

Mineral Industry Surveys

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ALUMINUM IN DECEMBER 2021

Domestic primary aluminum production in December 2021 was 79,000 metric tons (t). The average daily production in December 2021 was 2,560 t, slightly more than that in November 2021, 3% more than that in December 2020, but 13% less than that in December 2019. In 2021, domestic primary aluminum production was 889,000 t, 12% and 19% less than the amounts in 2020 and 2019, respectively. In 2021, average daily production of primary aluminum was 2,440 metric tons per day, 12% less than that in 2020 and 19% less than that in 2019 (fig. 1, table 1).

Total aluminum recovered from scrap in December 2021 was 261,000 t, slightly less than the amount in November 2021, 10% more than that in December 2020, but 3% less than that in December 2019. Of this, 139,000 t of aluminum was recovered from new scrap, and 122,000 t was recovered from old scrap. In 2021, total aluminum recovered from scrap was 3% more than that in 2020 but 9% less than that in 2019 (fig. 1, table 1).

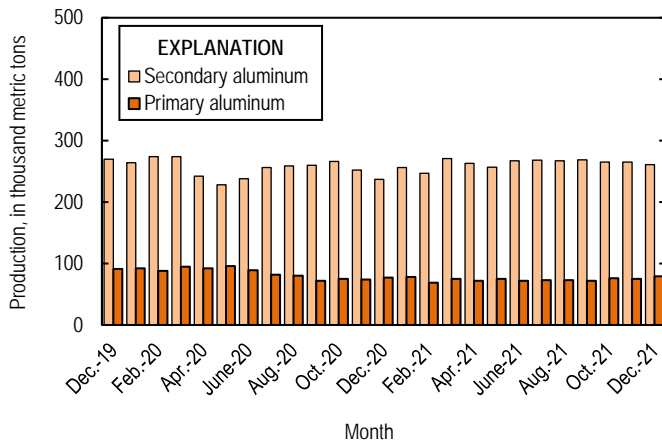


Figure 1. Monthly domestic primary and secondary aluminum production from December 2019 through December 2021.

Prices and Stocks

The December 2021 average U.S. spot market price of primary aluminum ingot was \$1.49 per pound, slightly more than that in November 2021, 41% more than that in December

2020, and 58% more than that in December 2019. The average cash price in December 2021 of primary aluminum ingot on the London Metal Exchange (LME) was \$1.22 per pound, slightly more than that in November 2021, 34% more than that in December 2020, and 52% more than that in December 2019 (fig. 2, table 6).

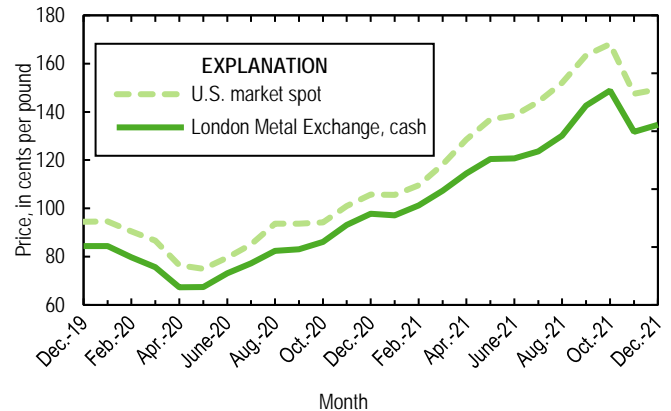


Figure 2. Average monthly prices for primary aluminum from December 2019 through December 2021. Source: S&P Global Platts Metals Week.

Inventories of primary aluminum in LME-approved warehouses, including off-warrant inventories, in the United States decreased to 57,437 t at the end of December 2021 from 65,217 t at the end of November 2021. Inventories of secondary aluminum (North American Secondary Aluminum Alloy Contract) in LME-approved warehouses, including off-warrant inventories, in the United States increased to 11,407 t at the end of December 2021 from 9,114 t at the end of November 2021 (London Metal Exchange Ltd., 2021a, b; 2022a, b).

U.S. Trade

Total imports of aluminum for consumption in 2021 increased by 15% compared with those in 2020. Imports of crude metal and alloys, semifabricated products, and scrap increased by 11%, 24%, and 25%, respectively, compared with imports in the prior year. Canada continued to be the leading

source of aluminum imports, supplying 57% of all aluminum imports during 2021, followed by the United Arab Emirates (6%) and Mexico (5%). Canada accounted for 70% of crude metal and alloys, 18% of semifabricated products, and 59% of scrap imports in 2021. The United Arab Emirates and Russia accounted for 10% and 5%, respectively, of crude metal and alloy imports in 2021. China (including Hong Kong) was the second leading supplier of semifabricated products with 12%, followed by Oman (7%), Mexico, Thailand, Turkey, and Saudi Arabia (5% each) in 2021. Mexico supplied 30% of scrap imports in 2021 (table 8).

