

Mineral Industry Surveys

For information, contact:

Samantha M. Ewing, Cobalt Commodity Specialist
National Minerals Information Center
Telephone: (703) 648-6183
Email: sewing@usgs.gov

Annie Hwang (Data)
Telephone: (703) 648-7952
Email: ahwang@usgs.gov

Internet: <https://www.usgs.gov/centers/national-minerals-information-center/mineral-industry-surveys>

COBALT IN APRIL 2024

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in April 2024 was 58% more than that imported in March 2024. For the first 4 months of 2024, the amount of cobalt contained in imports was 9% more than that imported during the first 4 months of 2023 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in April 2024 was 47% less than that exported in March 2024 and the amount exported during the first 4 months of 2024 was 6% less than the amount exported during the same period of 2023 (table 4).

Prices and Stocks

During the past 2 years, London Metal Exchange (LME) cobalt stocks generally trended downward through June 2023, then remained essentially unchanged through September 2023. Since that time, stocks have remained unchanged (table 1). In April, the LME cash mean price was essentially unchanged from that in March 2024 and was 19% lower than that in April 2023. The April 2024 monthly average U.S. spot cobalt price was 3% less than that in March 2024 and was 6% more than that

in April 2023 (fig. 1). The following listed prices are for cobalt metal in April, in dollars per pound.

Type	Price range	Average price
U.S. spot ¹	Not available	17.82
LME cash mean ²	12.46–12.78	12.59

¹Source: S&P Global Platts Metals Week, minimum 99.8% cobalt cathode.

²London Metal Exchange, mean of the cash buyer and cash seller price, minimum 99.8% cobalt briquettes, cathode, coarse grain powder, or rounds (converted from dollars per metric ton and rounded to the nearest cent).

Industry News

In April, Terrafame Ltd. [majority owned by Finnish Minerals Group Ltd. (Government of Finland)], halted operations at its battery chemical plant for four weeks, citing national strikes by Finnish labor unions that impacted the company's ability to deliver products from the plant. The plant was located adjacent to, and vertically integrated with, Terrafame's mining and processing operations in Sotkamo, Finland. The plant was designed to convert mixed sulfide precipitate produced at the

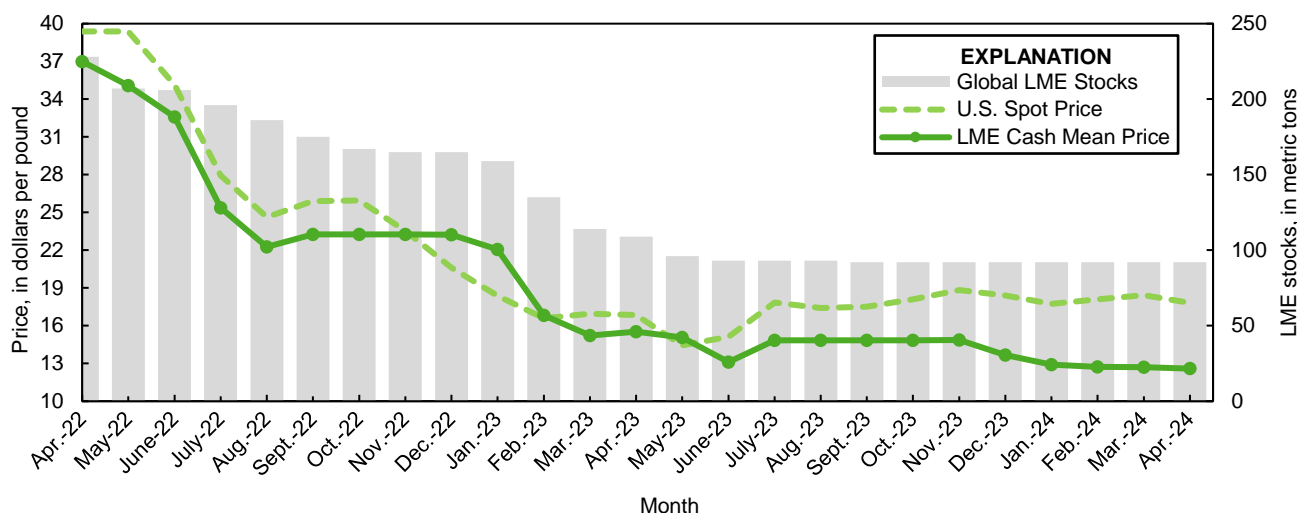


Figure 1. Global LME cobalt stocks, average U.S. spot cobalt prices, and average LME cash mean cobalt prices for April 2022 through April 2024. Sources: London Metal Exchange and S&P Global Platts Metals Week.

Terrafame polymetallic mining and bioheap-leaching operation into nickel sulfate and cobalt sulfate for battery applications, with a capacity of 7,400 tons per year of cobalt sulfate. Terrafame had been ramping up production at the battery chemical plant since it began operations at the facility in 2021, with a temporary suspension of operations in 2023 owing to low nickel prices (Terrafame Ltd., 2021, p. 3, 13–14, 23; 2023, 2024).

