

Mineral Industry Surveys

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COBALT IN OCTOBER 2024

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in October 2024 was 18% more than that imported in September 2024. For the first 10 months of 2024, the amount of cobalt contained in imports was 14% more than that imported during the first 10 months of 2023 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in October 2024 was 16% less than that exported in September 2024 and the amount exported during the first 10 months of 2024 was 13% less than the amount exported during the same period of 2023 (table 4).

Prices and Stocks

In October, global London Metal Exchange (LME) cobalt stocks increased 13% compared with that in September 2024 (table 1). The LME cash mean price was \$10.88 in October compared to \$10.81 in September and was 27% less than that in October 2023. The October 2024 monthly average U.S. spot cobalt price was 3% more than that in September 2024 and 12% less than that in October 2023 (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 | 15.90 |
| LME cash mean ² | 10.85–10.90 | 10.88 |

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

Production at the Ambatovy nickel-cobalt mining, processing and refining operation in Madagascar resumed this month after being shut down in September for slurry pipe damage. Sumitomo Corp. (Japan), majority owner of the Ambatovy joint venture, announced slurry pipe damage had resulted in ore discharge on September 25 and was subsequently shutdown. The Ambatovy project mined lateritic ore near the town of Moramanga and transported slurried ore 220 kilometers via pipeline to a processing plant and refinery near Toamasina. The project had a capacity to produce 4,000 metric tons per year (t/yr) of cobalt in the form of metal powder and briquettes with 99.9% purity (Ambatovy, [undated]a, b, c; Golubkova and Obayashi, 2024; Sumitomo Corp., 2024).

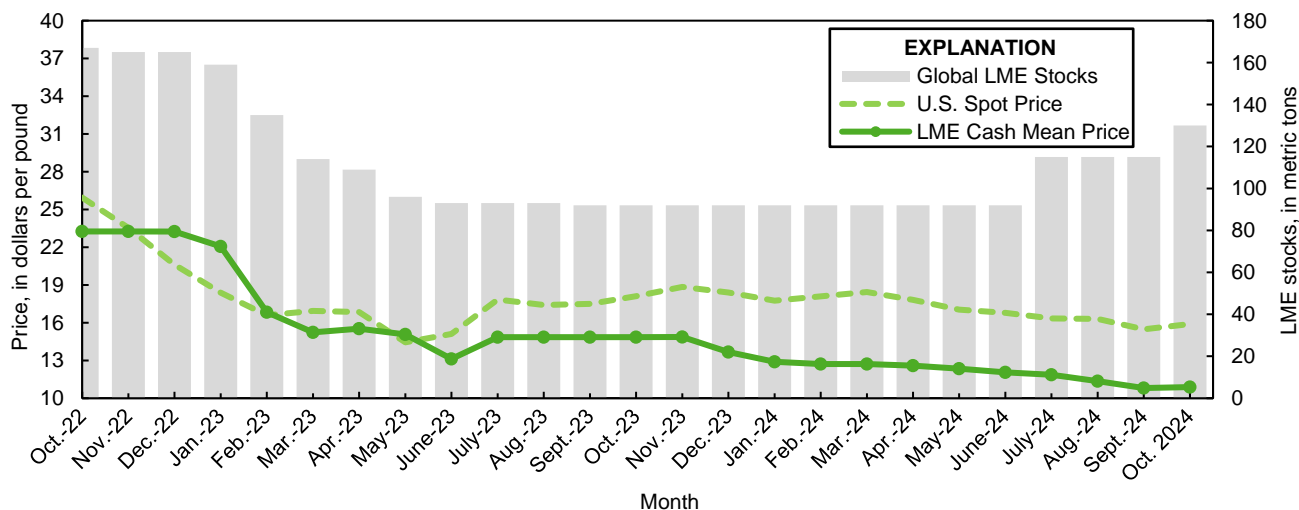


Figure 1. Global LME cobalt stocks, average U.S. spot cobalt prices, and average LME cash mean cobalt prices for October 2022 through October 2024. Sources: London Metal Exchange and S&P Global Platts Metals Week.

