

Mineral Industry Surveys

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LEAD IN SEPTEMBER 2020

Domestic mine production (recoverable) of lead in September 2020 was 23,700 metric tons (t). Average daily mine production in September 2020 was 790 t, 15% less than that in the previous month and slightly less than that in September 2019. Total secondary refined lead production in September 2020 was 95,800 t, slightly less than that in the previous month and September 2019 (fig. 1; tables 1, 2).

94.3 cents per pound, slightly less than that in the previous month and 8% less than that in September 2019.

The North American premium to the LME cash price in September 2020 averaged 9 cents per pound, 3% more than that in August 2020 and slightly less than that in September 2019 (fig. 2, table 3).

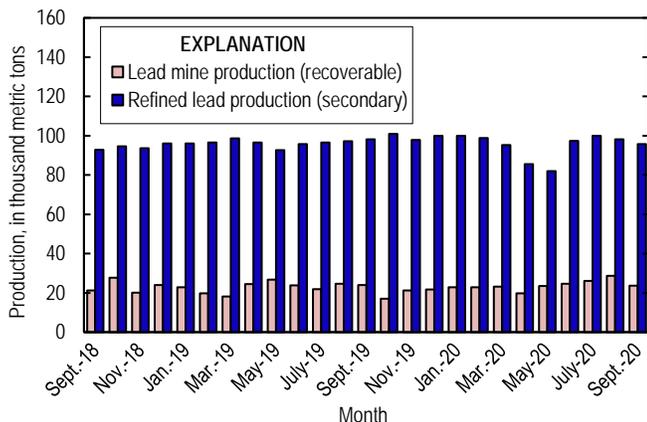


Figure 1. U.S. production of lead from September 2018 through September 2020. Source: U.S. Geological Survey.

The United States is a significant exporter of lead concentrates. U.S. exports of lead in ores and concentrates through September 2020 were 204,000 t, 10% more than those for the same period in 2019. The destinations in September 2020 were China (51%), Republic of Korea (22%), Canada (16%), and Japan (11%) (table 8).

Prices and Stocks

The average London Metal Exchange, Ltd. (LME) cash price for lead in September 2020 was 85.3 cents per pound, slightly less than that in the previous month and 9% less than that in September 2019 (table 3). The Platts Metals Week average North American Market price for lead in September 2020 was

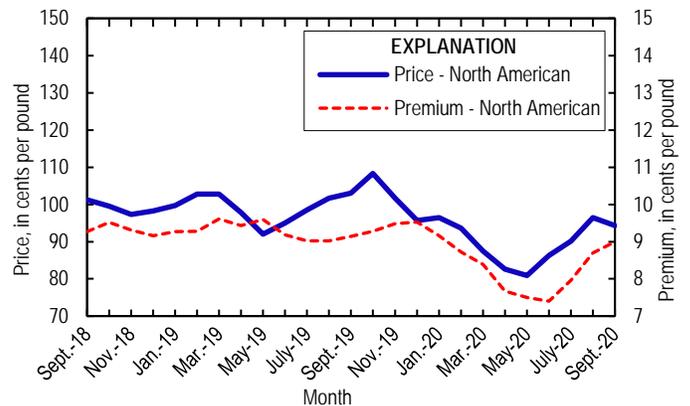


Figure 2. Average monthly North American price and premium for refined lead metal from September 2018 through September 2020. Source: Platts Metals Week.

The Platts average U.S. used lead-acid batteries (Midwest) price in September 2020 was 34 cents per pound, slightly more than that in August 2020 and essentially unchanged from that in September 2019 (table 3). Most secondary lead is recovered from used lead-acid batteries.

Global LME lead stocks at the end of September 2020 were 137,000 t, 10% more than those at the end of August 2020 and nearly double those at the end of September 2019 (table 11).

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TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES¹

(Metric tons, lead content, unless otherwise specified)

	2019 ²		2020		
	January– December	January– September	August	September	January– September
Production:					
Mine (recoverable)	266,000	206,000	28,700	23,700	215,000
Secondary refinery, reported by smelters/refineries	1,170,000	868,000	98,100	95,800	853,000
Consumption of refined lead, apparent ^{e, 3}	1,640,000	1,240,000	121,000	119,000	1,120,000
Imports for consumption:					
Ore and concentrate	8	8	--	--	(4)
Bullion	75	75	--	96	313
Unwrought	501,000	396,000	23,900	24,300	281,000
Exports:					
Ore and concentrate	259,000	186,000	37,400	48,100	204,000
Bullion (gross weight)	1,230	783	194	52	1,280
Unwrought (gross weight)	25,500	20,800	1,430	1,420	12,400
Platts Metals Week North American Market price (cents per pound)	99.91	99.25	96.48	94.34	89.82

^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.

³Smelter production plus imports for consumption minus domestic exports.

⁴Less than ½ unit.

