

Mineral Industry Surveys

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LEAD IN MARCH 2021

Domestic mine production (recoverable) of lead in March was 25,000 metric tons (t). Average daily mine production in March was 808 t, slightly more than that in the previous month (revised) and 9% more than that in March 2020.

Total secondary refined lead production in March was 89,600 t, 5% less than that in the previous month and 6% less than that in March 2020 (fig. 1; tables 1, 2).

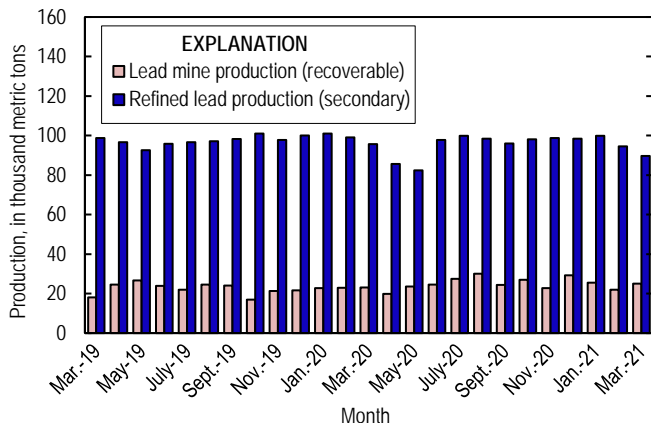


Figure 1. U.S. production of lead from March 2019 through March 2021. Source: U.S. Geological Survey.

The United States is a significant exporter of lead concentrates. U.S. exports of lead in ores and concentrates through March 2021 were 43,800 t, 16% more than those for the same period in 2020. Leading destinations in March were China (37%), Japan (18%), Mexico (17%), and Canada (14%) (table 8).

Prices and Stocks

The average London Metal Exchange, Ltd. (LME) cash price for lead in March was 88.9 cents per pound, 6% less than that in the previous month and 12% more than that in March 2020 (table 3). The S&P Global Platts Metals Week (Platts) average North American Market price for lead in March 2021 was 99.7 cents per pound, 5% less than that in the previous month and 14% more than that in March 2020.

The North American premium to the LME cash price in March 2021 averaged 10.7 cents per pound, slightly more than that in February 2021 and 28% more than that in March 2020 (fig. 2, table 3).

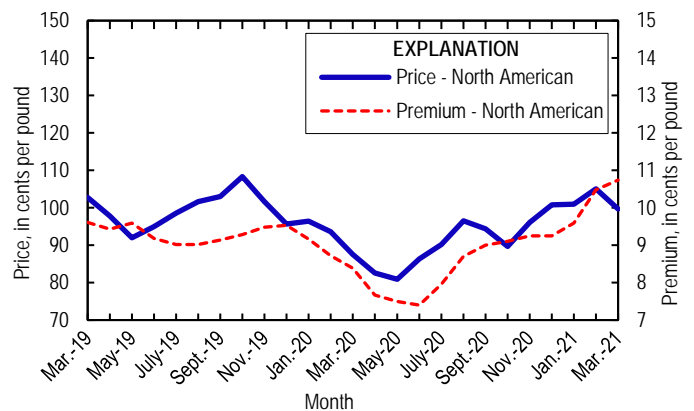


Figure 2. Average monthly North American price and premium for refined lead metal from March 2019 through March 2021. Source: S&P Global Platts Metals Week.

The Platts average U.S. used lead-acid batteries (Midwest) price in March 2021 was 31.2 cents per pound, essentially unchanged from that in February and 10% less than that in March 2020 (table 3). Most secondary lead is recovered from used lead-acid batteries.

Global LME lead stocks at the end of March 2021 were 119,550 t, 26% more than those at the end of February 2021 and 69% more than those at the end of March 2020 (table 11).

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TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES¹

(Metric tons, lead content, unless otherwise specified)

	2020 ²		2021		
	January– December	January– March	February	March	January– March
Production:					
Mine (recoverable)	297,000	68,800	22,000 ^r	25,000	72,600
Secondary refinery, reported by smelters/refineries	1,150,000	295,000	94,500	89,600	284,000
Consumption of refined lead, apparent ^{e, 3}	1,520,000	393,000	129,000	135,000	405,000
Imports for consumption:					
Ore and concentrate	(4)	(4)	139 ^r	87	226
Bullion	313	114	--	--	--
Unwrought	382,000	102,000	35,500	46,700	126,000
Exports:					
Ore and concentrate	265,000	37,800	7,290	22,000	43,800
Bullion (gross weight)	2,460	540	191	48	635
Unwrought (gross weight)	16,600	4,330	1,430	1,830	4,900
S&P Global Platts Metals Week North American Market price (cents per pound)	91.25	92.53	105.08	99.68	101.91

^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.