In October, Chinese cobalt refiner, Jinchuan Group Co. Ltd. increased cobalt metal production capacity at its Jinchang plant from 5,000 t/yr to 7,000 t/yr. China's refined metal production capacity has increased significantly in recent years as producers accommodate increasing demand, increasing feedstock availability from Congo (Kinshasa) and Indonesia, and take advantage of metal price premiums over chemicals. The Jinchuan capacity increase followed capacity increases announced in July for Chinese refiners GEM Co. Ltd., and CNGR Advanced Material Co. Ltd. GEM increased cobalt metal production capacity at its Jingmen plant from 3,000 t/yr to 10,000 t/yr in July. CNGR started new production lines with capacity of 2,000 t/yr of refined cobalt metal in July. Argus Non-Ferrous Markets forecasted China's cobalt metal production capacity to reach 60,000 t/yr in 2024, which was more than double the estimated capacity in 2023 (Argus Non-Ferrous Markets, 2024 a, b, c, p. 14).

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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, cobalt content.]

| Period | U.S. warehouse | Non-U.S. warehouse | Total |
|-------------|-------------------|-----------------------|-------|
| 2023 | | | |
| 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 |
| May | 34 | 58 | 92 |
| June | 34 | 58 | 92 |
| July | 34 | 81 | 115 |
| August | 34 | 81 | 115 |
| September | 34 | 81 | 115 |
| October | 34 | 96 | 130 |

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 | | | | | | | | |
| October | 502 | 19,100 | 118 | 2,640 | 282 | 2,040 | 663 | 7,570 |
| November | 842 | 29,500 | 82 | 2,100 | 278 | 2,290 | 979 | 8,550 |
| December | 750 | 26,800 | 75 | 1,780 | 491 | 4,630 | 952 | 9,500 |
| January–October | 6,080 | 237,000 | 1,230 | 32,200 | 1,990 ^r | 20,800 ^r | 7,570 ^r | — |
| January–December | 7,670 | 293,000 | 1,390 | 36,100 | 2,760 | 27,700 | 9,500 | — |
| 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 | 901 | 29,500 | 109 | 1,980 | 241 | 2,640 | 1,050 | 3,720 |
| May | 1,220 | 40,700 | 195 | 4,080 | 102 | 917 | 1,390 | 5,110 |
| June | 638 | 19,900 | 126 | 2,350 | 162 | 1,230 | 778 | 5,890 |
| July | 548 | 16,400 | 73 | 1,440 | 128 | 920 | 637 | 6,530 |
| August | 587 | 18,800 | 114 | 2,410 | 116 | 1,110 | 704 | 7,230 |
| September | 540 | 15,500 | 67 | 1,180 | 141 | 1,520 | 632 | 7,860 |
| October | | | | | | | | |
| Australia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| Belgium | 3 | 214 | 24 | 505 | 0 | 0 | 21 | 223 |
| Brazil | 0 | 0 | 0 | 0 | 1 | 7 | (⁶) | 45 |
| Canada | 104 | 3,820 | 0 | 0 | 0 | 0 | 104 | 1,330 |
| China | 0 | 0 | (⁶) | 8 | 1 | 22 | (⁶) | 155 |
| Finland | 6 | 240 | 111 | 2,050 | 83 | 932 | 114 | 1,050 |
| France | 0 | 0 | 0 | 0 | (⁶) | 3 | (⁶) | 82 |
| Germany | 21 | 1,720 | 0 | 0 | 0 | 0 | 21 | 115 |
| Hong Kong | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Italy | 0 | 0 | 2 | 68 | 0 | 0 | 2 | 11 |
| Japan | 321 | 7,900 | 0 | 0 | 0 | 0 | 321 | 1,520 |
| Madagascar | 63 | 1,620 | 0 | 0 | 0 | 0 | 63 | 1,270 |
| Morocco | 10 | 216 | 0 | 0 | 0 | 0 | 10 | 85 |
| Norway | 52 | 1,170 | 0 | 0 | 0 | 0 | 52 | 2,040 |
| Russia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 |
| South Africa | 5 | 177 | 0 | 0 | 0 | 0 | 5 | 182 |
| Taiwan | 0 | 0 | 0 | 0 | 7 | 46 | 2 | 65 |
| Turkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| United Kingdom | 5 | 317 | 31 | 517 | 14 | 289 | 33 | 282 |
| Zambia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| Other | 0 | 0 | 1 | 14 | 0 | 0 | 1 | 17 |
| Total | 590 | 17,400 | 169 | 3,160 | 106 | 1,300 | 747 | 8,610 |
| January–October | 7,000 | 228,000 | 1,500 | 30,000 | 1,710 | 16,800 | 8,610 | — |

