

# Mineral Industry Surveys

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## COBALT IN NOVEMBER 2023

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in November 2023 was 48% more than that imported during October 2023. For the first 11 months of 2023, the amount of cobalt contained in imports was 12% less than that imported during the same period in 2022 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in November 2023 was 35% less than that exported during October 2023. During the first 11 months of 2023, the amount exported was 3% less than the amount exported during the same period in 2022 (table 4).

LME cash mean price was unchanged from that in October 2023 and was 36% lower than that in November 2022. The November 2023 monthly average U.S. spot cobalt price was 4% higher than in October 2023 and was 20% lower than that in November 2022 (fig. 1). The following listed prices are for cobalt metal in November, in dollars per pound.

Type	Price range	Average price
U.S. spot <sup>1</sup>	Not available	18.84
LME cash mean <sup>2</sup>	14.85–14.86	14.86

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

<sup>2</sup>London 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).

## Prices and Stocks

During the past 2 years, London Metal Exchange (LME) cobalt stocks have generally trended downward through June 2023, then remained essentially unchanged through November 2023 (table 1). Monthly average cobalt prices trended up into the second quarter of 2022 then decreased through the first half of 2023, reaching lows in June 2023 not seen in the past two years. Prices increased in July but LME prices have since leveled out and the monthly average U.S. spot price has increased for the second consecutive month. In November, the

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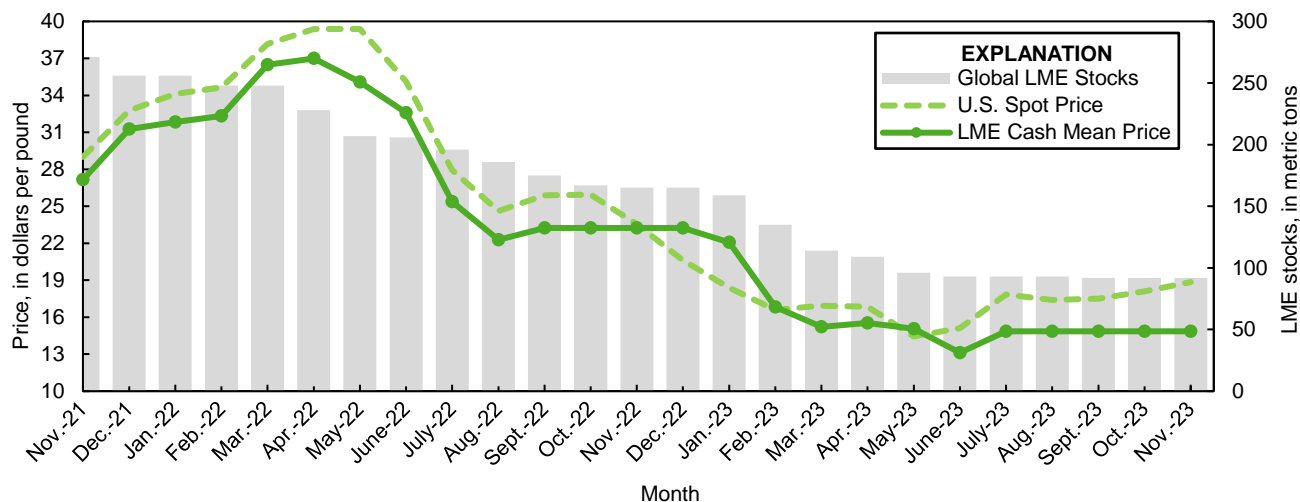


Figure 1. Global LME cobalt stocks, average U.S. spot cobalt prices, and average LME cash mean cobalt prices for November 2021 through November 2023. Sources: London Metal Exchange and S&P Global Platts Metals Week.

TABLE 1  
REPORTED LME<sup>1</sup> STOCKS  
OF COBALT METAL, END OF PERIOD<sup>2</sup>

(Metric tons, contained cobalt)

Period	U.S. warehouse	Non-U.S. warehouse	Total
2022:			
November	34	131	165
December	34	131	165
2023:			
January	34	125	159
February	34	101	135
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

<sup>1</sup>London Metal Exchange.

<sup>2</sup>U.S. Government National Defense Stockpile inventory statistics are no longer available.

TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY OR LOCALITY<sup>1</sup>

Period and country or locality of origin	Metals <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the period <sup>4</sup> (metric tons)	Cobalt content, year to date <sup>4,5</sup> (metric tons)
	Gross weight (metric tons)	Value <sup>6</sup> (thousands)	Gross weight (metric tons)	Value <sup>6</sup> (thousands)	Gross weight (metric tons)	Value <sup>6</sup> (thousands)		
2022:								
November	571	\$29,100	109	\$4,990	260	\$2,810	721	9,710
December	678	34,400	100	3,400	197	1,700	805	10,500
January–November	6,530	423,000 <sup>r</sup>	1,820	85,700	6,700	48,500	9,710	XX
January–December	7,200	458,000	1,920	89,100	6,900	50,200	10,500	XX
2023:								
January	593	27,700	184	6,160	262	3,760	803	803
February	559	26,200	94	3,220	243	1,870	694	1,500
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:								
Australia	--	--	--	--	--	--	--	65
Belgium	--	--	9	226	--	--	6	68
Brazil	--	--	--	--	18	288	7	97
Canada	97	4,120	--	--	--	--	97	1,560
China	--	--	3	93	(7)	6	3	110
Finland	21	472	40	874	229	1,500	111	1,310
France	(7)	13	--	--	--	--	(7)	7
Germany	16	1,290	--	--	--	--	16	134
Japan	189	6,770	--	--	--	--	189	1,390
Madagascar	189	5,960	--	--	--	--	189	884
Mexico	15	520	(7)	13	--	--	15	33
Morocco	3	104	--	--	--	--	3	173
Netherlands	--	--	--	--	--	--	--	17
Norway	260	8,380	--	--	--	--	260	2,140
Philippines	--	--	--	--	--	--	--	12
Russia	--	--	--	--	--	--	--	50
South Africa	7	58	--	--	--	--	7	133
Taiwan	--	--	8	238	18	203	10	89
Turkey	--	--	--	--	--	--	--	16
United Kingdom	7	471	20	608	13	282	26	185
Zambia	37	1,280	--	--	--	--	37	59
Other	--	--	1	47	(7)	2	1	12
Total	842	29,500	82	2,100	278	2,290	979	8,540
January–November	6,920	267,000	1,320	34,300	2,250	22,900	8,540	XX