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

(Metric tons)

Period	Mine		Secondary refinery ^c
	Lead in concentrate	Recoverable	
2019:			
September	24,700	24,000	98,200
October	17,400	17,000	101,000
November	21,900	21,300	97,800
December	22,300	21,700	100,000
January–December	274,000	266,000	1,170,000
2020:			
January	23,500	22,800	100,000
February	23,500	22,900	98,800
March	23,700	23,100	95,300
April	20,300	19,800	85,500
May	24,200	23,500	82,000
June	25,300	24,600	97,500
July	26,900	26,100	99,700
August	29,600	28,700	98,100
September	23,100	23,700	95,800
January–September	220,000	215,000	853,000

^cEstimated.

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

TABLE 3
MONTHLY AVERAGE LEAD PRICES

	North	London Metal Exchange		Used lead-acid
	American Market ¹	cash		batteries ²
	¢/lb	¢/lb	\$/t	¢/lb
2019:				
September	103.05	93.91	2,070.29	34.22
October	108.33	99.05	2,183.67	34.95
November	101.63	92.15	2,031.46	35.47
December	95.65	86.12	1,898.68	35.85
January–December	99.91	90.59	1,997.13	33.12
2020:				
January	96.46	87.30	1,924.69	36.75
February	93.63	84.90	1,871.75	36.44
March	87.50	79.11	1,744.14	34.78
April	82.59	74.91	1,651.53	32.50
May	80.90	73.40	1,618.16	32.25
June	86.32	78.92	1,739.86	32.00
July	90.16	82.20	1,812.15	32.50
August	96.48	87.78	1,935.20	33.16
September	94.34	85.34	1,881.36	33.98
January–September	89.82	81.54	1,797.65	33.82

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 SEPTEMBER 2020¹

(Metric tons, gross weight)

Item	Stocks	Net receipts	Consumption	Stocks
	August 31, 2020			September 30, 2020
Battery-lead	W	76,200	75,100	W
Other ²	W	5,840	5,910	W
Total	6,940	82,000	81,000	7,940
Percent change from preceding month ³	XX	-1.2	-1.8	13.9

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 SEPTEMBER 2020¹

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	78,600	--	--
Remelt lead	W	--	--
Antimonial lead	15,300	W	W
Other ²	W	W	--
Total lead-base	95,800	184	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
2019: ^p				
September	98,200	45,300	1,290	142,000
October	101,000	35,500	2,360	134,000
November	97,800	28,700	1,460	125,000
December	100,000	40,200	805	140,000
January–December	1,170,000	501,000	25,500	1,640,000
2020:				
January	100,000	42,000	1,580	141,000
February	98,800	26,400	1,290	124,000
March	95,300	33,400	1,460	127,000
April	85,500	41,100	1,290	125,000
May	82,000	27,300	909	108,000
June	97,500	34,800	1,370	131,000
July	99,700	27,400	1,700	125,000
August	98,100	23,900	1,430	121,000
September	95,800	24,300	1,420	119,000
January–September	853,000	281,000	12,400	1,120,000

^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)

	2019 ²		2020		
	January– December	January– September	August	September	January– September
Ores and concentrate (lead content)	259,000	186,000	37,400	48,100	204,000
Bullion	1,230	783	194	52	1,280
Unwrought:					
Refined lead	9,450	9,390	21	121	502
Refined lead containing antimony as the principal alloying element	651	436	64	86	432
Lead alloys	13,700	9,690	1,280	1,190	10,600
Other	1,620	1,330	71	18	899
Total	25,500	20,800	1,430	1,420	12,400
Wrought:					
Bars, rods, profiles, and wire	615	474	54	33	399
Pipes and tubes, including fittings	167	41	--	40	75
Plates, sheets, strip, foil	3,460	2,630	179	290	1,760
Other	2,360	1,390	195	283	1,910
Total	6,600	4,530	427	647	4,130
Powders and flakes	297	237	2	15	148
Tetraethyl lead and tetramethyl lead	507	449	3	6	124
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	27,300,000	20,200,000	2,410,000	2,720,000	19,700,000
Lead waste and scrap obtained from lead-acid storage batteries	--	--	--	--	--
Other lead waste and scrap	39,100	29,100	3,690	4,180	37,300

-- 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)

	2019 ²		2020		
	January– December	January– September	August	September	January– September
Australia	--	--	--	--	15,700
Canada	52,400	41,400	1,840	7,570	19,300
China	62,300	45,900	16,200	24,500	58,400
Dominican Republic	34	29	--	--	4
Germany	--	--	--	--	8,060
Indonesia	5	--	--	--	--
Italy	23,400	23,400	--	--	16,000
Japan	25,100	16,500	--	5,510	15,100
Korea, Republic of	51,300	32,800	7,870	10,600	42,500
Laos	11	11	--	--	--
Mexico	24,700	16,600	23	--	8,160
Netherlands	15,000	9,320	11,500	--	19,500
Thailand	3,390	--	--	--	1,190
Vietnam	1,760	41	2	--	30
Total	259,000	186,000	37,400	48,100	204,000

