

# Mineral Industry Surveys

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## COBALT IN SEPTEMBER 2018

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in January through September 2018 was 5% more than that imported during the same period in 2017 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in January through September 2018 was 59% more than that exported during the same period in 2017 (table 4).

## Prices

In September, the monthly average U.S. spot cobalt price decreased slightly from that in August 2018 and was 11% higher than that in September 2017. The monthly average LME cash mean price decreased slightly from that in August 2018 and was 4% higher than that in September 2017. The following listed prices are for cobalt metal in September, in dollars per pound.

Type	Price range	Average price
U.S. spot <sup>1</sup>	32.00–33.00	32.50
LME cash mean <sup>2</sup>	27.10–29.14	28.25

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

<sup>2</sup>London Metal Exchange, mean of the cash buyer and cash seller price, minimum 99.3% cobalt briquettes, cathode, ingot, or rounds (converted from dollars per metric ton and rounded to the nearest cent).

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TABLE 1  
REPORTED CONSUMPTION AND STOCKS OF COBALT MATERIALS<sup>1</sup>

(Metric tons, contained cobalt)

Period	Consumption, U.S. industry <sup>2</sup>	Stocks, end of period				
		U.S. industry <sup>2</sup>	U.S. Government <sup>3, 4</sup>	LME <sup>3, 5</sup>		Total
				U.S. warehouse	Non-U.S. warehouse	
2017:						
September	731	978	302	183	622	805
October	724	985	302	167	583	750
November	701	977	302	163	562	725
December	705	996	302	160	420	580
January–September	6,580	978	302	183	622	805
January–December <sup>6</sup>	8,710	996	302	160	420	580
2018:						
January	717	1,000	302	159	385	544
February	697	1,010	302	159	360	519
March	746	962	302	141	397	538
April	742	934	302	141	446	587
May	NA	NA	302	139	471	610
June	NA	NA	302	135	501	636
July	NA	NA	302	131	520	651
August	NA	NA	302	131	559	690
September	NA	NA	302	131	592	723
January–September	NA	NA	302	131	592	723

<sup>2</sup>Preliminary. NA Not available.

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

<sup>2</sup>Data for cobalt metal, metal powder, oxide and other chemical compounds, and scrap reported by U.S. cobalt processors and consumers. Includes estimates.

<sup>3</sup>Cobalt metal.

<sup>4</sup>Data from Defense Logistics Agency Strategic Materials.

<sup>5</sup>London Metal Exchange.

<sup>6</sup>U.S. industry data based on monthly reports.

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>5</sup> (metric tons)	Cobalt content, year to date <sup>5,6</sup> (metric tons)
	Gross weight (metric tons)	Value <sup>4</sup> (thousands)	Gross weight (metric tons)	Value <sup>4</sup> (thousands)	Gross weight (metric tons)	Value <sup>4</sup> (thousands)		
2017:								
September	788	\$45,300	139	\$5,970	234	\$2,500	963	8,840
October	875	51,900	104	4,670	187	2,730	1,000	9,850
November	1,090	63,800	250	10,900	187	3,450	1,340	11,200
December	507	28,300	201	9,330	218	3,430	723	11,900
January–September	7,050 <sup>r</sup>	321,000	1,560	51,700	2,100	24,600	8,840 <sup>r</sup>	XX
January–December	9,530	465,000	2,120	76,600	2,690	34,200	11,900	XX
2018:								
January	1,150	70,900	135	6,220	345	4,790	1,350	1,350
February	902	62,500	176	9,700	271	2,970	1,110	2,470
March	782	47,500	304	17,000	933	6,980	1,280	3,750
April	922	71,600	149	8,700	454	4,900	1,180	4,930
May	731	51,300	172	9,950	225	3,070	933	5,860
June	767	54,700	122	7,620	832	5,400	1,100	6,960
July	577	43,000	133	7,820	204	1,170	731	7,690
August	674	48,400	56	2,880	35	484	724	8,410
September:								
Australia	72	4,970	--	--	--	--	72	578
Belgium	--	--	54	3,300	--	--	39	368
Brazil	--	--	--	--	1	20	(7)	150
Canada	101	7,330	--	--	--	--	101	1,220
China	9	715	27	1,230	51	756	48	1,150
Finland	40	2,970	31	1,450	438	2,370	184	1,380
France	--	--	--	--	--	--	--	13
Germany	(7)	24	--	--	--	--	(7)	33
Hong Kong	--	--	--	--	--	--	--	46
India	--	--	--	--	20	298	5	7
Italy	--	--	--	--	--	--	--	10
Japan	150	8,230	--	--	--	--	150	1,480
Madagascar	105	7,980	--	--	--	--	105	567
Morocco	20	1,450	--	--	--	--	20	180
Norway	--	--	--	--	--	--	--	1,190
Russia	92	4,220	--	--	--	--	92	273
South Africa	--	--	--	--	--	--	--	225
Taiwan	--	--	--	--	--	--	--	22
United Kingdom	14	617	10	703	40	349	32	361
Other	(7)	5	--	--	2	52	1	12
Total	604	38,500	122	6,680	551	3,850	851	9,260
January–September	7,110	488,000	1,370	76,600	3,850	33,600	9,260	XX

