

Mineral Industry Surveys

For information, contact:

Kateryna Klochko, Lead Commodity Specialist
 National Minerals Information Center
 U.S. Geological Survey
 989 National Center
 Reston, VA 20192
 Telephone: (703) 648-4977, Fax: (703) 648-7757
 Email: kklochko@usgs.gov

Christine Pisut (Data)
 Telephone: (703) 648-7942
 Fax: (703) 648-7975
 Email: cpisut@usgs.gov

Internet: <http://www.usgs.gov/centers/nmic>

LEAD IN NOVEMBER 2019

Domestic mine production (recoverable) of lead in November was 21,400 metric tons (t). Average daily mine production in November was 713 t, 29% more than that in the previous month and 7% more than that in November 2018. Total secondary refined lead production in November was 97,800 t, slightly less than that in the previous month and 5% more than that in November 2018 (fig. 1; tables 1, 2).

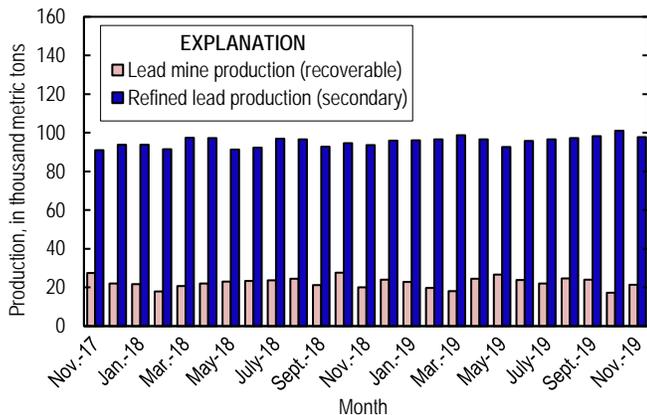


Figure 1. U.S. production of lead from November 2017 through November 2019. Source: U.S. Geological Survey.

The United States is a significant exporter of lead concentrates. U.S. exports of lead in ores and concentrates for the year through November were 237,000 t, slightly less than that for the same period in 2018. Leading destinations in November were Canada (46%), the Republic of Korea (22%), China (17%), and Thailand (12%) (table 8).

Prices and Stocks

The average London Metal Exchange, Ltd. (LME) cash price for lead in November was 92.2 cents per pound, 7% less than that in the previous month and 5% more than that in November 2018 (table 3). The Platts Metals Week average North American Market price for lead in November 2019 was 101.6 cents per

pound, 6% less than that in the previous month and 4% more than that in November 2018. The North American premium to the LME cash price in November 2019 averaged 9.48 cents per pound, slightly more than that in October 2019 and in November 2018 (fig. 2, table 3).

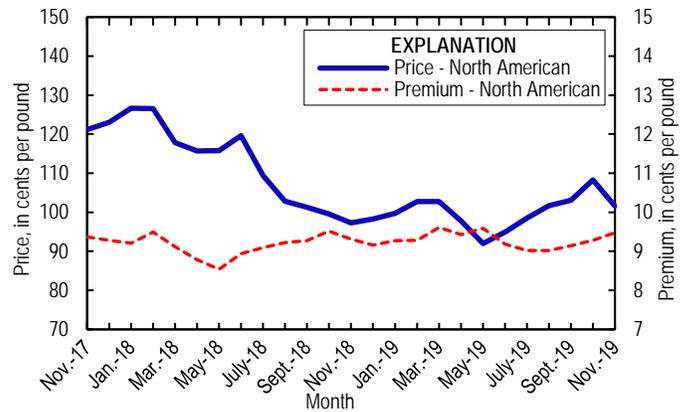


Figure 2. Average monthly North American price and premium for refined lead metal from November 2017 through November 2019. Source: Platts Metals Week.

The Platts average U.S. used lead-acid batteries (Midwest) price in November 2019 was 35.5 cents per pound, slightly more than that in October and 14% more than that in November 2018 (table 3). Most secondary lead is recovered from used lead-acid batteries.

