

Mineral Industry Surveys

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ALUMINUM IN MAY 2023

Domestic primary aluminum production in May 2023 was 65,000 metric tons (t). The average daily production in May 2023 was 2,090 t, unchanged from that in April 2023, 23% less than that in May 2022, and 14% less than that in May 2021 (fig. 1, table 1).

Total aluminum recovered from scrap in May 2023 was 272,000 t, unchanged from the revised amount in April 2023, 5% less than that in May 2022, and essentially unchanged from that in May 2021. Of this, 148,000 t of aluminum was recovered from new scrap, and 125,000 t was recovered from old scrap (fig. 1, table 1).

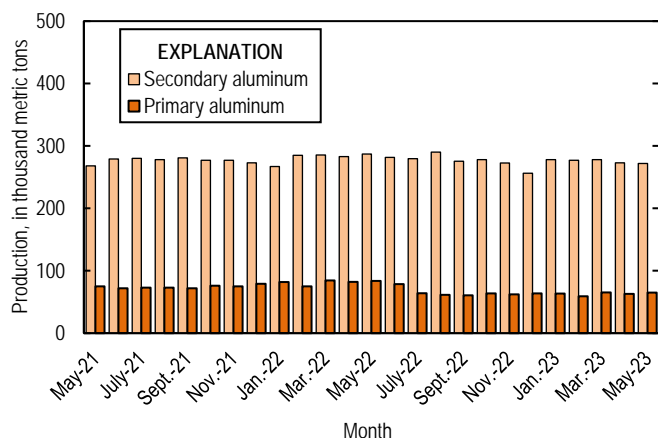


Figure 1. Monthly domestic primary and secondary aluminum production from May 2021 through May 2023.

Prices and Stocks

The May 2023 average U.S. spot market price of primary aluminum ingot was \$1.27 per pound, 4% less than that in April 2023, 23% less than that in May 2022, and 7% less than that in May 2021. The average cash price in May 2023 of primary aluminum ingot on the London Metal Exchange (LME) was \$1.03 per pound, 3% less than that in April 2023, 20% less than that in May 2022, and 7% less than that in May 2021 (fig. 2, table 6).

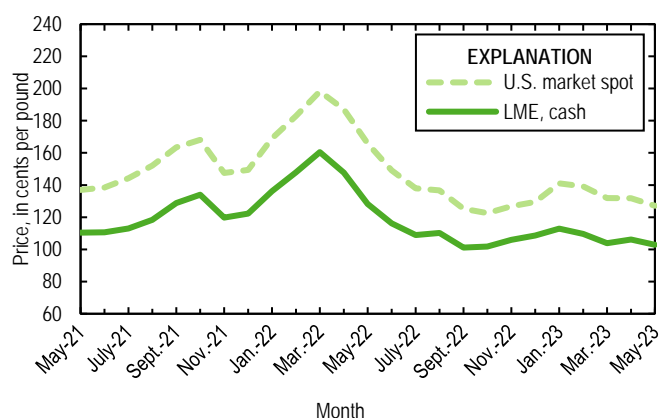


Figure 2. Average monthly prices for primary aluminum from May 2021 through May 2023. Source: S&P Global Platts Metals Week.

Inventories of primary aluminum in LME-approved warehouses, including off-warrant inventories, in the United States were 3,349 t at the end of May 2023, unchanged from that at the end of April 2023. Inventories of secondary aluminum (North American Secondary Aluminum Alloy Contract) in LME-approved warehouses, including off-warrant inventories, in the United States were 993 t at the end of May 2023, 7% less than that at the end of April 2023 (London Metal Exchange Ltd., 2023a-d).

Updates

On June 30, Norsk Hydro ASA (Norway) acquired Polish aluminum recycler, Alumetal S.A. The purchase expands Norsk Hydro's offering of post-consumer scrap based and low carbon recycled aluminum products. Alumetal has one plant in Hungary and three plants in Poland with a combined aluminum alloy casting capacity of 275,000 metric tons per year. Alumetal will continue to operate separately from Norsk Hydro (Argus Metals International, 2023; Norsk Hydro ASA, 2023).

In July, United Company RUSAL Plc (Russia) announced that it produced low carbon aluminum using inert anode technology at its Krasnoyarsk aluminum smelter. RUSAL reported that the technology was independently verified to

produce 0.01 metric tons of carbon dioxide equivalent per metric ton of metal (Dudman, 2023; United Company RUSAL Plc, 2023).