Zijin Mining Group Co. Ltd. (China) suspended operations at its La Compagnie Minière de Musonoie Global SAS (COMMUS) copper cobalt mine in Kolwezi, Congo (Kinshasa), following a report of elevated radiation in cobalt shipments from the mine. Elevated levels of radiation were detected as part of customs inspection in Botswana in April. The mine shutdown was ordered by the Congo (Kinshasa) Mines Minister while investigation was underway. In 2023, cobalt mine production from COMMUS was 2,300 tons (Kasongo, 2024; Reuters, 2024; Zijin Mining Group Co. Ltd., 2024, p.38).

References Cited

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- Zijin Mining Group Co. Ltd., 2024, Annual report 2023: Fujian Province, China, Zijin Mining Group Co. Ltd., 448p. (Accessed June 20, 2024, at <https://www.zijinmining.com/upload/file/2024/04/30/74fe00e4dbe140fab01574193d4aae65.pdf>.)

A worksheet has been added to the Excel table files that includes a button to remove text and numerical footnotes from data cells. This will allow users to only have numbers in data cells. Please see the worksheet titled RemoveTextButton for instructions in how to use the tool. Note: you must download the excel file in order to use the tool.

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Table 1. Reported LME¹ stocks of cobalt metal, end of period.²
[Data are in metric tons, contained cobalt.]

Period	U.S. warehouse	Non-U.S. warehouse	Total
2023			
April	34	75	109
May	34	62	96
June	34	59	93
July	34	59	93
August	34	59	93
September	34	58	92
October	34	58	92
November	34	58	92
December	34	58	92
2024			
January	34	58	92
February	34	58	92
March	34	58	92
April	34	58	92

¹London Metal Exchange.

²U.S. Government National Defense Stockpile inventory statistics are no longer available.

Table 2. U.S. imports for consumption of cobalt, by country or locality.

[Data are rounded to no more than three significant digits; may not add to totals shown. Revised data are marked with a superscript "r". —, not applicable. Source: U.S. Census Bureau.]

Period and country or locality of origin	Metals ¹		Oxides and hydroxides		Salts and compounds ²		Total cobalt content for the period ³ (metric tons)	Cobalt content, year to date ^{3, 4} (metric tons)
	Gross weight (metric tons)	Value ⁵ (thousand dollars)	Gross weight (metric tons)	Value ⁵ (thousand dollars)	Gross weight (metric tons)	Value ⁵ (thousand dollars)		
2023								
April	670	25,100	96	2,630	170	1,700	790	3,400
May	671	25,500	20	489	120 ^r	1,080 ^r	720 ^r	4,120
June	562	19,800 ^r	135	3,020	170	2,060	717	4,840
July	641	24,100 ^r	110	2,810	147	1,630	770	5,610 ^r
August	426	15,000	120	2,690	191	1,730	572	6,180
September	614	21,600 ^r	71	1,330	183	1,960	722	6,910 ^r
October	502	19,100	118	2,640	282	2,040	663	7,570 ^r
November	842	29,500	82	2,100	278	2,290	979	8,550 ^r
December	750	26,800	75	1,780	491	4,630	952	9,500 ^r
January–April	2,660	112,000	660	19,200	901	10,300	3,400	—
January–December	7,670	293,000	1,390	36,100	2,760 ^r	27,700 ^r	9,500 ^r	—
2024								
January	807	30,200	324	6,830	217	2,630	1,110	1,110
February	668	22,000	189	3,960	289	2,660	895	2,010
March	501	17,100	132	2,570	210	1,860	664	2,670
April								
Australia	0	0	0	0	0	0	0	10
Belgium	19	564	5	106	12	182	26	109
Brazil	0	0	0	0	72	835	24	29
Canada	134	4,500	0	0	66	961	152	620
China	(⁶)	6	13	188	48	328	22	47
Finland	13	620	47	875	27	151	55	563
France	2	149	0	0	0	0	2	54
Germany	9	741	0	0	0	0	9	23
Japan	165	4,910	0	0	0	0	165	547
Madagascar	201	5,450	0	0	0	0	201	713
Morocco	0	0	0	0	0	0	0	10
Norway	338	12,200	0	0	0	0	338	679
Russia	0	0	0	0	0	0	0	40
South Africa	17	135	0	0	0	0	17	49
Taiwan	0	0	8	203	0	0	6	40
Turkey	0	0	0	0	0	0	0	8
United Kingdom	3	215	34	576	12	143	31	136
Zambia	0	0	0	0	0	0	0	37
Other	0	0	1	35	3	37	2	7
Total	901	29,500	109	1,980	241	2,640	1,050	3,720
January–April	2,880	98,900	753	15,300	957	9,780	3,720	—

¹Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.²Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.³Estimated from gross weights.⁴May include revisions to previously published data.⁵Customs value.⁶Less than ½ unit.

