

# Mineral Industry Surveys

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## COBALT IN JUNE 2017

U.S. cobalt consumption and stocks in June 2017 will be published in a subsequent issue. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in January through June 2017 was 12% more than that imported during the same period in 2016 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in January through June 2017 was 27% more than that exported during the same period in 2016 (table 4).

## Prices

In June, the monthly average U.S. spot cobalt price was 7% higher than that in May 2017 and 156% higher than that in January 2016. The monthly average London Metal Exchange Ltd. (LME) cash mean price was 5% higher than that in May

2017 and 148% higher than that in January 2016. The following listed prices are for cobalt metal in June, in dollars per pound.

Type	Price range	Average price
U.S. spot <sup>1</sup>	26.25–30.00	27.60
LME cash mean <sup>2</sup>	25.40–27.10	26.07

<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	Stocks, end of period					
	Consumption, U.S. industry <sup>p, 2</sup>	U.S. industry <sup>p, 2</sup>	U.S. Government <sup>3, 4</sup>	LME <sup>3, 5</sup>		Total
				U.S. warehouse	Non-U.S. warehouse	
2016:						
June	712	1,030	301	190	455	645
July	708	1,020	301	190	454	644
August	693	1,040	301	190	440	630
September	698	1,030	301	190	435	625
October	734	1,040	301	195	425	620
November	711	1,040	301	195	429	624
December	724	1,020	301	195	496	691
January–June	4,300	1,030	301	190	455	645
January–December <sup>6</sup>	8,570	1,020	301	195	496	691
2017:						
January	NA	NA	301	195	458	653
February	NA	NA	301	185	533	718
March	NA	NA	301	193	533	726
April	NA	NA	301	188	601	789
May	NA	NA	301	188	557	745
June	NA	NA	301	193	548	741
January–June	NA	NA	301	193	548	741

<sup>p</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<sup>1</sup>

Period and country 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)		
2016:								
June	939	\$22,200	147	\$2,750	221	\$2,270	1,120	5,700
July	767	19,000	106	2,310	241	1,990	918	6,620
August	1,240	30,200	243	4,690	225	2,230	1,480	8,100
September	724	18,100	223	4,650	85	786	910	9,010
October	787	20,600	156	3,300	177	1,630	958	9,970
November	1,120	28,800	99	2,210	103	756	1,220	11,200
December	1,450	40,000	209	4,690	149	1,340	1,650	12,800
January–June	4,670 <sup>r</sup>	110,000 <sup>r</sup>	926	17,500	1,140	11,800	5,700 <sup>r</sup>	XX
January–December	10,800	267,000	1,960	39,300	2,120	20,500	12,800	XX
2017:								
January	720	21,700	135	3,300	183	2,130	880	880
February	1,130	37,600	180	4,260	237	2,720	1,350	2,230
March	793	25,500	207	5,570	234	2,630	1,020	3,250
April	980	45,500	222	7,050	211	2,040	1,200	4,440
May	535	25,600	227	7,890	215	2,370	764	5,210
June:								
Australia	--	--	--	--	--	--	--	186
Belgium	--	--	23	836	--	--	16	194
Bolivia	--	--	--	--	--	--	--	199
Brazil	--	--	--	--	20	127	6	59
Canada	152	6,880	--	--	--	--	152	854
China	121	6,610	39	1,280	55	917	167	776
Finland	11	588	15	548	231	2,600	97	704
France	(7)	3	--	--	--	--	(7)	22
Germany	1	73	--	--	--	--	1	24
Hong Kong	--	--	--	--	--	--	--	42
India	--	--	--	--	--	--	--	5
Japan	166	7,950	(7)	30	--	--	166	568
Madagascar	84	4,530	--	--	--	--	84	567
Morocco	--	--	--	--	--	--	--	98
Norway	326	17,200	--	--	--	--	326	1,170
Russia	41	2,100	--	--	(7)	2	41	309
South Africa	28	1,530	--	--	--	--	28	113
Switzerland	--	--	--	--	--	--	--	36
Taiwan	--	--	--	--	--	--	--	(7)
United Kingdom	1	86	29	1,240	9	96	25	257
Zambia	46	2,290	--	--	--	--	46	171
Other	--	--	(7)	4	--	--	1	6
Total	977	49,800	106	3,930	316	3,750	1,160	6,360
January–June	5,140	206,000	1,080	32,000	1,400	15,600	6,360	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<sup>1</sup>

