 ^r	34,900	1,320	127,000 ^r
June	96,200 ^r	41,400	1,860	136,000 ^r
July	97,000 ^r	32,000	1,770	127,000 ^r
August	97,600	58,500	1,130	155,000
January–August	773,000	351,000	19,700	1,100,000

^pPreliminary. ^rRevised.

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)

	2018 ²		2019		
	January– December	January– August	July	August	January– August
Ores and concentrate (lead content):	251,000	153,000	31,600	21,100	134,000
Bullion	2,060	1,420	213	252	708
Unwrought:					
Refined lead	49,300	9,130	609	21	9,500
Refined lead containing antimony as the principal alloying element	654	542	49	14	397
Lead alloys	14,400	10,200	1,090	994	8,510
Other	2,850	1,960	25	107	1,280
Total	67,200	21,900	1,770	1,130	19,700
Wrought:					
Bars, rods, profiles, and wire	886	603	21	52	416
Pipes and tubes, including fittings	116	69	--	3	41
Plates, sheets, strip, foil	3,180	2,350	172	213	2,410
Other	1,770	1,200	204	275	1,190
Total	5,960	4,230	397	543	4,060
Powders and flakes	372	204	21	21	216
Tetraethyl lead and tetramethyl lead	502	324	21	1	401
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	26,800,000	18,900,000	2,390,000	2,410,000	18,000,000
Lead waste and scrap obtained from lead-acid storage batteries	9,200	9,130	--	--	--
Other lead waste and scrap	40,300	27,000	2,200	3,640	26,700

--Zero.

¹Data are rounded to 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)

	2018 ²		2019		
	January– December	January– August	July	August	January– August
Australia	7,310	--	--	--	--
Canada	51,200	26,000	1,160	5,660	35,100
China	73,600	58,900	7,320	11,300	26,000
Dominican Republic	--	--	--	--	29
Germany	15,100	7,200	--	--	--
Italy	7,170	7,170	8,100	--	15,500
Japan	19,100	7,790	--	3,980	9,570
Korea, Republic of	48,700	17,700	7,060	--	25,800
Laos	--	--	--	--	11
Mexico	19,100	18,600	7,980	120	16,500
Netherlands	7,100	7,100	--	--	5,340
Saudi Arabia	27	27	--	--	--
Thailand	2,520	2,520	--	--	--
Vietnam	--	--	14	--	32
Total	251,000	153,000	31,600	21,100	134,000

-- 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)

	2018 ²		2019		
	January– December	January– August	July	August	January– August
Ores and concentrate (lead content):	--	--	--	--	8
Bullion (lead content)	789	476	--	--	75
Unwrought:					
Refined lead	448,000	308,000	25,700	50,000	288,000
Refined lead containing antimony as the principal alloying element (lead content)	45,200	30,200	1,730	2,280	17,900
Lead alloys (lead content)	18,600	11,500	1,860	2,950	14,500
Other (lead content)	50,800	31,700	2,650	3,280	30,300
Total	563,000	382,000	32,000	58,500	351,000
Wrought:					
Bars, rods, profiles, and wire	1,020	593	214	231	1,640
Pipes and tubes, including fittings	29	5	--	1	70
Plates, sheets, strip, foil	1,740	1,100	146	81	1,140
Other	4,090	2,310	172	131	1,970
Total	6,890	4,010	531	444	4,810
Powders and flakes	203	131	19	19	211
Tetraethyl lead and tetramethyl lead	716	619	13	14	88
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	1,050,000	574,000	38,400	32,300	341,000
Lead waste and scrap obtained from lead-acid storage batteries (lead content)	1,660	1,070	136	123	1,220
Other lead waste and scrap (lead content)	2,450	1,750	265	139	1,260

-- Zero.

¹Data are rounded to 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 LOCALITY¹

(Metric tons, lead content)

Material and country or locality of origin	2018 ²		2019		
	January– December	January– August	July	August	January– August
Refined lead:					
Argentina	6,050	4,140	176	127	2,720
Australia	2,780	--	--	--	--
Brazil	15,500	10,700	200	803	4,510
Burma	100	100	100	250	750
Canada	148,000	100,000	12,900	13,000	107,000
Chile	100	100	--	--	--
China	--	--	--	--	1
Colombia	491	491	--	--	801
Dominican Republic	250	225	--	--	50
Ecuador	10,900	7,010	2,020	2,100	15,000
Germany	--	--	--	--	50
Honduras	199	199	--	--	--
Hong Kong	--	--	100	--	100
India	23,200	21,500	--	223	3,540
Israel	1,820	1,660	295	--	1,650
Kazakhstan	5,130	3,450	293	5,820	16,600
Korea, Republic of	106,000	64,000	--	18,600	59,400
Mexico	107,000	76,700	7,580	7,220	67,800
Nigeria	47	--	200	48	397
Panama	125	125	--	400	400
Peru	3,350	2,050	--	--	1,350
Russia	6,460	6,460	1,910	1,010	3,700
South Africa	174	174	--	--	20
Sri Lanka	625	625	--	--	--
Thailand	7,500	6,110	--	--	1,160
United Kingdom	485	191	--	15	211
Venezuela	2,460	1,740	--	380	934
Total	448,000	308,000	25,700	50,000	288,000
Other unwrought lead:³					
Argentina	1,920	1,920	128	168	1,560
Bolivia	--	--	124	--	124
Canada	93,100	58,300	5,350	7,770	56,800
Chile	1,780	1,780	--	2	--
China	--	--	--	--	2
Colombia	1,040	431	--	--	--
Costa Rica	4,470	2,660	--	--	19
Ecuador	125	125	89	--	334
Germany	--	--	--	1	1
Honduras	2,490	2,490	--	--	--
India	93	18	18	19	148
Korea, Republic of	--	--	--	--	5
Mexico	8,150	4,310	197	196	2,340
Panama	199	199	--	--	--
Peru	50	50	--	221	221
Russia	209	172	--	--	(4)
South Africa	95	95	--	--	--
Sweden	--	--	--	11	11
Taiwan	--	--	--	--	(4)
United Kingdom	--	--	343	97	1,040
Venezuela	885	777	--	26	81
Total	115,000	73,400	6,250	8,510	62,700
Grand total	563,000	382,000	32,000	58,500	351,000

-- 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.

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

(Metric tons)

Period	United States	Asia	Europe	Total
2018:				
August	--	33,600	89,300	123,000
September	--	27,200	88,500	116,000
October	--	23,600	90,000	114,000
November	--	21,100	84,100	105,000
December	--	20,700	86,700	107,000
2019:				
January	--	19,300	53,200	72,500
February	--	22,600	54,300	76,900
March	--	22,200	56,500	78,800
April	--	22,100	52,400	74,400
May	--	20,600	48,800	69,400
June	--	19,100	46,700	65,800
July	--	27,900	50,700	78,500
August	--	30,900	46,700	77,500

-- Zero.

Source: London Metal Exchange, Ltd.