

Mineral Industry Surveys

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COBALT IN SEPTEMBER 2023

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in September 2023 was 26% more than that imported during August 2023. For the first 9 months of 2023, the amount of cobalt contained in imports was 17% 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 September 2023 was 50% more than that exported during August 2023. During the first 9 months of 2023, the amount exported increased slightly from the amount exported during the same period in 2022 (table 4).

September 2022. The September 2023 monthly average U.S. spot cobalt price was essentially unchanged from that in August 2023 and was 32% lower than that in September 2022 (fig. 1). The following listed prices are for cobalt metal in September, in dollars per pound.

Type	Price range	Average price
U.S. spot ¹	Not available	17.50
LME cash mean ²	14.84–14.85	14.85

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).

Prices and Stocks

During the past 2 years, London Metal Exchange (LME) cobalt stocks have generally trended downward. In September 2023, LME cobalt stocks were essentially unchanged from those in August 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 have since leveled out. In September, the LME cash mean price was unchanged from that in August 2023 and was 36% lower than that in

Industry News

A magnitude 6.8 earthquake took place 71 kilometers southwest of Marrakech, Morocco, on September 8, 2023. The epicenter was in the High Atlas Mountains. It caused severe damage to nearby towns and villages and killed thousands of people. The Guemassa hydrometallurgical complex, located 37

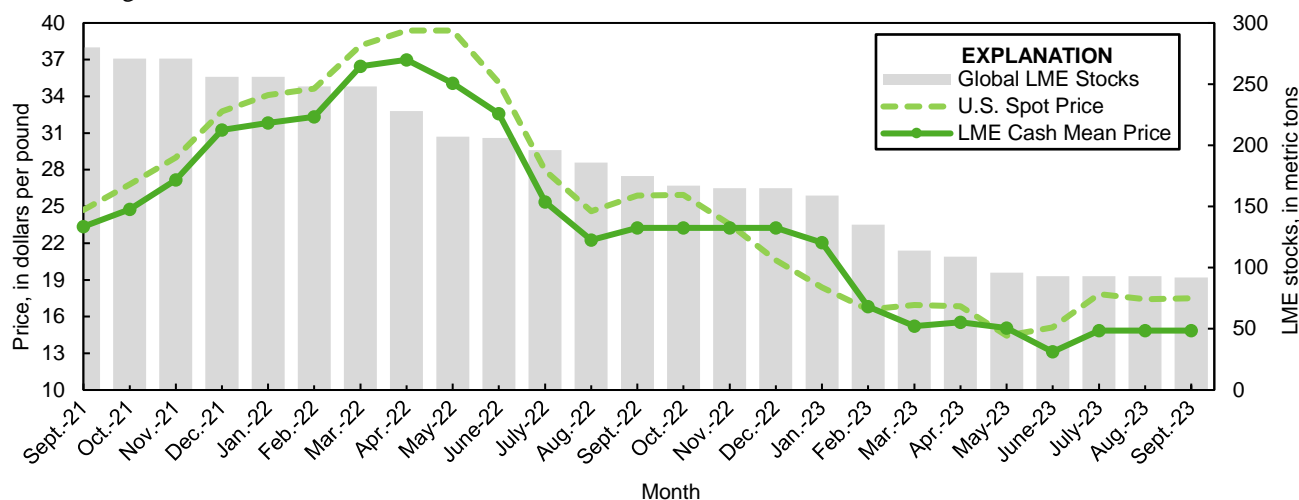


Figure 1. Global LME cobalt stocks, average U.S. spot cobalt prices, and average LME cash mean cobalt prices for September 2021 through September 2023. Sources: S&P Global Platts Metals Week and London Metal Exchange.

kilometers southwest of Marrakech in the direction of the earthquake, was being inspected for damage by operator Groupe Managem (Morocco). Managem produced electrolytic cobalt at the Guemassa refinery from cobalt mined and processed at the Bou-Azzer Mine in Morocco, the only producing primary cobalt mine in the world. The refinery also used cobalt hydroxide from Managem's joint-venture LAMIKAL mining and processing operation in Congo (Kinshasa) and secondary (scrap) materials as feed. In 2022, Managem produced 1,690 metric tons of refined cobalt and established a partnership with Glencore International AG, which was expected to begin recycling shredded lithium-ion battery scrap, or black mass, at the Guemassa facility in the second half of 2023. They planned to produce 1,200 metric tons per year of cobalt from black mass provided by Glencore. There was no information on status of the complex following inspections (Africa Intelligence, 2023; Groupe Managem, 2023, p. 22, 32–33, 144; Turner, 2023).

References Cited

- Africa Intelligence 2023, Miners spared by earthquake but active in recovery efforts: Africa Intelligence [Paris, France], September 15, 4 p. (Accessed December 5, 2023, via <https://www.africaintelligence.com/>.)
- Groupe Managem, 2023, Rapport financier annuel 2022 [Annual financial report 2022]: Casablanca, Morocco, Groupe Managem, 261 p. [In French.] (Accessed November 15, 2023, at https://www.managemgroup.com/files/2023-04/Managem%20RFA%202022%2028%20Avr_compressed_compressed%20%281%29_0.pdf.)
- Turner, Lauren, 2023, Morocco earthquake—What we know: BBC News, September 9. (Accessed November 15, 2023, at <https://www.bbc.com/news/world-africa-66762329>.)