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 | | | | | | |
| October | 23 | 1,270 | 207 | 2,850 | 28 | 3,980 |
| November | 17 | 861 | 213 | 3,430 | 55 | 4,350 |
| December | 18 | 924 | 212 | 3,120 | 34 | 4,020 |
| January–October | 271 | 14,000 | 1,470 | 21,200 | 356 | 45,700 |
| January–December | 306 | 15,800 | 1,890 | 27,800 | 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 | 23 | 1,010 | 120 | 1,220 | 54 | 4,640 |
| May | 46 | 2,430 | 73 | 757 | 56 | 5,460 |
| June | 20 | 1,000 | 189 | 1,960 | 47 | 4,900 |
| July | 60 | 2,720 | 170 | 1,370 | 51 | 5,470 |
| August | 43 | 1,820 | 130 | 1,630 | 50 | 5,220 |
| September | 33 | 1,530 | 146 | 1,460 | 39 | 5,080 |
| October | | | | | | |
| Austria | 0 | 0 | 0 | 0 | 3 | 229 |
| Belgium | 16 | 616 | 0 | 0 | 0 | 0 |
| Canada | 0 | 0 | 12 | 125 | 2 | 1,080 |
| France | 0 | 0 | 15 | 158 | 8 | 870 |
| Germany | (²) | 3 | 0 | 0 | 2 | 191 |
| Ireland | 0 | 0 | 69 | 245 | (²) | 12 |
| Mexico | 0 | 0 | 13 | 32 | (²) | 24 |
| Tunisia | 0 | 0 | 6 | 59 | (²) | 3 |
| United Kingdom | 15 | 691 | 14 | 184 | 8 | 1,050 |
| Other | 1 | 18 | 3 | 33 | (²) | 628 |
| Total | 31 | 1,330 | 132 | 836 | 24 | 4,090 |
| January–October | 365 | 16,800 | 1,400 | 14,400 | 421 | 48,700 |

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 | | | | | | | | |
| October | 541 | 17,800 | (⁶) | 8 | (⁶) | 4 | 541 | 4,400 |
| November | 331 | 11,200 | 26 | 715 | 0 | 0 | 350 | 4,750 |
| December | 351 | 12,900 | 2 | 91 | 0 | 0 | 352 | 5,110 |
| January–October | 4,360 ^r | 142,000 ^r | 56 | 1,420 | 2 | 24 | 4,400 | — |
| January–December | 5,050 | 166,000 | 84 | 2,230 | 2 | 24 | 5,110 | — |
| 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 |
| May | 401 | 14,100 | 1 | 5 | 0 | 0 | 402 | 2,020 |
| June | 391 | 11,400 | 3 | 49 | 0 | 0 | 393 | 2,410 |
| July | 334 | 12,100 | (⁶) | 12 | 0 | 0 | 334 | 2,750 |
| August | 276 | 10,300 | (⁶) | 11 | (⁶) | 4 | 277 | 3,020 |
| September | 438 | 10,600 | 3 | 76 | 0 | 0 | 441 | 3,470 |
| October | 370 | 11,500 | (⁶) | 10 | 0 | 0 | 370 | 3,840 |
| January–October | 3,770 | 122,000 | 95 | 740 | 1 | 7 | 3,840 | — |

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 | | | | |
| October | 135 | 17,700 | 0 | 0 |
| November | 140 | 18,000 | 0 | 0 |
| December | 137 | 18,500 | 0 | 0 |
| January–October | 1,330 | 187,000 ^r | 3 | 94 |
| 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 |
| May | 158 | 20,900 | 0 | 0 |
| June | 140 | 17,500 | (²) | 32 |
| July | 149 | 24,700 | 0 | 0 |
| August | 138 | 19,800 | 0 | 0 |
| September | 116 | 17,100 | 0 | 0 |
| October | 160 | 22,800 | 0 | 0 |
| January–October | 1,520 | 206,000 | (²) | 32 |

¹Free alongside ship (f.a.s.) value.

²Less than ½ unit.