

# Mineral Industry Surveys

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## ALUMINUM IN NOVEMBER 2022

Domestic primary aluminum production in November 2022 was 62,000 metric tons (t). The average daily production in November 2022 was 2,070 t, essentially unchanged compared with that in October 2022, 17% less than that in November 2021, and 15% less than that in November 2020 (fig. 1, table 1).

Total aluminum recovered from scrap in November 2022 was 277,000 t, slightly less than that in October 2022, unchanged compared with that in November 2021, and 10% more than that in November 2020. Of this, 151,000 t of aluminum was recovered from new scrap, and 126,000 t was recovered from old scrap (fig. 1, table 1).

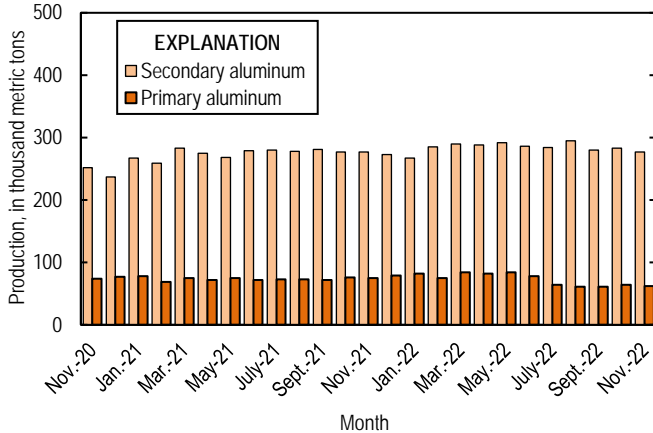


Figure 1. Monthly domestic primary and secondary aluminum production from November 2020 through November 2022.

### Prices and Stocks

The November 2022 average U.S. spot market price of primary aluminum ingot was \$1.27 per pound, 3% more than that in October 2022, 14% less than that in November 2021, and 26% more than that in November 2020. The average cash price in November 2022 of primary aluminum ingot on the London Metal Exchange (LME) was \$1.06 per pound, 4% more than that in October 2022, 12% less than that in November 2021, and 21% more than that in November 2020 (fig. 2, table 6).

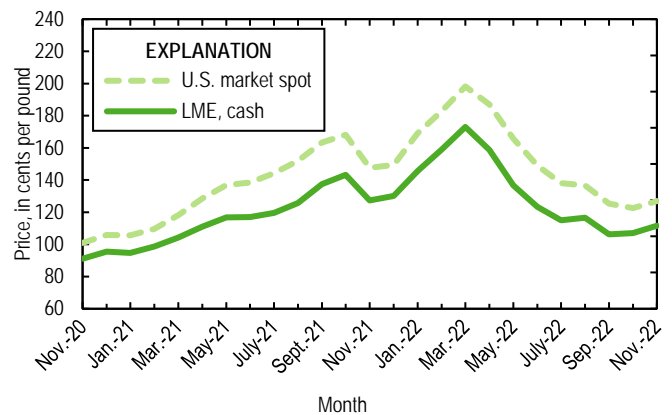


Figure 2. Average monthly prices for primary aluminum from November 2020 through November 2022. Source: S&P Global Platts Metals Week.

Inventories of primary aluminum in LME-approved warehouses, including off-warrant inventories, in the United States decreased to 9,103 t at the end of November 2022 from 12,532 t at the end of October 2022. Inventories of secondary aluminum (North American Secondary Aluminum Alloy Contract) in LME-approved warehouses, including off-warrant inventories, in the United States decreased to 3,737 t at the end of November 2022 from 3,917 t at the end of October 2022 (London Metal Exchange Ltd., 2022a, b, c; 2023).

### Updates

On December 8, Norsk Hydro ASA announced that it will acquire aluminum extruder Hueck System GmbH & Co. KG. Located in Ludenscheid, Germany, Hueck manufactures and supplies aluminum windows, doors, facades, and extruded profiles. The purchase includes a foundry and two extrusion presses (Norsk Hydro ASA, 2022).

In December, Aluminium Dunkerque Industries France reportedly restarted production at its primary aluminum smelter located in northern France. Owing to rising energy costs, production curtailments began in September, reducing annual production by 22%. The smelter produced 290,000 t of primary

aluminum in 2022 and expected to return to full capacity by May 2023 (Perez and Farchy, 2022; Trompiz, 2023).