-- 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)

	2019 ²		2020		
	January– December	January– September	August	September	January– September
Ores and concentrate (lead content)	8	8	--	--	(3)
Bullion (lead content)	75	75	--	96	313
Unwrought:					
Refined lead	406,000	324,000	18,100	18,300	232,000
Refined lead containing antimony as the principal alloying element (lead content)	27,000	20,100	1,620	2,210	15,400
Lead alloys (lead content)	23,200	17,400	1,020	1,430	12,400
Other (lead content)	44,000	34,400	3,170	2,370	21,000
Total	501,000	396,000	23,900	24,300	281,000
Wrought:					
Bars, rods, profiles, and wire	3,420	1,700	547	245	3,160
Pipes and tubes, including fittings	77	71	(3)	5	95
Plates, sheets, strip, foil	1,760	1,270	43	37	1,140
Other	2,770	2,190	262	159	1,460
Total	8,020	5,230	852	446	5,850
Powders and flakes	315	241	--	--	132
Tetraethyl lead and tetramethyl lead	139	101	19	(3)	243
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	528,000	360,000	188,000	96,900	3,950,000
Lead waste and scrap obtained from lead-acid storage batteries (lead content)	2,320	1,360	191	203	1,430
Other lead waste and scrap (lead content)	2,100	1,420	255	217	1,530

-- Zero.

¹Data are rounded to 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	2019 ²		2020		
	January– December	January– September	August	September	January– September
Refined lead:					
Argentina	4,300	3,020	--	--	1,800
Australia	--	--	--	--	9,190
Brazil	9,920	5,220	1,150	1,050	14,300
Burma	1,500	950	--	200	550
Canada	159,000	119,000	10,400	9,870	84,000
China	101	101	--	--	--
Colombia	801	801	--	--	900
Dominican Republic	50	50	--	26	52
Ecuador	19,800	15,700	400	400	6,090
Germany	50	50	--	--	--
Ghana	--	--	--	--	421
Hong Kong	100	100	--	--	--
India	4,090	3,540	--	--	3,760
Indonesia	--	--	--	--	76
Israel	2,200	1,650	--	192	1,460
Japan	--	--	299	--	299
Kazakhstan	17,800	16,600	--	--	6,670
Korea, Republic of	76,000	73,500	--	--	33,400
Mexico	96,700	75,000	4,650	5,150	50,500
Nigeria	994	397	1,120	999	5,560
Panama	400	400	--	--	--
Peru	3,030	1,450	120	200	1,600
Russia	6,070	4,170	--	--	10,100
South Africa	20	20	--	--	--
Sri Lanka	--	--	--	--	200
Thailand	1,250	1,160	--	--	192
United Kingdom	404	211	(3)	--	491
Venezuela	2,080	934	--	221	245
Total	406,000	324,000	18,100	18,300	232,000
Other unwrought lead:⁴					
Argentina	2,080	1,690	--	--	--
Bolivia	183	124	--	--	--
Brazil	276	--	35	--	208
Canada	86,800	65,800	5,460	5,470	45,100
China	2	2	--	--	--
Chile	--	--	--	--	299
Costa Rica	19	19	--	--	--
Denmark	--	--	--	--	(3)
Dominican Republic	--	--	--	304	610
Ecuador	378	334	111	45	318
France	--	--	--	--	30
Germany	1	1	--	--	--
Ghana	--	--	--	--	198
India	321	148	--	68	292
Korea, Republic of	14	5	10	--	10
Mexico	2,700	2,430	52	92	1,080
Paraguay	49	--	--	--	--
Peru	221	221	--	--	--
Russia	(3)	(3)	--	--	--
Sweden	11	11	--	--	--
Taiwan	(3)	(3)	--	--	--

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	2019 ²		2020		
	January– December	January– September	August	September	January– September
Other unwrought lead—Continued: ⁴					
United Kingdom	1,040	1,040	114	--	455
Venezuela	185	81	27	27	158
Total	94,300	71,900	5,810	6,010	48,800
Grand total	500,000	396,000	23,900	24,300	281,000

-- Zero.

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

²May include revisions to previously published data.

³Less than ½ unit.

⁴Includes 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.

Source: U.S. Census Bureau.

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

(Metric tons)

Period	United States	Asia	Europe	Total
2019:				
September	--	27,425	42,075	69,500
October	--	27,400	42,675	70,075
November	--	26,250	40,875	67,125
December	--	26,050	40,150	66,200
2020:				
January	--	26,000	40,800	66,800
February	--	25,750	42,350	68,100
March	--	26,250	44,650	70,900
April	3,725	26,100	43,825	73,650
May	5,875	25,625	44,325	75,825
June	5,875	24,625	36,000	66,500
July	7,725	28,450	81,975	118,150
August	7,250	33,775	83,875	124,900
September	6,825	34,350	95,825	137,000

-- Zero.

Source: London Metal Exchange, Ltd.