Total exports of aluminum increased by 7% during 2021 compared with those of the previous year. Exports of crude metal and alloys increased slightly and scrap exports increased by 12% compared with exports in 2020. Exports of semifabricated products decreased by 10% compared with those in the prior year. The leading destinations for total aluminum products during 2021, in descending order of quantity, were Mexico (18%), Malaysia (18%), Canada (16%), India (15%), and the Republic of Korea (10%). Scrap accounted for 72% of all aluminum exports in 2021 (table 9).

Update

On December 20, 2021, the U.S. Department of Commerce announced its determination in a countervailing duty investigation of aluminum sheet imported from China between April 23, 2018 and December 31, 2019. The investigation concluded that six companies in China received Government subsidies to produce aluminum sheet. Countervailing duties of ranging between 32.22% and 277.35% were assigned to the companies investigated (Coyne, 2021).

On January 7, 2022, the U.S. Department of Commerce announced its determination in an antidumping investigation of aluminum foil imported from China. The investigation concluded that 13 companies in China sold aluminum foil in the United States below fair market value. An antidumping margin of 62.02% was assigned to each company that made shipments to the United States during the review period from April 1, 2019 to March 31, 2020 (Lazzaro, 2022a).

On February 4, 2022, the U.S. Department of Commerce announced its determination in an antidumping and countervailing duty investigation of aluminum extrusions imported from China. The investigation concluded that 85 companies in China received Government subsidies and sold extrusions in the United States below fair market value. An antidumping margin of 86.01% was assigned to each company that made shipments to the United States during the review period from May 1, 2019 to April 30, 2020. Countervailing duties of 16.08% were assigned to three companies and 242.56% to three other companies that made shipments to the United States between January 1, 2019 and December 31, 2019 (Lazzaro, 2022b).

A power failure on February 19, 2022 was cited for the shutdown of one potline at the Albras smelter in Brazil. The shutdown affected 110,000 metric tons per year (t/yr) of capacity at the 460,000-t/yr primary aluminum smelter. The cause of the power failure was under investigation and a restart date was not available. The smelter was operated by Norsk Hydro ASA which owned 51% of the smelter joint venture with its partner Nippon Amazon Aluminium Ltd. owning 49% (Warwick, 2022).

On February 21, 2022, Alcoa Corp. reached a power supply contract with Endesa for the smelter in San Ciprian, Spain. The power supply agreement would start January 1, 2024 and enable the 228,000-t/yr smelter to restart production. Alcoa shut down the smelter on January 1, 2022 citing high power prices. (See Aluminum in August 2021.) The agreement would supply 1.35 terrawatt hours of power annually for 10 years from wind-powered generators near the smelter and other renewable sources in the region (Burgess and Baratti, 2022).

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TABLE 1
COMPONENTS OF ALUMINUM SUPPLY¹

(Thousand metric tons)

Period	Primary production	Secondary recovery ²			Imports for consumption			Total new supply ³	Stocks, end of period ⁴
		New	Old	Total	Metals and alloys, crude	Plates, sheets, bars, etc.	Total		
2020	1,012	1,630	1,420	3,050	3,270	1,050	4,320	8,380	1,490
2020, December	77	124	113	237	229	78	307	621	1,490
2021:									
January	78	134	123	256	250	84	334	668	1,470
February	69	131	116	247	243	81	324	640	1,480
March	75	154	117	271	308	121	429	775	1,470
April	72	144	118	263	324	109	433	768	1,660
May	75	138	119	257	313	114	427	760	1,680
June	72	141	127	267	294	113	407	746	1,680
July	73	141	127	268	298	105	403	744	1,730
August	73	142	125	267	319	126	445	785	1,710
September	72	145	124	269	285	106	391	732	1,710
October	76	142	123	265	339	107	446	787	1,780 ^r
November	75	144	121	265	338	119	457	797	1,820
December	79	139	122	261	316	109	425	765	NA
January–December	888	1,700	1,460	3,160	3,630	1,290	4,920	8,970	NA

^rRevised. NA Not available.

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

²Metallic recovery from purchased, tolled, or imported scrap, expanded for full coverage of industry.