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TABLE 1
COMPONENTS OF ALUMINUM SUPPLY¹

(Thousand metric tons)

Period	Primary production	Secondary recovery ⁴			Imports for consumption			Total new supply ²	Stocks, end of period ³
		New	Old	Total	Metals and alloys, crude	Plates, sheets, bars, etc.	Total		
2022 ^p	861	1,880	1,450	3,330	4,150	1,460	5,610	9,810	2,050
2022:									
May	84	165	123	287	404	144	548	919	1,880
June	78	157	125	282	460	124	583	943	1,910
July	64	153	126	280	345	129	474	818	1,940
August	61	165	125	290	360	130	490	841	1,980
September	61	155	120	276	317	128	445	782	2,000
October	64	156	122	278	322	125	447	789	2,060
November	62	154	119	273	279	115	394	729	2,050
December	64	143	113	256	388	96	484	804	2,050
January–May	407	801 ^r	597 ^r	1,400 ^r	1,680	617	2,300	4,100 ^r	NA
2023:									
January	64	159 ^r	118 ^r	278 ^r	307	99	406	748 ^r	1,950
February	59	147 ^r	130 ^r	277 ^r	238	73	311	647 ^r	2,000
March	65	149 ^r	129 ^r	278 ^r	316	89	405	748 ^r	1,960
April	63	147 ^r	126 ^r	273 ^r	375	90	465	801 ^r	1,980
May	65	148	125	272	407	86	493	830	NA
January–May	316	750	628	1,380	1,640	438	2,080	3,770	NA

^pPreliminary. ^rRevised. NA Not Available.

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

²Primary production, secondary recovery, and imports for consumption.

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

⁴Metallic 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 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
2022 ^P	2,330	1,730	1,650	1,500	101	93	4	4	4,080	3,330
2022:										
May	195	145	146	134	8	8	(2)	(2)	350	287
June	197	147	140	127	8	8	(2)	(2)	345	282
July	193	144	141	128	8	8	(2)	(2)	342	280
August	197	147	148	135	8	8	(2)	(2)	353	290
September	196	144	137	125	8	8	(2)	(2)	341	277
October	199	147	136	124	8	8	(2)	(2)	344	279
November	197	147	130	118	8	8	(2)	(2)	336	273
December	192	141	118	107	8	8	(2)	(2)	318	256
January–May	961 ^r	716 ^r	700 ^r	641	42	39	2	2	1,710 ^r	1,400 ^r
2023:										
January	201 ^r	151 ^r	130 ^r	119	8	8	(2)	(2)	340 ^r	278 ^r
February	196 ^r	146 ^r	135 ^r	123 ^r	8	8	(2)	(2)	339 ^r	277 ^r
March	199 ^r	147 ^r	134 ^r	122 ^r	8	8	(2)	(2)	342 ^r	278 ^r
April	194 ^r	144 ^r	133 ^r	121 ^r	8	8	(2)	(2)	335 ^r	273 ^r
May	199	148	129	118	8	8	(2)	(2)	337	273
January–May	989	737	661	602	42	39	1	1	1,690	1,380

^PPreliminary. ^rRevised.

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 MAY 2023¹

(Metric tons)

	Consumption		Calculated metallic recovery	
	Tabulated reports	Estimated full coverage	Tabulated reports	Estimated full coverage
Secondary smelters	166,000	199,000	123,000	148,000
Independent mill fabricators	117,000	129,000	106,000	117,000
Foundries	7,040	8,450	6,440	7,730
Other consumers	242	290	242	290
Total	290,000	337,000	236,000	273,000

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 MAY 2023¹

(Metric tons)

	May			January–May		
	Stocks, opening ²	Net receipts ³	Melted or consumed	Stocks, closing	Net receipts ³	Melted or consumed
New scrap:						
Extrusion	61,900	38,600	38,600	61,900	196,000	196,000
Can stock clippings	10,600	28,600	28,600	10,600	147,000	147,000
Other wrought sheet/clippings	11,400	33,200	32,800	11,800	175,000	172,000
Casting	3,980	6,910	6,910	3,980	30,100	30,100
Borings and turnings	5,620	12,800	12,800	5,620	65,700	65,700
Dross and skimmings ⁴	18,400	46,400	46,400	18,400	226,000	226,000
Total new scrap	112,000	167,000	166,000	112,000	840,000	837,000
Old scrap:						
Used castings	8,690	26,500	26,500	8,690	133,000	133,000
Used extrusion	8,210	12,700	12,700	8,210	63,500	63,500
Used cans (shredded, loose, baled)	5,890	48,000	48,000	5,890	237,000	237,000
Other wrought products	20,500	24,200	24,200	20,500	127,000	127,000
Fragmentized shredder (auto shredder)	5,150	11,300	11,300	5,150	58,200	58,200
Total old scrap	48,400	123,000	123,000	48,400	618,000	618,000
Total all classes	160,000	289,000	289,000	161,000	1,460,000	1,460,000

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.