<sup>1</sup>Revised. XX Not applicable. -- Zero.

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

<sup>3</sup>Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

<sup>4</sup>Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

<sup>5</sup>Estimated from gross weights.

<sup>6</sup>May include revisions to previously published data.

<sup>7</sup>Customs value.

<sup>8</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY OR LOCALITY<sup>1</sup>

Period and country or locality of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Gross weight (metric tons)	Value <sup>2</sup> (thousands)
2022:						
November	31	\$1,670	117	\$1,710	33	\$4,480
December	39	1,970	88	1,930	36	4,780
January–November	268 <sup>r</sup>	15,100 <sup>r</sup>	1,650	24,800 <sup>r</sup>	397 <sup>r</sup>	45,900 <sup>r</sup>
January–December	307	17,000	1,740	26,700	433	50,700
2023:						
January	61	3,180	150	2,350	26	3,850
February	19	1,240	140	2,210	36	5,740
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:						
Belgium	5	171	--	--	--	--
Canada	--	--	24	354	3	1,160
China	--	--	5	44	2	660
France	--	--	49	934	19	332
Germany	--	--	3	103	4	532
India	1	94	3	52	(3)	124
Ireland	--	--	47	114	(3)	19
Italy	--	--	--	--	8	57
Japan	--	--	6	133	(3)	4
Singapore	--	--	9	112	9	117
Taiwan	--	--	6	226	(3)	5
Thailand	--	--	3	89	--	--
Tunisia	--	--	10	98	(3)	54
United Kingdom	12	592	64	1,490	7	908
Other	(3)	3	--	--	1	378
Total	17	861	228	3,750	55	4,350
January–November	289	14,900	1,690	25,000	411	50,100

<sup>r</sup>Revised. -- Zero.

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

<sup>2</sup>Customs value.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4  
U.S. EXPORTS OF COBALT MATERIALS<sup>1</sup>

Period	Unwrought cobalt, powders, matte, waste and scrap <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the period <sup>4</sup> (metric tons)	Cobalt content, year to date <sup>4,5</sup> (metric tons)
	Gross weight (metric tons)	Value <sup>6</sup> (thousands)	Gross weight (metric tons)	Value <sup>6</sup> (thousands)	Gross weight (metric tons)	Value <sup>6</sup> (thousands)		
2022:								
November	525	\$13,800	7	\$281	--	--	530	4,900
December	460	13,600	1	31	--	--	460	5,360
January–November	4,870 <sup>r</sup>	155,000	42	1,740	1	\$16	4,900 <sup>r</sup>	XX
January–December	5,330	169,000	43	1,770	1	16	5,360	XX
2023:								
January	408	13,000	3	114	(7)	4	411	411
February	327	12,500	1	41	--	--	328	738
March	535	15,300	6	202	--	--	539	1,280
April	434	15,900	12	175	--	--	442	1,720
May	522	15,700	2	88	--	--	524	2,240
June	318	11,300	18	246	--	--	331	2,570
July	523	14,300	13	530	(7)	4	532	3,110
August	299	11,100	(7)	12	1	10	299	3,410
September	448	14,500	(7)	4	--	--	448	3,850
October	541	17,800	(7)	8	(7)	4	541	4,400
November	331	11,200	26	715	--	--	350	4,750
January–November	4,690	153,000	82	2,140	2	24	4,750	XX

<sup>1</sup>Revised. XX Not applicable. -- Zero.

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

<sup>3</sup>May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

<sup>4</sup>Cobalt acetates and cobalt chlorides.

<sup>5</sup>Estimated from gross weights.

<sup>6</sup>May include revisions to previously published data.

<sup>7</sup>Free alongside ship (f.a.s.) value.

<sup>8</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5  
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,  
AND CONCENTRATES<sup>1</sup>

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Gross weight (metric tons)	Value <sup>2</sup> (thousands)
2022:				
November	181	\$24,400	--	--
December	182	21,000	--	--
January–November	1,690 <sup>r</sup>	207,000 <sup>r</sup>	(3)	\$12
January–December	1,870	228,000	(3)	12
2023:				
January	186	27,000	--	--
February	118	19,300	(3)	4
March	126	18,500	(3)	7
April	157	19,700	1	20
May	129	16,600	2	60
June	144	18,300	--	--
July	101	17,500	(3)	3
August	119	16,600	--	--
September	113	16,300	--	--
October	135	17,700	--	--
November	140	18,000	--	--
January–November	1,470	206,000	3	94

<sup>r</sup>Revised. -- Zero.

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

<sup>2</sup>Free alongside ship (f.a.s.) value.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.