³Primary production, secondary recovery, and imports for consumption.

⁴Inventory levels reflect total for U.S. and Canadian producers; data from the Aluminum Association Inc.

TABLE 2
ESTIMATED FULL COVERAGE CONSUMPTION OF AND METALLIC RECOVERY FROM
PURCHASED NEW AND OLD ALUMINUM SCRAP¹

(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
	2020	2,010	1,550	1,540	1,410	91	84	4	4	3,650
2020, December	168	129	111	101	8	8	(2)	(2)	288	237
2021:										
January	173	132	128	117	8	8	(2)	(2)	310	256
February	166	129	120	110	8	8	(2)	(2)	295	247
March	176	134	141	129	8	8	(2)	(2)	325	272
April	175	135	131	120	8	8	(2)	(2)	315	263
May	172	133	127	116	8	8	(2)	(2)	308	257
June	175	135	137	124	8	8	(2)	(2)	320	267
July	172	133	139	127	8	8	(2)	(2)	321	268
August	176	135	136	124	8	8	(2)	(2)	321	267
September	174	134	139	127	8	8	(2)	(2)	321	269
October	175	134	134	123	8	8	(2)	(2)	318	265
November	176	135	133	122	8	8	(2)	(2)	319	265
December	174	134	130	119	8	8	(2)	(2)	313	261
January–December	2,090	1,600	1,600	1,460	101	93	4	4	3,790	3,160

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

²Less than ½ unit.

TABLE 3
 CONSUMPTION OF AND RECOVERY FROM PURCHASED
 NEW AND OLD ALUMINUM SCRAP IN DECEMBER 2021¹

(Metric tons)

	Consumption		Calculated metallic recovery	
	Tabulated reports	Estimated full coverage	Tabulated reports	Estimated full coverage
Secondary smelters	145,000	174,000	112,000	134,000
Independent mill fabricators	117,000	130,000	107,000	119,000
Foundries	7,040	8,450	6,440	7,730
Other consumers	273	328	273	328
Total	270,000	313,000	225,000	261,000

¹Data 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 DECEMBER 2021¹

(Metric tons)

	December			January–December ²		
	Stocks, opening ²	Net receipts ³	Melted or consumed	Stocks, closing	Net receipts ³	Melted or consumed
New scrap:						
Extrusion	19,300	38,200	38,100	19,400	476,000	476,000
Can stock clippings	7,710	28,900	28,900	7,710	337,000	336,000
Other wrought sheet/clippings	8,140	29,300	29,100	8,320	377,000	382,000
Casting	4,490	8,290	8,290	4,490	88,200	88,200
Borings and turnings	4,390	12,100	12,100	4,390	141,000	143,000
Dross and skimmings	13,300	34,100	34,100	13,300	410,000	410,000
Total new scrap	57,300	151,000	151,000	57,600	1,830,000	1,840,000
Old scrap:						
Used castings	8,150	27,300	27,300	8,150	325,000	325,000
Used extrusion	7,680	16,700	16,700	7,680	199,000	200,000
Used cans (shredded, loose, baled)	8,700	40,500	40,500	8,700	486,000	486,000
Other wrought products	16,300	23,400	23,400	16,300	277,000	273,000
Fragmentized shredder (auto shredder)	5,310	11,000	11,000	5,310	137,000	136,000
Total old scrap	46,100	119,000	119,000	46,100	1,420,000	1,420,000
Total all classes	103,000	270,000	270,000	104,000	3,250,000	3,260,000

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

²May include revisions to previously published data.

³Includes data on imported aluminum-base scrap.

TABLE 5
ALUMINUM ALLOYS PRODUCED AT SECONDARY SMELTERS IN THE UNITED
STATES IN DECEMBER 2021^{1,2}

(Metric tons)