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

TABLE 5
ESTIMATED ALUMINUM ALLOYS PRODUCED AT SECONDARY SMELTERS IN THE UNITED
STATES IN MAY 2023^{1,2}

(Metric tons)

	May				January–May	
	Stocks, opening ³	Production	Net shipments	Stocks, closing	Production	Net shipments
Die-cast alloys:						
13% Si, 360, etc. (0.6% Cu, max.)	2,830	2,700	2,700	2,830	13,500	13,500
380 and variations	7,310	20,300	20,300	7,310	95,100	92,200
Sand and permanent mold:						
95/5 Al-Si, 356, etc. (0.6% Cu, max.)	1,940	3,100	3,100	1,940	15,500	15,500
No. 319 and variations	1,420	1,390	1,390	1,420	6,940	6,940
F-132 alloy and variations	89	233	233	89	1,170	1,170
Al-Zn alloys	339	71	71	339	355	355
Al-Si alloys (0.6% to 2.0% Cu)	230	195	195	230	973	973
Al-Cu alloys (1.5% Si, max.)	139	724	724	139	3,620	3,620
Other ⁴	3,380	4,900	4,900	3,380	30,900	33,700
Wrought alloys, extrusion billets	16,000	61,200	61,200	16,000	306,000	306,000
Total all alloys	33,600	94,800	94,800	33,600	474,000	474,000
Less:						
Primary aluminum consumed	XX	14,400	XX	XX	72,000	XX
Primary silicon consumed	XX	1,750	XX	XX	8,740	XX
Other alloying ingredients consumed	XX	851	XX	XX	4,260	XX
Net metallic recovery from aluminum scrap consumed in production of secondary aluminum ingot ⁵	XX	77,800	XX	XX	389,000	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
2022:		
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
December	129.488	108.612
January–December	152.572	122.767
2023:		
January	141.000	112.881
February	139.175	109.624
March	131.935	103.858
April	131.764	106.168
May	127.088	102.837
January–May	134.192	107.074

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)
2022:					
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
December	79.30	66.80	64.50	64.40	48.80
January–December	92.88	74.05	70.83	70.33	63.28
2023:					
January	83.25	68.75	68.25	67.63	51.88
February	88.50	69.38	70.00	70.25	57.38
March	83.30	69.50	70.90	72.30	59.40
April	77.25	70.75	70.75	74.25	62.25
May	73.13	69.50	69.88	73.63	64.00
January–May	81.09	69.58	69.96	71.61	58.98

Source: Fastmarkets–AMM.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF ALUMINUM IN MAY 2023¹

(Metric tons)

Country or locality	Metals and alloys, crude		Plates, sheets, bars, etc.		Scrap		Total	
	January–		January–		January–		January–	
	May	May	May	May	May	May	May	May
Argentina	18,300	64,200	4	21	--	--	18,300	64,200
Australia	59,100	125,000	38	84	--	--	59,200	125,000
Austria	--	(2)	2,930	13,300	8	55	2,940	13,300
Bahrain	7,740	28,900	1,350	4,860	--	--	9,080	33,700
Belgium	187	655	1,080	6,480	--	--	1,270	7,130
Brazil	--	--	1,470	1,960	1,200	2,850	2,670	4,810
Canada	212,000	1,060,000	19,200	88,600	35,200	166,000	266,000	1,310,000
Chile	--	--	--	--	149	957	149	957
China ³	49	301	6,860	66,400	59	119	6,970	66,800
Colombia	--	--	180	1,020	726	3,990	906	5,010
Costa Rica	--	--	45	132	149	962	194	1,090
France	1,080	2,410	743	3,310	13	58	1,830	5,780
Germany	147	742	1,830	9,380	791	2,720	2,770	12,800
Greece	--	--	976	9,740	14	68	990	9,800
Guatemala	--	--	--	--	852	4,390	852	4,390
Honduras	--	--	278	774	260	1,230	538	2,000
India	4,770	23,600	913	6,320	--	--	5,680	30,000
Indonesia	99	99	920	4,400	--	--	1,020	4,500
Italy	163	1,210	1,140	5,160	--	(2)	1,300	6,370
Japan	--	(2)	4,020	17,700	47	75	4,070	17,800
Korea, Republic of	1,120	7,470	10,600	34,200	309	741	12,000	42,400
Malaysia	--	1,070	477	2,090	--	--	477	3,170
Mexico	1,780	6,570	5,210	25,200	22,600	89,700	29,600	121,000
Netherlands	147	532	225	808	--	433	373	1,770
New Zealand	1,790	7,270	--	1	--	--	1,790	7,270
Norway	374	2,360	284	1,460	--	--	658	3,810
Oman	100	100	5,540	32,500	--	--	5,640	32,600
Qatar	8,380	45,800	--	(2)	--	--	8,380	45,800
Romania	--	--	11	23	--	111	11	134
Russia	--	7,960	--	25	--	--	--	7,980
Saudi Arabia	--	2,090	1,050	4,030	--	--	1,050	6,120
South Africa	--	826	5,620	23,000	2,570	2,830	8,190	26,700
Spain	177	2,310	956	3,790	404	548	1,540	6,650
Sweden	--	2,500	1,310	5,110	--	--	1,310	7,600
Switzerland	--	--	882	4,280	--	--	882	4,280
Taiwan	13	539	329	1,910	--	(2)	342	2,450
Thailand	52	277	2,090	16,100	14	143	2,160	16,500
Turkey	215	1,080	1,560	17,400	20	852	1,800	19,400
United Arab Emirates	89,100	251,000	157	731	200	200	89,400	252,000
United Kingdom	3	97	605	2,110	23	302	632	2,510
Vietnam	--	--	1,530	7,940	--	--	1,530	7,940
Other	4	193	3,590	15,400	2,000	7,140	5,590	22,800
Total	407,000	1,640,000	85,900	438,000	67,600	286,000	560,000	2,370,000