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

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	
2020:			
March	23,700	23,100	95,600
April	20,300	19,800	85,700
May	24,200	23,500	82,300
June	25,300	24,600	97,800
July	28,300	27,500	99,900
August	30,900	30,100	98,400
September	25,100	24,400	96,000
October	27,600	26,900	98,100
November	23,300	22,700	98,700
December	30,100	29,200	98,400
January–December	306,000	297,000	1,150,000
2021:			
January	26,300 ^f	25,600 ^f	99,900
February	22,600 ^f	22,000 ^f	94,500
March	25,800	25,000	89,600
January–March	74,700	72,600	284,000

^cEstimated. ^fRevised.

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
2020:				
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
October	89.71	80.61	1,777.07	31.50
November	96.09	86.84	1,914.48	28.63
December	100.81	91.56	2,018.60	31.68
January–December	91.25	82.74	1,824.08	33.01
2021:				
January	100.98	91.40	2,014.93	32.75
February	105.08	94.61	2,085.75	31.06
March	99.68	88.94	1,960.76	31.15
January–March	101.91	91.65	2,020.48	31.65

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 MARCH 2021¹

(Metric tons, gross weight)

Item	Stocks February 28, 2021	Net receipts	Consumption	Stocks March 31, 2021
Battery-lead	W	79,500	78,100	W
Other ²	W	6,060	6,040	W
Total	10,500	85,600	84,100	11,900
Percent change from preceding month ³	XX	9.9	3.3	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 MARCH 2021¹

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	76,900	--	--
Remelt lead	W	--	--
Antimonial lead	12,500	W	W
Other ²	W	W	--
Total lead-base	89,600	W	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
2020: ^P				
March	95,600	33,400	1,460	128,000
April	85,700	41,100	1,290	126,000
May	82,300	27,300	909	109,000
June	97,800	34,800	1,370	131,000
July	99,900	27,400	1,700	126,000
August	98,400	23,900	1,430	121,000
September	96,000	24,300	1,420	119,000
October	98,100	49,300	1,260	146,000
November	98,700	28,500	1,430	126,000
December	98,400	24,000	1,480	121,000
January–December	1,150,000	382,000	16,600	1,520,000
2021:				
January	99,900	44,100	1,640	142,000
February	94,500	35,500	1,430	129,000
March	89,600	46,700	1,830	135,000
January–March	284,000	126,000	4,900	405,000

^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	2020 ²		2021		
	January– December	January– March	February	March	January– March
Ores and concentrate (lead content)	265,000	37,800	7,290	22,000	43,800
Bullion	2,460	540	191	48	635
Unwrought:					
Refined lead	642	261	84	105	370
Refined lead containing antimony as the principal alloying element	534	125	166	74	270
Lead alloys	14,300	3,700	1,140	1,510	4,010
Other	1,140	249	39	145	246
Total	16,600	4,330	1,430	1,830	4,900
Wrought:					
Bars, rods, profiles, and wire	559	198	57	21	106
Pipes and tubes, including fittings	87	6	3	--	42
Plates, sheets, strip, foil	2,760	699	347	434	989
Other	2,360	677	279	830	1,380
Total	5,770	1,580	686	1,290	2,520
Powders and flakes	203	99	2	17	23
Tetraethyl lead and tetramethyl lead	145	61	3	1	8
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	27,500,000	6,730,000	2,000,000	2,780,000	7,420,000
Lead waste and scrap obtained from lead-acid storage batteries	--	--	--	--	--
Other lead waste and scrap	46,900	11,900	2,880	4,400	9,340

-- 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)

Country or locality	2020 ²		2021		
	January– December	January– March	February	March	January– March
Australia	15,700	8,040	--	--	--
Canada	27,500	2,590	2,400	3,050	7,540
China	82,600	1,430	--	8,060	8,060
Dominican Republic	4	4	--	--	--
Germany	8,060	--	3,680	--	7,290
Indonesia	20	--	--	--	--
Italy	16,000	7,920	--	--	--
Japan	20,800	118	--	3,960	4,000
Korea, Republic of	49,900	13,500	1,030	2,220	7,980
Mexico	15,800	196	--	3,750	3,780
Netherlands	27,200	4,000	--	--	3,980
Peru	106	--	--	--	--
Philippines	--	--	--	81	81
Thailand	1,190	--	--	--	--
Vietnam	30	17	178	914	1,090
Total	265,000	37,800	7,290	22,000	43,800