China's Ministry of Commerce has announced that the Brazilian government will begin imposing countervailing duties on aluminum sheet products imported from China. Beginning March 31, 2023, Brazil will impose duties ranging from 14.88% to 14.93% over a 5-year period (Liu and Others, 2022).

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TABLE 1  
COMPONENTS OF ALUMINUM SUPPLY<sup>1</sup>

(Thousand metric tons)

Period	Primary production	Secondary recovery <sup>4</sup>			Imports for consumption			Total new supply <sup>2</sup>	Stocks, end of period <sup>3</sup>
		New	Old	Total	Metals and alloys, crude	Plates, sheets, bars, etc.	Total		
2021 <sup>P</sup>	889	1,780	1,520	3,300	3,630	1,290	4,920	9,110	1,860
2021:									
November	75	151	126	277	338	119	457	809	1,820
December	79	146	127	273	316	109	425	777	1,860
January–November	810	1,630 <sup>r</sup>	1,390 <sup>r</sup>	3,020 <sup>r</sup>	3,310	1,180	4,500	8,330 <sup>r</sup>	NA
2022:									
January	82	152	115	267	343	112	455	804	1,880
February	75	159	126	285	262	107	369	729	1,900
March	84	159	132	290	341	129	470	844	1,910
April	82	155	132	288	331	125	456	826	1,910
May	84	162	130	292	404	144	548	923	1,880
June	78	154	132	286	460	124	583	948	1,910
July	64	150	134	284	345	129	474	822	1,940
August	61	162	132	295	360	130	491	847	1,980
September	61	152	128	280	317	128	444	785	2,000 <sup>r</sup>
October	64	153	129	283	322	125	446	792	2,030
November	62	151	126	277	279	115	394	733	NA
January–November	797	1,710	1,420	3,130	3,760	1,370	5,130	9,050	NA

<sup>P</sup>Preliminary. <sup>r</sup>Revised. NA Not Available.

<sup>1</sup>Data are rounded to no more than three significant digits, except "Primary production"; may not add to totals shown.

<sup>2</sup>Primary production, secondary recovery, and imports for consumption.

<sup>3</sup>Inventory levels reflect total for U.S. and Canadian producers; data from the Aluminum Association Inc.

<sup>4</sup>Metallic recovery from purchased, tolled, or imported scrap, expanded for full coverage of industry.

TABLE 2  
ESTIMATED FULL COVERAGE CONSUMPTION OF AND METALLIC RECOVERY FROM  
PURCHASED NEW AND OLD ALUMINUM SCRAP<sup>1</sup>

(Thousand metric tons)

Period	Secondary smelters		Independent mill fabricators		Foundries		Other consumers		Total	
	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery
	2021 <sup>P</sup>	2,320	1,750	1,590	1,450	101	93	4	4	4,020
2021:										
November	196	147	133	122	8	8	(2)	(2)	338	277
December	194	146	130	119	8	8	(2)	(2)	333	273
January–November	2,130 <sup>r</sup>	1,600 <sup>r</sup>	1,460 <sup>r</sup>	1,340	93	85	4	4	3,690 <sup>r</sup>	3,020 <sup>r</sup>
2022:										
January	195	146	123	113	8	8	(2)	(2)	327	267
February	193	145	144	132	8	8	(2)	(2)	346	285
March	200	149	145	133	8	8	(2)	(2)	354	290
April	199	149	143	130	8	8	(2)	(2)	351	288
May	201	150	146	134	8	8	(2)	(2)	356	292
June	202	151	140	127	8	8	(2)	(2)	351	286
July	199	148	141	128	8	8	(2)	(2)	348	284
August	202	152	148	135	8	8	(2)	(2)	358	295
September	201	149	137	125	8	8	(2)	(2)	347	281
October	205	152	136	124	8	8	(2)	(2)	349	284
November	203	151	130	118	8	8	(2)	(2)	341	277
January–November	2,200	1,640	1,530	1,400	93	85	4	4	3,830	3,130

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

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

<sup>2</sup>Less than ½ unit.

