

Mineral Industry Surveys

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COBALT IN MARCH 2024

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in March 2024 was 26% less than that imported during February 2024. For the first 3 months of 2024, the amount of cobalt contained in imports was slightly more than that imported during the same period in 2023 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in March 2024 was 81% more than that exported during February 2024 and during the first 3 months of 2024, the amount exported was slightly more than the amount exported during the same period in 2023 (table 4).

Prices and Stocks

In March, London Metal Exchange (LME) cobalt stocks were unchanged from that in February 2024 (table 1). The LME cash mean price was unchanged from that in February 2024 and was 17% lower than that in March 2023. The March 2024 monthly average U.S. spot cobalt price increased slightly from that in February 2024 and was 9% more than that in March 2023 (fig. 1). The following listed prices are for cobalt metal in March, in dollars per pound.

Type	Price range	Average price
U.S. spot ¹	Not available	18.43
LME cash mean ²	12.68–12.75	12.71

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

On March 23, PT Halmahera Persada Lygend (Indonesia) (PT HPL), began trial production of three new production lines at its high-pressure acid leaching (HPAL) facility at Obi Industrial Park, North Maluku Province, Indonesia. The facility processed laterite ore to produce mixed hydroxide precipitate (MHP), an intermediate product containing nickel and cobalt. The new production lines, operated by PT HPL subsidiary PT Obi Nickel Cobalt, had a design capacity of 7,500 metric tons per year (t/y) of cobalt in MHP, and represent the third phase of HPAL production at PT HPL. PT HPL ramped up its HPAL production beginning in 2021 with two production lines and a

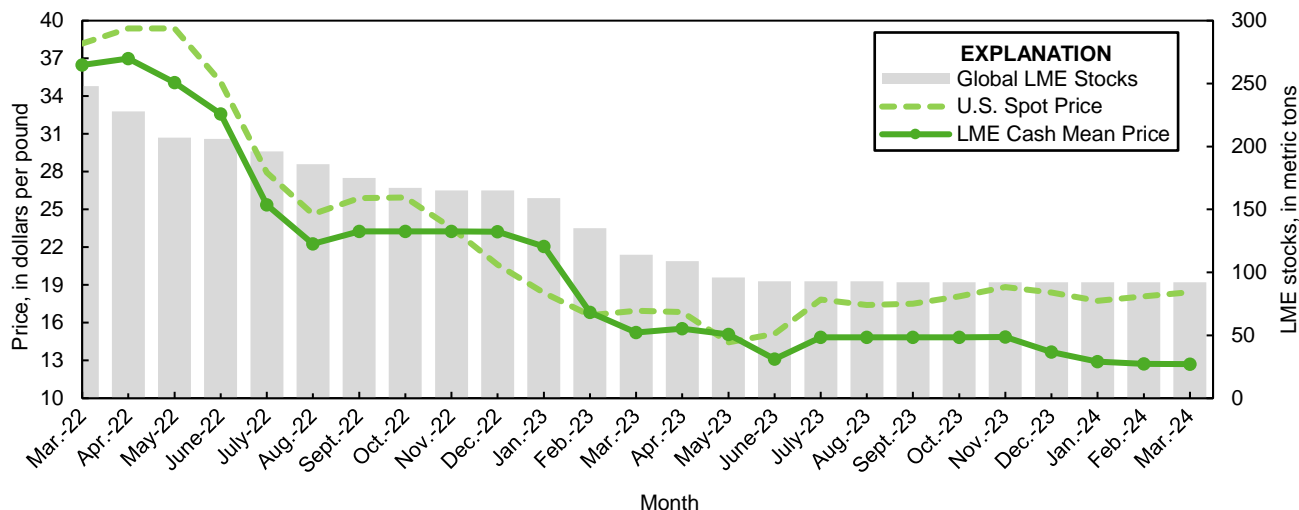


Figure 1. Global LME cobalt stocks, average U.S. spot cobalt prices, and average LME cash mean cobalt prices for March 2022 through March 2024. Sources: London Metal Exchange and S&P Global Platts Metals Week.

design capacity of 4,500 t/y of cobalt in MHP. An additional production line with a design capacity of 2,250 t/y of cobalt in MHP commenced in 2023. The combined design capacity of all six production lines totaled 14,250 t/y of cobalt in MHP (Lygend Resources and Technology Co, Ltd., 2024; PT Trimegah Bangun Persada Tbk, 2024, p. 34, 105-106).

In March, CMOC Group Ltd. (China) (CMOC) announced its average daily processing capacity from its mixed ore project at the Tenke Fungurume Mine in Congo (Kinshasa) achieved its design capacity of 15,000 metric tons of ore per day. CMOC commissioned three new mixed ore and oxide ore production lines in the central and eastern areas of the mine in 2023, which brought the mine's capacity to 37,000 t/y of cobalt in hydroxide. CMOC's 2024 cobalt production guidance for Congo (Kinshasa), including the Tenke Fungurume Mine and the Kisanfu Mine that also started up in 2023, was 60,000-70,000 t of cobalt in hydroxide (CMOC Group Ltd., 2024a, p. 10, 44, 67; 2024b).