Table 3. U.S. imports for consumption of additional cobalt materials, by country or locality.

[Data are rounded to no more than three significant digits; may not add to totals shown. Revised data are marked with a superscript "r". Source: U.S. Census Bureau.]

Period and country or locality of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Gross weight (metric tons)	Value ¹ (thousand dollars)	Gross weight (metric tons)	Value ¹ (thousand dollars)	Gross weight (metric tons)	Value ¹ (thousand dollars)
2023						
April	18	929	139	1,540	38	4,450
May	38	1,900	148	2,350	34	4,420 ^r
June	34	1,680	178	2,200	30	4,650
July	19	926	131	2,330	31	4,490
August	21	1,050	134	1,800	33	4,650
September	7	331	93	1,370	58	4,680
October	23	1,270	207	2,850	28	3,980
November	17	861	213 ^r	3,430 ^r	55	4,350
December	18	924	212 ^r	3,120 ^r	34	4,020
January–April	129	6,860	574	8,320	141	18,900
January–December	306	15,800	1,890	27,800 ^r	445	54,100
2024						
January	24	1,110	118	1,060	27	4,750
February	53	2,400	179	2,150	28	4,120
March	32	1,410	146	1,980	45	4,990
April						
Belgium	12	455	12	59	0	0
Canada	0	0	16	227	3	1,190
France	0	0	19	31	20	519
Germany	(²)	4	0	0	3	421
Ireland	0	0	35	171	(²)	31
Italy	0	0	0	0	18	249
Japan	0	0	2	35	(²)	12
Taiwan	0	0	6	232	(²)	10
Tunisia	0	0	16	154	0	0
United Kingdom	10	469	14	310	9	1,390
Other	1	81	1	7	1	816
Total	23	1,010	120	1,220	54	4,640
January–April	131	5,930	563	6,410	154	18,500

¹Customs value.

²Less than ½ unit.

Table 4. U.S. exports of cobalt materials.

[Data are rounded to no more than three significant digits; may not add to totals shown. Revised data are marked with a superscript "r". —, not applicable. Source: U.S. Census Bureau.]

Period	Unwrought cobalt, powders, matte, waste and scrap ¹		Oxides and hydroxides		Salts and compounds ²		Total cobalt content for the period ³ (metric tons)	Cobalt content, year to date ^{3, 4} (metric tons)
	Gross weight (metric tons)	Value ⁵ (thousand dollars)	Gross weight (metric tons)	Value ⁵ (thousand dollars)	Gross weight (metric tons)	Value ⁵ (thousand dollars)		
	2023							
April	434	15,900	12	175	0	0	442	1,720
May	522	15,700	2	88	0	0	524	2,240
June	318	11,300	18	246	0	0	331	2,570
July	532 ^r	14,500 ^r	13	530	(⁶)	4	542 ^r	3,120 ^r
August	299	11,100	(⁶)	12	1	10	299	3,420 ^r
September	448	14,500	(⁶)	4	0	0	448	3,860
October	541	17,800	(⁶)	8	(⁶)	4	541	4,400
November	331	11,200	26	715	0	0	350	4,750
December	351 ^r	12,900 ^r	2	91	0	0	352 ^r	5,110 ^r
January–April	1,700	56,800	22	532	(⁶)	4	1,720	—
January–December	5,050 ^r	166,000 ^r	84	2,230	2	24	5,110 ^r	—
2024								
January	365	12,600	(⁶)	6	0	0	365	365
February	332	13,300	(⁶)	4	0	0	332	698
March	540	14,600	86	538	0	0	601	1,300
April	319	12,000	1	28	(⁶)	3	320	1,620
January–April	1,560	52,400	87	576	(⁶)	3	1,620	—

¹May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.²Cobalt acetates and cobalt chlorides.³Estimated from gross weights.⁴May include revisions to previously published data.⁵Free alongside ship (f.a.s.) value.⁶Less than ½ unit.

Table 5. U.S. exports of wrought cobalt, cobalt ore, and concentrates.

[Data are rounded to no more than three significant digits; may not add to totals shown. Revised data are marked with a superscript "r". Source: U.S. Census Bureau.]

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Gross weight (metric tons)	Value ¹ (thousand dollars)	Gross weight (metric tons)	Value ¹ (thousand dollars)
2023				
April	157	19,500 ^r	1	20
May	129	16,600	2	60
June	145 ^r	18,400 ^r	0	0
July	101	17,500	(²)	3
August	119	16,600	0	0
September	113	16,300	0	0
October	135	17,700	0	0
November	140	18,000	0	0
December	137	18,500	0	0
January–April	587	84,300 ^r	1	31
January–December	1,610	224,000	3	94
2024				
January	185	21,200	0	0
February	156	21,500	0	0
March	145	19,500	0	0
April	174	20,800	0	0
January–April	660	83,000	0	0

¹Free alongside ship (f.a.s.) value.

²Less than ½ unit.