TABLE 3  
 CONSUMPTION OF AND RECOVERY FROM PURCHASED  
 NEW AND OLD ALUMINUM SCRAP IN NOVEMBER 2022<sup>1</sup>

(Metric tons)

	Consumption		Calculated metallic recovery	
	Tabulated reports	Estimated full coverage	Tabulated reports	Estimated full coverage
Secondary smelters	169,000	203,000	126,000	151,000
Independent mill fabricators	117,000	130,000	106,000	118,000
Foundries	7,040	8,450	6,440	7,730
Other consumers	273	328	273	328
Total	293,000	341,000	239,000	277,000

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

TABLE 4  
PURCHASED AND TOLL-TREATED ALUMINUM-BASE SCRAP IN NOVEMBER 2022<sup>1</sup>

(Metric tons)

	November			January–November <sup>2</sup>		
	Stocks, opening <sup>2</sup>	Net receipts <sup>3</sup>	Melted or consumed	Stocks, closing	Net receipts <sup>3</sup>	Melted or consumed
New scrap:						
Extrusion	18,700	35,300	35,300	18,600	444,000	444,000
Can stock clippings	10,500	30,000	30,000	10,500	326,000	326,000
Other wrought sheet/clippings	8,040	36,300	36,500	7,870	404,000	404,000
Casting	5,920	7,810	7,810	5,920	87,400	87,400
Borings and turnings	5,270	13,300	13,300	5,270	148,000	148,000
Dross and skimmings <sup>4</sup>	18,500	46,100	46,100	18,500	499,000	499,000
Total new scrap	66,900	169,000	169,000	66,700	1,910,000	1,910,000
Old scrap:						
Used castings	8,160	26,800	26,800	8,160	303,000	303,000
Used extrusion	7,840	16,700	16,700	7,840	189,000	189,000
Used cans (shredded, loose, baled)	7,850	46,100	46,100	7,850	489,000	489,000
Other wrought products	19,100	22,200	22,200	19,100	276,000	276,000
Fragmentized shredder (auto shredder)	5,970	12,100	12,100	5,970	134,000	134,000
Total old scrap	48,900	124,000	124,000	48,900	1,390,000	1,390,000
Total all classes	116,000	293,000	293,000	116,000	3,300,000	3,300,000

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

<sup>2</sup>May include revisions to previously published data.

<sup>3</sup>Includes data on imported aluminum-base scrap.

<sup>4</sup>Gross volume of dross and skimmings. Recoverable aluminum content ranges from 15% to 50% of gross weight.

TABLE 5  
ALUMINUM ALLOYS PRODUCED AT SECONDARY SMELTERS IN THE UNITED  
STATES IN NOVEMBER 2022<sup>1,2</sup>

(Metric tons)

	November				January–November	
	Stocks, opening <sup>3</sup>	Production	Net shipments	Stocks, closing	Production	Net shipments
<b>Die-cast alloys:</b>						
13% Si, 360, etc. (0.6% Cu, max.)	2,570	2,870	2,870	2,570	31,600	31,600
380 and variations	7,970	18,900	18,900	7,970	208,000	208,000
<b>Sand and permanent mold:</b>						
95/5 Al-Si, 356, etc. (0.6% Cu, max.)	1,950	2,830	2,830	1,950	31,200	31,200
No. 319 and variations	2,230	2,000	2,000	2,230	22,000	22,000
F-132 alloy and variations	143	221	221	143	2,430	2,430
Al-Zn alloys	172	85	85	172	936	936
Al-Si alloys (0.6% to 2.0% Cu)	101	166	166	101	1,820	1,820
Al-Cu alloys (1.5% Si, max.)	405	564	564	405	6,210	6,210
Other <sup>4</sup>	7,250	8,250	8,250	7,250	90,800	90,800
<b>Wrought alloys, extrusion billets</b>	<b>10,700</b>	<b>54,800</b>	<b>54,800</b>	<b>10,700</b>	<b>611,000</b>	<b>611,000</b>
<b>Total all alloys</b>	<b>33,400</b>	<b>90,700</b>	<b>90,700</b>	<b>33,400</b>	<b>1,010,000</b>	<b>1,010,000</b>
<b>Less:</b>						
Primary aluminum consumed	XX	16,600	XX	XX	187,000	XX
Primary silicon consumed	XX	1,680	XX	XX	18,500	XX
Other alloying ingredients consumed	XX	791	XX	XX	8,770	XX
<b>Net metallic recovery from aluminum scrap consumed in production of secondary aluminum ingot<sup>5</sup></b>						
	XX	71,600	XX	XX	792,000	XX

XX Not applicable.

<sup>1</sup>Excludes integrated aluminum companies.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>May include revisions to previously published data.