-- 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	2020 ²		2021		
	January– December	January– March	February	March	January– March
Ores and concentrate (lead content)	(3)	(3)	139 [†]	87	226
Bullion (lead content)	313	114	--	--	--
Unwrought:					
Refined lead	314,000	82,200	28,100	36,000	100,000
Refined lead containing antimony as the principal alloying element (lead content)	22,800	5,300	2,260	3,360	8,630
Lead alloys (lead content)	18,600	5,000	828	1,840	3,470
Other (lead content)	27,300	9,260	4,350	5,530	14,200
Total	382,000	102,000	35,500	46,700	126,000
Wrought:					
Bars, rods, profiles, and wire	4,810	490	334	589	1,460
Pipes and tubes, including fittings	100	10	(3)	16	18
Plates, sheets, strip, foil	1,350	411	53	118	307
Other	2,050	434	228	149	545
Total	8,310	1,340	614	871	2,330
Powders and flakes	183	77	(3)	--	19
Tetraethyl lead and tetramethyl lead	278	136	(3)	(3)	3
Waste and scrap:					
Spent lead-acid storage batteries for starting engines (units)	990,000	771,000	92,800	41,800	181,000
Lead waste and scrap obtained from lead-acid storage batteries (lead content)	2,120	499	196	221	647
Other lead waste and scrap (lead content)	2,360	691	275	142	616

[†]Revised. -- 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	2020 ²		2021		
	January– December	January– March	February	March	January– March
Refined lead:					
Argentina	1,800	1,410	--	--	--
Australia	15,900	3,380	--	2,000	2,000
Azerbaijan	--	--	--	282	282
Belgium	--	--	773	625	1,400
Brazil	15,500	4,000	376	--	759
Burma	750	200	--	--	--
Canada	113,000	33,000	8,990	10,200	28,000
Colombia	900	349	--	--	--
Dominican Republic	130	--	51	--	154
Ecuador	7,190	2,450	200	350	650
France	--	--	703	26	728
Germany	--	--	3,390	8,470	11,900
Ghana	1,610	--	345	297	1,140
India	3,760	2,820	--	--	--
Indonesia	76	76	--	--	--
Israel	2,050	575	197	26	224
Italy	--	--	442	79	521
Japan	299	--	--	--	--
Kazakhstan	13,400	--	--	129	909
Korea, Republic of	48,800	1,820	1,600	--	20,400
Malaysia	--	--	124	--	124
Mexico	67,000	19,900	5,490	7,630	19,300
Nigeria	7,140	1,520	706	551	1,260
Peru	1,900	1,230	100	100	300
Poland	--	--	49	--	49
Russia	11,200	8,810	3,410	2,800	6,410
South Africa	20	--	100	557	657
Sri Lanka	200	200	--	--	--
Sweden	--	--	530	1,760	2,290
Thailand	291	96	--	--	--
United Kingdom	590	294	487	94	679
Venezuela	245	24	--	--	--
Total	314,000	82,200	28,100	36,000	100,000
Other unwrought lead:⁴					
Australia	47	--	863	610	1,470
Brazil	208	111	--	--	--
Canada	63,600	18,800	6,470	8,870	23,000
Chile	299	--	--	--	--
Colombia	20	--	--	--	--
Denmark	(3)	--	--	--	--
Dominican Republic	1,070	--	--	--	153
Ecuador	318	125	45	--	45
Egypt	--	--	--	274	274
France	43	--	--	--	--
Ghana	198	--	--	--	--
India	644	113	--	23	46
Korea, Republic of	10	--	--	--	17
Mexico	1,230	245	63	781	858
Panama	149	--	--	149	297
Russia	4	--	(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	2020 ²		2021		
	January– December	January– March	February	March	January– March
Other unwrought lead—Continued: ⁴					
United Kingdom	615	87	--	--	93
Venezuela	211	53	--	27	54
Total	68,700	19,600	7,440	10,700	26,300
Grand total	382,000	102,000	35,500	46,700	126,000

-- 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
2020:				
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
October	6,325	33,600	84,475	124,400
November	4,425	33,200	75,075	112,700
December	1,550	35,125	96,500	133,175
2021:				
January	--	21,375	75,400	96,775
February	--	19,325	75,300	94,625
March	--	34,000	85,550	119,550

-- Zero.

Source: London Metal Exchange, Ltd.