Global LME lead stocks at the end of November 2019 were 67,125 t, 4% less than those at the end of October 2019 and 36% less than those at the end of November 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– November	October	November	January– November
Production:					
Mine (recoverable)	271,000	247,000	17,200	21,400	245,000
Secondary refinery, reported by smelters/refineries	1,140,000	1,040,000	101,000	97,800	1,070,000
Consumption of refined lead, apparent ^{e, 3}	1,630,000	1,500,000	134,000	125,000	1,500,000
Imports for consumption:					
Ore and concentrate	--	--	--	--	8
Bullion	789	739	--	--	75
Unwrought	563,000	525,000	35,500	28,700	461,000
Exports:					
Ore and concentrate	251,000	240,000	32,400	18,300	237,000
Bullion (gross weight)	2,060	2,010	97	248	1,130
Unwrought (gross weight)	67,200	60,800	2,360	1,460	24,800
Platts Metals Week North American Market					
price (cents per pound)	110.89	112.04	108.33	101.63	100.29

^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.

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:			
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	96,100
February	20,300	19,800	96,600
March	18,600	18,100	98,700
April	25,200	24,500	96,600
May	27,400	26,700	92,600
June	24,400	23,800	95,800
July	22,700	22,100	96,600
August	25,400	24,700	97,200
September	24,700	24,000	98,200
October	17,600	17,200	101,000
November	22,000	21,400	97,800
January–November	252,000	245,000	1,070,000

^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
2018:				
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
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
January–November	100.29	90.99	2,006.08	32.87

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 NOVEMBER 2019¹

(Metric tons, gross weight)

Item	Stocks	Net receipts	Consumption	Stocks
	October 31, 2019			November 30, 2019
Battery-lead	W	74,900	74,700	W
Other ²	W	5,910	6,170	W
Total	7,270	80,800	80,800	7,220
Percent change from preceding month ³	XX	-7.1	-7.4	-0.8

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 NOVEMBER 2019¹

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	80,900	--	--
Remelt lead	W	--	--
Antimonial lead	16,300	W	W
Other ²	W	W	--
Total lead-base	97,800	186	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				
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	96,100	54,000	9,490	141,000
February	96,600	37,200	1,380	132,000
March	98,700	38,100	1,820	135,000
April	96,600	55,100	918	151,000
May	92,600	34,900	1,320	126,000
June	95,800	41,400	1,860	135,000
July	96,600	32,000	1,770	127,000
August	97,200	58,500	1,130	154,000
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
January–November	1,070,000	461,000	24,800	1,500,000

^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)

	2018 ²		2019		
	January– December	January– November	October	November	January– November
Ores and concentrate (lead content)	251,000	240,000	32,400	18,300	237,000
Bullion	2,060	2,010	97	248	1,130
Unwrought:					
Refined lead	49,300	43,600	32	35	9,590
Refined lead containing antimony as the principal alloying element	654	615	136	26	598
Lead alloys	14,400	13,700	2,100	1,260	13,000
Other	2,850	2,850	100	136	1,570
Total	67,200	60,800	2,360	1,460	24,800
Wrought:					
Bars, rods, profiles, and wire	886	791	26	84	585
Pipes and tubes, including fittings	116	113	65	40	147
Plates, sheets, strip, foil	3,180	2,910	331	164	3,120
Other	1,770	1,630	387	340	2,110
Total	5,960	5,440	810	628	5,970
Powders and flakes	372	313	48	10	295
Tetraethyl lead and tetramethyl lead	502	470	17	24	489
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	26,800,000	25,000,000	2,750,000	2,330,000	25,300,000
Lead waste and scrap obtained from lead-acid storage batteries	9,200	9,200	--	--	--
Other lead waste and scrap	40,300	37,300	3,850	2,420	35,800

--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– November	October	November	January– November
Australia	7,310	7,310	--	--	--
Canada	51,200	49,700	1,790	8,440	51,600
China	73,600	69,600	13,300	3,050	62,300
Dominican Republic	--	--	--	--	29
Germany	15,100	15,100	--	--	--
Indonesia	--	--	--	5	5
Italy	7,170	7,170	--	--	23,400
Japan	19,100	18,800	7,060	--	23,600
Korea, Republic of	48,700	43,400	9,370	3,980	46,100
Laos	--	--	--	--	11
Mexico	19,100	19,100	39	108	16,700
Netherlands	7,100	7,100	--	--	9,320
Saudi Arabia	27	27	--	--	--
Thailand	2,520	2,520	750	2,120	2,870
Vietnam	--	--	11	570	623
Total	251,000	240,000	32,400	18,300	237,000