<sup>4</sup>Includes alloys No. 12, Al-Mg, Al-Zn, Al-Cu, Al-Si-Cu-Ni, aluminum-base hardeners, variations of these alloys, plus other aluminum alloys.

<sup>5</sup>No allowance made for melt-loss of primary aluminum and alloying ingredients.

TABLE 6  
 AVERAGE PRICE OF ALUMINUM IN THE UNITED STATES  
 AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	Midwest U.S. market price	LME cash price Grade A
2021:		
November	147.557	119.796
December	149.417	122.237
January–December	138.511	112.281
2022:		
January	169.020	136.197
February	182.873	147.883
March	198.185	160.448
April	187.079	147.693
May	165.795	128.182
June	149.085	116.235
July	137.994	108.911
August	136.691	110.264
September	125.275	101.129
October	122.548	101.737
November	126.830	105.909
January–November	154.670	124.053

Source: S&P Global Platts Metals Week.

TABLE 7  
AVERAGE BUYING PRICES FOR ALUMINUM SCRAP

(Cents per pound)

Month	Used beverage cans	Mixed low copper clips	Old sheet	Old cast	Turnings (clean and dry)
<b>2021:</b>					
November	84.00	78.00	70.50	70.00	68.00
December	85.70	74.60	70.50	70.00	70.40
January–December	76.50	73.03	67.87	68.39	67.16
<b>2022:</b>					
January	99.38	77.75	72.75	72.13	71.75
February	111.63	81.75	78.50	76.13	74.00
March	129.30	86.10	86.20	83.70	79.20
April	122.38	87.50	89.50	85.50	80.75
May	106.25	81.00	76.75	77.63	73.13
June	93.70	74.70	69.60	70.60	66.60
July	76.88	68.50	63.75	65.25	59.38
August	77.50	67.13	61.88	62.63	56.88
September	72.80	65.60	63.30	63.20	52.40
October	73.00	65.75	61.25	61.00	48.50
November	72.38	66.00	62.00	61.75	48.00

Source: Fastmarkets–AMM.

TABLE 8  
U.S. IMPORTS FOR CONSUMPTION OF ALUMINUM IN NOVEMBER 2022<sup>1</sup>

(Metric tons)

Country or locality	Metals and alloys, crude		Plates, sheets, bars, etc.		Scrap		Total	
	November	January– November	November	January– November	November	January– November	November	January– November
Argentina	9,060	141,000	16	309	--	--	9,080	141,000
Australia	4,950	178,000	9	306	--	--	4,960	178,000
Austria	--	25	2,740	33,200	9	77	2,750	33,300
Bahrain	10,500	238,000	896	45,500	--	2	11,400	284,000
Belgium	274	542	1,200	11,800	--	--	1,480	12,300
Brazil	--	27,200	1,550	14,800	12	4,970	1,560	47,000
Canada	182,000	2,310,000	30,700	201,000	79,700	401,000	293,000	2,910,000
Chile	--	--	--	2	97	1,720	97	1,720
China <sup>2</sup>	106	1,490	17,000	203,000	2	434	17,200	205,000
Colombia	--	--	373	3,290	148	5,000	521	8,300
Costa Rica	--	--	29	152	109	2,120	138	2,280
France	199	2,340	344	5,420	11	187	554	7,950
Germany	230	2,280	3,720	37,800	290	1,870	4,240	42,000
Greece	--	--	2,710	27,200	15	240	2,720	27,500
Guatemala	--	--	21	60	531	7,390	552	7,450
Honduras	--	--	308	2,720	15	1,680	323	4,400
India	16,000	104,000	1,920	18,800	--	1	17,900	123,000
Indonesia	22	944	1,450	13,900	--	--	1,470	14,900
Italy	--	1,350	1,530	12,900	--	4	1,530	14,200
Japan	--	3	2,750	46,000	--	66	2,750	46,000
Korea, Republic of	--	23,100	3,730	107,000	108	174	3,830	130,000
Malaysia	--	224	841	12,300	--	--	841	12,500
Mexico	935	13,500	5,800	77,500	13,000	192,000	19,800	283,000
Netherlands	99	751	127	2,200	196	1,270	422	4,220
Norway	464	5,520	909	9,970	--	--	1,370	15,500
Oman	--	624	10,400	112,000	--	--	10,400	113,000
Qatar	7,910	76,500	<sup>(3)</sup>	86	--	--	7,910	76,600
Romania	--	--	3	815	--	--	3	815
Russia	11,500	177,000	60	6,540	--	--	11,500	183,000
Saudi Arabia	20	860	2,870	29,900	--	--	2,890	30,800
South Africa	40	3,000	4,640	41,800	--	2,170	4,680	47,000
Spain	109	2,150	817	10,500	--	1	926	12,700
Sweden	1,350	6,320	1,080	10,200	--	--	2,440	16,600
Switzerland	--	89	1,190	7,140	--	99	1,190	7,330
Taiwan	<sup>(3)</sup>	162	341	5,040	--	3	341	5,210
Thailand	--	1,790	3,720	91,100	34	220	3,760	93,100
Turkey	44	13,000	3,210	45,100	--	<sup>(3)</sup>	3,250	58,100
United Arab Emirates	31,800	427,000	52	7,820	--	97	31,800	435,000
United Kingdom	21	69	563	14,400	--	117	584	14,600
Vietnam	--	25	1,440	34,800	--	22	1,440	34,800
Other	1,610	1,840	3,620	61,700	992	18,900	6,220	82,500
Total	279,000	3,760,000	115,000	1,370,000	95,300	641,000	489,000	5,770,000