	December			January–December		
	Stocks, opening ³	Production	Net shipments	Stocks, closing	Production	Net shipments
Die-cast alloys:						
13% Si, 360, etc. (0.6% Cu, max.)	2,760	2,600	2,600	2,760	31,200	31,200
380 and variations	6,350	18,300	18,300	6,350	220,000	220,000
Sand and permanent mold:						
95/5 Al-Si, 356, etc. (0.6% Cu, max.)	2,120	2,850	2,850	2,120	34,200	34,200
No. 319 and variations	2,110	2,210	2,210	2,110	26,500	26,500
F-132 alloy and variations	128	198	198	128	2,380	2,380
Al-Zn alloys	37	29	29	37	344	344
Al-Si alloys (0.6% to 2.0% Cu)	143	186	186	143	2,240	2,240
Al-Cu alloys (1.5% Si, max.)	423	297	297	423	3,570	3,570
Other ⁴	7,630	7,870	7,870	7,630	94,400	94,400
Wrought alloys, extrusion billets	10,100	53,100	53,100	10,100	637,000	637,000
Total all alloys	31,900	87,700	87,700	31,900	1,050,000	1,050,000
Less:						
Primary aluminum consumed	XX	15,600	XX	XX	187,000	XX
Primary silicon consumed	XX	1,630	XX	XX	19,600	XX
Other alloying ingredients consumed	XX	733	XX	XX	8,790	XX
Net metallic recovery from aluminum						
scrap consumed in production of						
secondary aluminum ingot ⁵	XX	69,700	XX	XX	837,000	XX

XX Not applicable.

¹Excludes integrated aluminum companies.

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

³May include revisions to previously published data.

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

⁵No 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
2020	89.666	77.187
2020, December	105.798	91.531
2021:		
January	105.638	90.891
February	109.548	94.329
March	118.185	99.409
April	128.563	105.404
May	136.947	110.397
June	138.489	110.635
July	144.205	113.033
August	152.055	118.417
September	163.420	128.794
October	168.110	134.028
November	147.557	119.796
December	149.417	122.237
January–December	138.511	112.281

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)
2020	49.90	43.57	41.19	41.39	35.73
2020, December	62.82	58.86	58.02	57.50	50.41
2021:					
January	65.00	64.50	61.50	63.00	59.00
February	67.50	65.63	64.50	65.50	64.00
March	73.00	68.50	66.50	68.50	68.75
April	75.50	72.10	68.90	70.50	69.20
May	74.13	74.50	70.50	71.00	69.50
June	70.88	73.75	68.75	68.75	68.00
July	71.40	73.90	67.20	67.40	67.60
August	77.10	73.50	66.10	66.70	66.40
September	NA	NA	NA	NA	NA
October	NA	NA	NA	NA	NA
November	NA	NA	NA	NA	NA
December	NA	NA	NA	NA	NA
January–December ¹	71.81	70.80	66.74	67.67	66.56

NA Not available.

¹September–December 2021 data are not available. January–August YTD average.

Source: Fastmarket-AMM.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF ALUMINUM IN DECEMBER 2021¹

(Metric tons)

Country or locality	Metals and alloys, crude		Plates, sheets, bars, etc		Scrap		Total	
	December	January– December	December	January– December	December	January– December	December	January– December
Argentina	510	110,000	--	175	--	--	510	110,000
Australia	18,000	116,000	25	497	--	39	18,100	117,000
Austria	--	1,500	1,760	29,700	--	51	1,760	31,300
Bahrain	29,600	155,000	2,150	24,600	--	--	31,700	180,000
Belgium	20	343	875	11,900	--	--	895	12,300
Brazil	--	(2)	127	433	22	10,600	149	11,000
Canada	196,000	2,530,000	16,700	236,000	29,700	403,000	242,000	3,170,000
Chile	--	--	--	(2)	423	2,680	423	2,680
China ³	126	1,740	17,000	158,000	24	280	17,100	160,000
Colombia	--	--	837	7,720	439	5,560	1,280	13,300
Costa Rica	--	--	5	205	122	2,300	127	2,510
France	35	2,180	600	8,030	28	257	663	10,500
Germany	315	2,860	3,520	39,700	149	2,990	3,990	45,600
Greece	--	--	2,200	22,000	30	80	2,230	22,100
Guatemala	--	--	--	14	745	10,700	745	10,700
Honduras	--	--	483	5,750	18	269	501	6,020
India	3,060	55,500	1,810	15,600	--	(2)	4,870	71,100
Indonesia	--	--	2,130	21,400	--	8	2,130	21,400
Italy	10	349	873	15,500	--	(2)	883	15,900
Japan	--	9	5,070	46,800	11	2,260	5,080	49,000
Korea, Republic of	161	12,900	4,060	34,300	37	155	4,260	47,400
Malaysia	39	340	1,280	13,300	--	--	1,320	13,600
Mexico	1,640	14,800	6,100	62,100	14,700	205,000	22,500	282,000
Netherlands	111	631	747	4,170	285	2,720	1,140	7,510
New Zealand	--	817	3	12	--	--	3	829
Norway	380	543	679	10,300	--	--	1,060	10,800
Oman	--	3,460	5,430	84,700	--	--	5,430	88,200
Qatar	5,740	66,900	--	(2)	--	--	5,740	66,900
Romania	--	--	397	5,340	--	--	397	5,340
Russia	22,900	193,000	942	14,100	--	--	23,800	207,000
Saudi Arabia	--	--	4,300	62,500	--	726	4,300	63,200
South Africa	--	2,040	3,730	42,000	--	--	3,730	44,100
Spain	251	1,200	1,360	22,700	24	3,370	1,630	27,200
Sweden	--	--	253	8,870	--	--	253	8,870
Switzerland	--	78	248	8,900	3	5	251	8,980
Taiwan	--	91	511	5,880	--	23	511	6,000
Thailand	34	1,140	6,740	70,200	2	299	6,770	71,600
Turkey	864	4,220	4,090	60,200	--	--	4,950	64,500
United Arab Emirates	36,900	354,000	348	4,400	199	309	37,400	359,000
United Kingdom	2	128	360	5,390	--	3,510	362	9,020
Vietnam	--	1	4,670	42,100	--	20	4,670	42,100
Other	4	340	6,750	87,700	1,430	22,300	8,190	110,000
Total	316,000	3,630,000	109,000	1,290,000	48,400	680,000	474,000	5,600,000