-- 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– November	October	November	January– November
Ores and concentrate (lead content)	--	--	--	--	8
Bullion (lead content)	789	739	--	--	75
Unwrought:					
Refined lead	448,000	421,000	26,800	22,300	374,000
Refined lead containing antimony as the principal alloying element (lead content)	45,200	41,700	2,390	2,260	24,700
Lead alloys (lead content)	18,600	16,400	2,630	2,090	22,100
Other (lead content)	50,800	45,900	3,670	2,070	40,200
Total	563,000	525,000	35,500	28,700	461,000
Wrought:					
Bars, rods, profiles, and wire	1,020	809	286	1,200	3,180
Pipes and tubes, including fittings	29	25	--	1	72
Plates, sheets, strip, foil	1,740	1,590	178	191	1,640
Other	4,090	3,440	153	331	2,670
Total	6,890	5,850	618	1,720	7,570
Powders and flakes	203	203	25	(3)	266
Tetraethyl lead and tetramethyl lead	716	710	12	14	126
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	1,050,000	989,000	39,400	38,000	437,000
Lead waste and scrap obtained from lead-acid storage batteries (lead content)	1,660	1,570	249	336	1,940
Other lead waste and scrap (lead content)	2,450	2,300	125	97	1,640

-- 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	2018 ²		2019		
	January– December	January– November	October	November	January– November
Refined lead:					
Argentina	6,050	5,640	525	377	3,920
Australia	2,780	2,780	--	--	--
Brazil	15,500	14,100	1,100	656	6,970
Burma	100	100	450	100	1,400
Canada	148,000	133,000	12,900	11,200	144,000
Chile	100	100	--	--	--
China	--	--	--	--	101
Colombia	491	491	--	--	801
Dominican Republic	250	250	--	--	50
Ecuador	10,900	9,360	600	1,700	18,000
Germany	--	--	--	--	50
Honduras	199	199	--	--	--
Hong Kong	--	--	--	--	200
India	23,200	23,100	--	99	3,640
Israel	1,820	1,820	457	95	2,200
Kazakhstan	5,130	5,130	583	645	17,800
Korea, Republic of	106,000	105,000	1	--	73,500
Mexico	107,000	101,000	8,440	6,190	89,700
Nigeria	47	--	--	200	597
Panama	125	125	--	--	400
Peru	3,350	2,650	700	400	2,550
Russia	6,460	6,460	395	319	4,890
South Africa	174	174	--	--	20
Sri Lanka	625	625	--	--	--
Thailand	7,500	6,900	--	91	1,250
United Kingdom	485	388	96	--	307
Venezuela	2,460	2,160	548	200	1,680
Total	448,000	421,000	26,800	22,300	374,000
Other unwrought lead: ³					
Argentina	1,920	1,920	--	104	1,800
Bolivia	--	--	59	--	183
Brazil	--	--	127	--	127
Canada	93,100	83,800	8,430	5,970	80,200
Chile	1,780	1,780	--	--	--
China	--	--	--	--	2
Colombia	1,040	1,040	--	--	--
Costa Rica	4,470	4,030	--	--	19
Ecuador	125	125	--	--	334
Germany	--	--	--	--	1
Honduras	2,490	2,490	--	--	--
India	93	38	18	117	284
Korea, Republic of	--	--	8	--	14
Mexico	8,150	7,320	48	183	2,660
Panama	199	199	--	--	--
Peru	50	50	--	--	221
Russia	209	209	--	--	(4)
South Africa	95	95	--	--	--
Sweden	--	--	--	--	11
Taiwan	--	--	--	--	(4)
United Kingdom	--	--	--	--	1,040
Venezuela	885	885	--	52	133
Total	115,000	104,000	8,690	6,420	87,000
Grand total	563,000	525,000	35,500	28,700	461,000

-- 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:				
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
September	--	27,400	42,100	69,500
October	--	27,400	42,700	70,100
November	--	26,300	40,900	67,100

-- Zero.

Source: London Metal Exchange, Ltd.