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TABLE 1
REPORTED LME¹ STOCKS
OF COBALT METAL, END OF PERIOD²

(Metric tons, contained cobalt)

Period	U.S. warehouse	Non-U.S. warehouse	Total
2022:			
September	34	141	175
October	34	133	167
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

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 LOCALITY¹

Period and country or locality of origin	Metals ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the period ⁴ (metric tons)	Cobalt content, year to date ^{4,5} (metric tons)
	Gross weight (metric tons)	Value ⁶ (thousands)	Gross weight (metric tons)	Value ⁶ (thousands)	Gross weight (metric tons)	Value ⁶ (thousands)		
2022:								
September	578	\$34,600	200	\$7,120	310	\$4,410	827	8,260
October	579	29,600	117	5,030	200	2,550	725	8,990
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–September	5,380	365,000	1,590	75,700	6,240	43,200	8,260 ^r	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:								
Australia	51	1,620	--	--	--	--	51	65
Belgium	--	--	--	--	--	--	--	48
Brazil	--	--	--	--	22	387	8	82
Canada	157	6,750	--	--	--	--	157	1,270
China	(7)	5	15	294	24	208	17	105
Finland	(7)	14	40	865	119	1,180	67	1,070
France	--	--	--	--	--	--	--	6
Germany	4	265	--	--	--	--	4	93
Japan	101	3,120	--	--	--	--	101	1,040
Madagascar	109	3,740	--	--	--	--	109	632
Mexico	--	--	--	--	--	--	--	17
Morocco	10	248	--	--	--	--	10	148
Netherlands	--	--	--	--	--	--	--	17
Norway	156	5,170	--	--	--	--	156	1,880
Philippines	--	--	16	169	--	--	12	12
Russia	--	--	--	--	--	--	--	50
South Africa	21	165	--	--	--	--	21	109
Taiwan	--	--	--	--	18	186	4	69
Turkey	--	--	--	--	--	--	--	7
United Kingdom	5	446	--	--	--	--	5	153
Zambia	--	--	--	--	--	--	--	17
Other	(7)	2	--	--	--	--	(7)	11
Total	614	21,500	71	1,330	183	1,960	722	6,900
January–September	5,580	218,000	1,120	29,600	1,690	18,500	6,900	XX

^rRevised. XX Not applicable. -- Zero.

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

²Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

³Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁴Estimated from gross weights.

⁵May include revisions to previously published data.

⁶Customs value.

⁷Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY OR LOCALITY¹

Period and country or locality of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)
2022:						
September	35	\$1,780	200	\$2,850	33	\$4,190
October	32	1,730	133	2,200	42	3,790
November	31	1,670	117	1,710	33	4,480
December	39	1,970	88	1,930	36	4,780
January–September	205 ^r	11,700 ^r	1,400	20,900	322 ^r	37,700 ^r
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:						
Belgium	5	187	1	39	--	--
Canada	(3)	53	7	44	2	928
France	--	--	12	278	16	271
Germany	--	--	--	--	5	553
Ireland	--	--	29	145	(3)	60
Japan	--	--	3	18	(3)	17
Norway	--	--	--	--	18	592
Singapore	--	--	9	109	--	--
Taiwan	--	--	6	232	(3)	8
Tunisia	--	--	4	45	--	--
United Arab Emirates	--	--	18	371	--	--
United Kingdom	2	91	3	56	15	1,590
Other	--	--	1	31	2	662
Total	7	331	93	1,370	58	4,680
January–September	249	12,700	1,260	18,400	328	41,800

^rRevised. -- Zero.

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

²Customs value.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF COBALT MATERIALS¹

Period	Unwrought cobalt, powders, matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the period ⁴ (metric tons)	Cobalt content, year to date ^{4,5} (metric tons)
	Gross weight (metric tons)	Value ⁶ (thousands)	Gross weight (metric tons)	Value ⁶ (thousands)	Gross weight (metric tons)	Value ⁶ (thousands)		
2022:								
September	335	\$11,900	7	\$298	--	--	340	3,790
October	584	16,900	2	64	--	--	585	4,370
November	525	13,800	7	281	--	--	530	4,900
December	460	13,600	1	31	--	--	460	5,360
January–September	3,760 ^r	124,000	33	1,390	1	\$16	3,790 ^r	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
January–September	3,810	124,000	55	1,410	2	19	3,850	XX

¹Revised. XX Not applicable. -- Zero.

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

³May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

⁴Cobalt acetates and cobalt chlorides.

⁵Estimated from gross weights.

⁶May include revisions to previously published data.

⁷Free alongside ship (f.a.s.) value.

⁸Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,
AND CONCENTRATES¹

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)
2022:				
September	182	\$25,400	(3)	\$8
October	121	17,200	--	--
November	181	24,400	--	--
December	182	21,000	--	--
January–September	1,390 ^r	165,000 ^r	(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	--	--
January–September	1,190	170,000	3	94

^rRevised. -- Zero.

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

²Free alongside ship (f.a.s.) value.

³Less than ½ unit.

Source: U.S. Census Bureau.