-- Zero.

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

<sup>2</sup>Includes Hong Kong.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 9  
U.S. EXPORTS OF ALUMINUM IN NOVEMBER 2022<sup>1</sup>

(Metric tons)

Country or locality	Metals and alloys, crude		Plates, sheets, bars, etc.		Scrap		Total	
	November	January– November	November	January– November	November	January– November	November	January– November
Australia	36	888	61	1,780	--	--	97	2,660
Belgium	--	8	74	1,200	714	16,200	788	17,400
Brazil	1	49	345	4,320	1,250	2,170	1,600	6,540
Canada	5,970	62,600	27,500	296,000	11,200	112,000	44,600	470,000
China <sup>2</sup>	188	1,780	1,180	12,500	10,300	140,000	11,700	154,000
Colombia	2	33	33	349	173	1,910	208	2,290
Dominican Republic	(3)	5	70	391	210	2,590	280	2,990
France	245	4,730	602	8,630	47	836	894	14,200
Germany	740	4,820	575	6,890	97	4,630	1,410	16,300
Guatemala	--	1	1	97	--	2	1	100
India	54	632	252	2,150	28,800	426,000	29,100	428,000
Indonesia	--	3	1	53	3,520	58,800	3,520	58,800
Ireland	--	43	240	1,380	--	--	240	1,430
Israel	--	2	551	6,530	--	(3)	551	6,530
Italy	4	72	103	1,500	485	11,800	592	13,400
Jamaica	--	27	1	18	--	--	1	45
Japan	57	1,130	696	8,610	3,000	25,600	3,750	35,400
Korea, Republic of	72	1,280	1,770	17,200	27,200	269,000	29,100	287,000
Malaysia	6,670	45,000	572	6,230	33,400	362,000	40,600	413,000
Mexico	13,400	150,000	26,300	262,000	14,500	184,000	54,300	597,000
Netherlands	18	77	34	492	644	6,870	696	7,440
New Zealand	(3)	11	86	1,030	--	--	86	1,040
Norway	--	8	1	29	104	140	105	177
Pakistan	--	22	(3)	49	1,920	16,300	1,920	16,400
Panama	--	2	5	61	--	40	5	103
Philippines	--	4	34	265	587	5,810	621	6,080
Poland	(3)	14	125	932	--	11	125	957
Romania	--	(3)	102	3,300	--	--	102	3,300
Russia	--	--	--	8	--	2,720	--	2,730
Saudi Arabia	--	(3)	15	65	--	--	15	65
Singapore	60	479	456	4,900	36	756	552	6,140
Spain	5	6	97	622	510	5,030	612	5,660
Taiwan	25	1,110	480	6,040	5,970	39,100	6,480	46,200
Thailand	37	130	104	1,320	12,100	101,000	12,300	102,000
Turkey	--	3	496	2,920	126	12,500	622	15,400
United Arab Emirates	(3)	45	150	4,890	589	5,080	739	10,000
United Kingdom	7	547	590	8,900	--	1,990	597	11,400
Vietnam	5	8	5	2,510	803	12,800	813	15,400
Other	105	741	377	4,910	1,780	16,400	2,270	22,000
Total	27,800	276,000	64,100	681,000	160,000	1,840,000	252,000	2,800,000

-- Zero.

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

<sup>2</sup>Includes Hong Kong.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.