-- 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 MAY 2023¹

(Metric tons)

Country or locality	Metals and alloys, crude		Plates, sheets, bars, etc.		Scrap		Total	
	May	January–	May	January–	May	January–	May	January–
		May		May		May		May
Australia	72	81	126	722	--	--	198	802
Belgium	--	--	142	1,250	1,040	3,440	1,180	4,690
Brazil	--	45	260	2,140	393	2,820	654	5,010
Canada	6,640	29,300	30,900	144,000	11,600	52,600	49,100	226,000
China ²	122	400	1,080	5,410	25,100	87,500	26,300	93,300
Colombia	--	3	45	162	164	412	209	576
Dominican Republic	--	7	45	203	125	464	170	675
France	408	1,700	720	3,920	155	451	1,280	6,070
Germany	283	1,270	349	2,640	107	1,600	738	5,500
Guatemala	--	--	--	31	--	--	--	31
India	44	405	164	1,740	48,100	185,000	48,300	187,000
Indonesia	--	--	2	120	6,240	14,800	6,240	15,000
Ireland	--	7	66	386	69	138	135	531
Israel	(3)	9	671	2,730	--	--	671	2,740
Italy	1	46	155	870	1,190	4,890	1,340	5,810
Jamaica	--	8	39	54	--	--	39	61
Japan	130	411	885	4,290	3,170	15,800	4,190	20,500
Korea, Republic of	80	239	2,450	10,900	21,500	115,000	24,000	126,000
Malaysia	14,900	60,300	673	2,420	30,900	165,000	46,400	228,000
Mexico	13,600	67,100	29,300	124,000	17,400	73,600	60,300	265,000
Netherlands	5	516	37	220	260	3,720	301	4,460
New Zealand	--	19	10	358	--	--	10	377
Norway	--	(3)	(3)	5	91	822	91	827
Pakistan	--	120	1	219	1,560	6,090	1,560	6,420
Panama	(3)	5	5	35	--	(3)	5	40
Philippines	9	14	31	158	348	1,500	387	1,670
Poland	(3)	6	96	556	--	21	97	583
Romania	(3)	(3)	109	555	--	--	109	555
Saudi Arabia	--	--	11	80	--	62	11	142
Singapore	--	30	75	995	20	837	95	1,860
Spain	6	6	178	794	532	2,180	716	2,980
Taiwan	40	313	553	2,260	3,390	19,300	3,980	21,900
Thailand	176	294	169	1,740	19,100	84,600	19,400	86,600
Turkey	--	1	1,040	3,070	166	756	1,210	3,830
United Arab Emirates	--	36	435	791	253	2,030	689	2,860
United Kingdom	56	85	884	4,350	405	845	1,340	5,280
Vietnam	(3)	(3)	25	230	2,040	9,140	2,070	9,370
Other	10	147	496	2,340	592	3,380	1,100	5,860
Total	36,600	163,000	72,300	327,000	196,000	858,000	305,000	1,350,000

-- 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.