-- Zero.

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

²Less than ½ unit.

³Includes Hong Kong.

Source: U.S. Census Bureau.

TABLE 9
U.S. EXPORTS OF ALUMINUM IN DECEMBER 2021¹

(Metric tons)

Country or locality	Metals and alloys, crude		Plates, sheets, bars, etc.		Scrap		Total	
	December	January– December	December	January– December	December	January– December	December	January– December
Australia	156	1,080	53	1,010	--	235	209	2,320
Belgium	(3)	1	11	251	750	5,180	761	5,440
Brazil	--	33	67	1,270	293	4,810	360	6,110
Canada	4,390	66,000	19,100	296,000	9,450	99,200	32,900	461,000
China ²	307	2,290	471	8,700	11,900	220,000	12,700	231,000
Colombia	1	378	3	555	41	432	45	1,370
Dominican Republic	6	119	21	339	106	1,760	133	2,220
France	35	212	114	3,880	80	819	229	4,910
Germany	35	107	118	2,860	354	4,160	507	7,130
Guatemala	--	1	5	97	--	--	5	98
India	3	563	33	948	42,300	442,000	42,300	444,000
Indonesia	--	(3)	2	18	4,000	71,300	4,000	71,300
Ireland	(3)	14	24	406	--	116	24	536
Israel	--	38	288	10,200	--	--	288	10,200
Italy	(3)	15	65	668	684	3,610	749	4,290
Jamaica	--	17	--	50	--	1	--	68
Japan	53	501	92	2,580	3,180	29,200	3,330	32,300
Korea, Republic of	37	830	281	8,330	30,500	284,000	30,800	293,000
Malaysia	350	1,140	32	2,440	38,300	520,000	38,700	523,000
Mexico	7,070	107,000	18,400	264,000	11,700	167,000	37,200	538,000
Netherlands	1	85	13	518	508	3,090	522	3,690
New Zealand	2	17	20	443	--	--	22	460
Norway	--	--	--	42	--	--	--	42
Pakistan	--	2	(3)	19	2,480	18,000	2,480	18,000
Panama	(3)	5	2	76	--	--	2	81
Philippines	--	17	12	123	111	4,500	123	4,640
Poland	--	53	23	442	--	(3)	23	495
Romania	3	103	12	489	--	--	15	592
Russia	--	(3)	7	78	2,790	53,200	2,800	53,300
Saudi Arabia	1	2	9	199	--	232	10	433
Singapore	14	108	49	2,290	28	997	91	3,390
Spain	5	45	16	216	513	3,390	534	3,650
Taiwan	114	1,440	198	3,820	4,830	34,500	5,150	39,800
Thailand	7	34	37	831	8,980	74,600	9,020	75,400
Turkey	(3)	1	28	1,160	1,970	9,540	2,000	10,700
United Arab Emirates	--	119	325	2,830	134	10,000	459	13,000
United Kingdom	(3)	105	290	4,900	169	3,280	459	8,290
Vietnam	--	1	19	639	900	11,900	919	12,500
Other	6	2,780	247	3,390	1,670	15,800	1,920	22,000
Total	12,600	185,000	40,500	626,000	179,000	2,100,000	232,000	2,910,000

-- Zero.

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

²Includes Hong Kong.

³Less than ½ unit.

Source: U.S. Census Bureau.