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

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

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

<sup>3</sup>Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

<sup>4</sup>Customs value.

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

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

<sup>7</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)
2017:						
September	24	\$1,140	119	\$1,750	20	\$2,680
October	45	2,110	181	2,790	13	2,780
November	27	1,260	103	1,100	20	3,040
December	50	2,270	124	2,060	15	2,750
January–September	296	12,800	1,140 <sup>r</sup>	17,300 <sup>r</sup>	160 <sup>r</sup>	21,900 <sup>r</sup>
January–December	418	18,400	1,550	23,300	208	30,500
2018:						
January	42	2,040	198	3,090	19	3,330
February	63	3,230	161	2,780	22	2,870
March	38	2,070	258	3,650	41	4,760
April	45	2,550	164	3,760	21	2,600
May	85	4,150	207	3,190	51	4,850
June	38	2,480	212	3,860	24	3,350
July	26	1,770	226	4,080	24	4,050
August	25	1,720	179	2,880	23	2,830
September:						
Canada	--	--	3	68	3	1,090
China	--	--	7	3	(3)	81
France	--	--	15	627	10	743
Germany	2	180	1	9	3	236
Ireland	--	--	51	467	(3)	90
Japan	--	--	29	349	(3)	45
Netherlands	--	--	4	146	(3)	3
Taiwan	--	--	3	116	(3)	3
Tunisia	--	--	2	25	(3)	8
United Kingdom	21	1,310	68	1,030	15	1,170
Other	1	87	2	48	(3)	147
Total	24	1,580	186	2,890	32	3,620
January–September	386	21,600	1,790	30,200	258	32,300

<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>5</sup> (metric tons)	Cobalt content, year to date <sup>5,6</sup> (metric tons)
	Gross weight (metric tons)	Value <sup>4</sup> (thousands)	Gross weight (metric tons)	Value <sup>4</sup> (thousands)	Gross weight (metric tons)	Value <sup>4</sup> (thousands)		
2017:								
September	368	\$10,100	13	\$576	19	\$20	382	3,870
October	485	13,600	7	235	19	281	494	4,360
November	841	11,200	4	169	20	295	849	5,210
December	507	11,600	11	507	19	330	520	5,730
January–September	3,700	80,700	177	2,170	146	1,610	3,870	XX
January–December	5,540	117,000	200	3,090	205	2,510	5,730	XX
2018:								
January	308	8,990	1	58	19	280	314	314
February	973	11,800	19	353	16	276	991	1,300
March	1,310	17,700	4	190	--	--	1,310	2,610
April	530	16,200	5	290	38	555	543	3,160
May	990	22,000	7	412	21	833	1,000	4,160
June	336	12,000	5	180	1	12	340	4,500
July	605	19,100	12	686	12	35	616	5,110
August	626	19,700	2	83	59	851	642	5,760
September	359	14,200	6	346	42	666	374	6,130
January–September	6,030	142,000	62	2,600	207	3,510	6,130	XX

XX Not applicable. -- Zero.

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

<sup>2</sup>May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

<sup>3</sup>Cobalt acetates and cobalt chlorides.

<sup>4</sup>Free alongside ship (f.a.s.) value.

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

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

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)
2017:				
September	98	\$9,000	1	\$5
October	107	8,340	--	--
November	85	10,200	--	--
December	94	10,400	3	7
January–September	899 <sup>†</sup>	73,300	250	1,030
January–December	1,190	102,000	253	1,040
2018:				
January	98	9,690	--	--
February	99	10,100	(3)	4
March	88	10,700	--	--
April	70	6,970	(3)	3
May	69	8,500	--	--
June	109	11,800	2	83
July	92	9,850	35	302
August	85	9,340	--	--
September	91	10,600	18	160
January–September	801	87,600	55	551

<sup>†</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.