The Department of Defense, using Defense Production Act Title III authorities, awarded \$7 million to The Doe Run Co. (St. Louis) in March 2024 for construction of a cobalt and nickel demonstration plant. The plant would be located near Doe Run's existing technology center outside Viburnum, Missouri, and would produce cobalt and nickel products from Doe Run's existing mineral resources. Doe Run has been operating six underground mines in the Viburnum lead mining district in Missouri and produced lead, copper and zinc concentrates and refined lead products. (Doe Run Co., The 2024, undated a, b; U.S. Department of Defense, 2024).

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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			
March	34	80	114
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

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. —, 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								
March	838	33,000	287	7,220	226	2,940	1,120	2,610
April	670	25,100	96	2,630	170	1,700	790	3,400
May	671	25,500	20	489	96	878	712	4,120
June	562	20,000	135	3,020	170	2,060	717	4,830
July	641	24,000	110	2,810	147	1,630	770	5,600
August	426	15,000	120	2,690	191	1,730	572	6,180
September	614	21,500	71	1,330	183	1,960	722	6,900
October	502	19,100	118	2,640	282	2,040	663	7,560
November	842	29,500	82	2,100	278	2,290	979	8,540
December	750	26,800	75	1,780	491	4,630	952	9,490
January–March	1,990	86,900	564	16,600	730	8,570	2,610	—
January–December	7,670	293,000	1,390	36,100	2,740	27,500	9,490	—
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								
Australia	0	0	0	0	0	0	0	10
Belgium	7	275	13	284	0	0	17	83
Brazil	0	0	0	0	0	0	0	5
Canada	201	7,450	0	0	1	3	202	468
China	11	152	2	40	(⁶)	6	13	25
Finland	(⁶)	12	68	1,230	194	1,720	113	509
France	14	755	0	0	0	0	14	52
Germany	6	421	0	0	0	0	6	14
Japan	97	2,930	0	0	0	0	97	382
Madagascar	84	2,680	0	0	0	0	84	512
Morocco	0	0	0	0	0	0	0	10
Norway	0	0	0	0	0	0	0	341
Russia	40	1,040	0	0	0	0	40	40
South Africa	14	115	0	0	0	0	14	32
Taiwan	0	0	8	209	12	84	9	34
Turkey	0	0	0	0	(⁶)	4	(⁶)	8
United Kingdom	9	805	38	739	0	0	36	105
Zambia	17	486	0	0	0	0	17	37
Other	(⁶)	11	2	73	3	35	3	5
Total	501	17,100	132	2,570	210	1,860	664	2,670
January–March	1,980	69,300	644	13,400	716	7,150	2,670	—

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. 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						
March	30	1,510	146	2,220	42	4,830
April	18	929	139	1,540	38	4,450
May	38	1,900	148	2,350	34	4,430
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	228	3,750	55	4,350
December	18	924	201	2,910	34	4,020
January–March	111	5,930	435	6,780	103	14,400
January–December	306	15,800	1,890	27,900	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						
Belgium	8	298	9	439	0	0
Canada	(²)	57	16	265	2	731
France	0	0	7	183	18	988
Germany	(²)	19	0	0	8	824
Ireland	0	0	50	130	(²)	49
Italy	0	0	7	146	(²)	128
Japan	0	0	3	32	1	95
Mexico	0	0	3	23	(²)	5
Tunisia	0	0	13	122	0	0
United Kingdom	23	1,040	36	622	14	1,730
Other	0	0	1	22	1	438
Total	32	1,410	146	1,980	45	4,990
January–March	108	4,920	443	5,190	100	13,900

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. —, not applicable. Source: U.S. Census Bureau.]

[Data are rounded to no more than three significant digits, may not add to totals shown. —, 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	Value ⁵	Gross weight	Value ⁵	Gross weight	Value ⁵		
	(metric tons)	(thousand dollars)	(metric tons)	(thousand dollars)	(metric tons)	(thousand dollars)		
2023								
March	535	15,300	6	202	0	0	539	1,280
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	523	14,300	13	530	(⁶)	4	532	3,110
August	299	11,100	(⁶)	12	1	10	299	3,410
September	448	14,500	(⁶)	4	0	0	448	3,850
October	541	17,800	(⁶)	8	(⁶)	4	541	4,400
November	331	11,200	26	715	0	0	350	4,750
December	345	12,700	2	91	0	0	347	5,090
January–March	1,270	40,800	10	357	(⁶)	4	1,280	—
January–December	5,030	165,000	84	2,230	2	24	5,090	—
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
January–March	1,240	40,400	86	548	0	0	1,300	—

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. 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				
March	126	18,500	(²)	7
April	157	19,700	1	20
May	129	16,600	2	60
June	144	18,300	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–March	430	64,800	(²)	11
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
January–March	486	62,100	0	0

¹Free alongside ship (f.a.s.) value.²Less than ½ unit.