Period and country 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)
2016:						
June	78	\$2,090	77	\$1,090	14	\$2,070
July	70	2,360	74	1,230	6	1,360
August	60	1,770	115	1,600	15	1,700
September	24	1,040	114	1,410	21	2,220
October	51	2,010	155	1,550	27	2,760
November	67	2,450	94	1,230	25	2,390
December	43	1,540	108	1,540	8	1,950
January–June	504	15,800	366	5,250	64	9,530 <sup>r</sup>
January–December	820	27,000	1,030	13,800	167	21,900
2017:						
January	68	3,080	100	1,620	11	1,920
February	33	1,550	111	1,470	12	2,050
March	44	1,600	119	1,780	29	3,240
April	45	1,960	134	1,830	26	3,080
May	26	1,150	158	2,420	19	2,210
June:						
Austria	--	--	--	--	(3)	7
Belgium	9	418	--	--	(3)	2
Canada	--	--	9	65	3	901
China	--	--	2	10	1	311
France	(3)	28	10	212	4	711
Germany	--	--	(3)	10	(3)	184
India	--	--	--	--	(3)	3
Ireland	--	--	32	502	--	--
Japan	(3)	13	30	455	1	182
Korea, Republic of	--	--	4	69	--	--
Liechtenstein	--	--	--	--	(3)	13
Mexico	--	--	(3)	4	--	--
Norway	3	125	--	--	--	--
Singapore	--	--	8	111	--	--
Switzerland	--	--	(3)	4	(3)	13
Taiwan	--	--	(3)	5	(3)	6
Tunisia	--	--	10	80	--	--
United Kingdom	18	716	33	450	3	238
Vietnam	--	--	--	--	(3)	3
Total	31	1,300	139	1,980	13	2,570
January–June	247	10,700	761	11,100	108	15,100

<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>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)		
2016:								
June	303	\$6,100	10	\$214	68	\$356	327	2,080
July	311	5,570	--	--	--	--	311	2,390
August	458	8,030	21	256	39	202	483	2,870
September	275	5,480	6	130	8	66	281	3,150
October	273	5,240	4	143	(7)	6	275	3,430
November	360	6,160	1	52	24	102	367	3,790
December	361	7,430	2	100	9	86	365	4,160
January–June	1,950	40,200	99	703	234	1,140	2,080	XX
January–December	3,990	78,100	134	1,380	314	1,600	4,160	XX
2017:								
January	356	6,380	--	--	31	213	364	364
February	376	6,590	--	--	18	212	381	745
March	471	10,900	97	434	--	--	541	1,290
April	312	9,180	10	269	(7)	7	319	1,600
May	589	12,000	40	305	36	532	626	2,230
June	398	7,520	5	139	19	281	405	2,640
January–June	2,500	52,500	152	1,150	104	1,240	2,640	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.

<sup>7</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)
2016:				
June	137	\$9,970	--	--
July	106	7,820	(3)	\$4
August	80	6,510	2	59
September	93	7,790	(3)	3
October	120	8,000	--	--
November	90	7,910	--	--
December	103	8,490	--	--
January-June	796 <sup>r</sup>	50,000 <sup>r</sup>	--	--
January-December	1,390	96,500	2	65
2017:				
January	153	8,520	--	--
February	84	6,430	2	26
March	104	8,090	4	20
April	93	8,180	105	415
May	70	7,590	132	533
June	104	8,610	--	--
January-June	608	47,400	242	993

<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.