

# Mineral Industry Surveys

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## COBALT IN JUNE 2016

U.S. cobalt consumption during January through June 2016 was slightly more than consumption during the same period in 2015. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in January through June 2016 was 8% less than revised imports during the same period in 2015. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in January through June 2016 was slightly more than revised exports during the same period in 2015.

## Prices

In June, the monthly average U.S. spot cobalt price decreased from that of May. The monthly average LME cash mean price increased for the second consecutive month. 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>	10.60–11.65	11.09
LME cash mean <sup>2</sup>	10.66–10.89	10.79

<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>p, 2</sup>	U.S. industry <sup>p, 2</sup>	Stocks, end of period			Total
			U.S. Government <sup>3, 4</sup>	LME <sup>3, 5</sup>		
				U.S. warehouse	Non-U.S. warehouse	
2015:						
June	707 <sup>r</sup>	1,070 <sup>r</sup>	301	8	345	353
July	714 <sup>r</sup>	1,070 <sup>r</sup>	301	23	423	446
August	696 <sup>r</sup>	1,070 <sup>r</sup>	301	110	418	528
September	684 <sup>r</sup>	1,060 <sup>r</sup>	301	110	448	558
October	711 <sup>r</sup>	1,060 <sup>r</sup>	301	110	448	558
November	712 <sup>r</sup>	1,030 <sup>r</sup>	301	125	441	566
December	701 <sup>r</sup>	1,050 <sup>r</sup>	301	165	465	630
January–June	4,240 <sup>r</sup>	1,070 <sup>r</sup>	301	8	345	353
January–December <sup>6</sup>	8,450 <sup>r</sup>	1,050 <sup>r</sup>	301	165	465	630
Year <sup>7</sup>	8,780	1,080	301	165	465	630
2016:						
January	720 <sup>r</sup>	1,060 <sup>r</sup>	301	169	450	619
February	713 <sup>r</sup>	1,050 <sup>r</sup>	301	169	445	614
March	705 <sup>r</sup>	1,070 <sup>r</sup>	301	193	458	651
April	718 <sup>r</sup>	1,050 <sup>r</sup>	301	197	457	654
May	734 <sup>r</sup>	1,050 <sup>r</sup>	301	186	451	637
June	712	1,030	301	190	455	645
January–June	4,300	1,030	301	190	455	645

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<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.

<sup>7</sup>U.S. industry data include annual 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)		
2015:								
June	785	\$23,300	210	\$4,440	212	\$2,290	1,000	6,190 <sup>r</sup>
July	845	24,900 <sup>r</sup>	110	2,590	107	1,110	958	7,150 <sup>r</sup>
August	843	25,000	144	3,440	182	1,750	1,000	8,160 <sup>r</sup>
September	661	19,900	154	3,620	111 <sup>r</sup>	982 <sup>r</sup>	804 <sup>r</sup>	8,960 <sup>r</sup>
October	623	17,900 <sup>r</sup>	149	3,340	284 <sup>r</sup>	1,930 <sup>r</sup>	811 <sup>r</sup>	9,770 <sup>r</sup>
November	650	17,500	110	2,500	259 <sup>r</sup>	1,400 <sup>r</sup>	799 <sup>r</sup>	10,600 <sup>r</sup>
December	714	17,900 <sup>r</sup>	112	2,410	142 <sup>r</sup>	1,550 <sup>r</sup>	841 <sup>r</sup>	11,400
January–June	4,960 <sup>r</sup>	144,000	972	22,300	1,550	17,600	6,190 <sup>r</sup>	XX
January–December	9,290 <sup>r</sup>	267,000	1,750	40,200	2,630	26,300	11,400	XX
2016:								
January	612	14,200	100	1,980	104	1,340	720	720
February	1,050	23,100	171	3,010	106	1,160	1,210	1,930
March	720	17,500	173	3,260	170	1,860	903	2,830
April	701	18,400	190	3,680	194	1,790	899	3,730
May	643	15,500	145	2,790	347	3,390	857	4,590
June:								
Australia	--	--	--	--	--	--	--	290
Austria	(7)	27	--	--	--	--	(7)	1
Belgium	--	--	24	531	--	--	17	211
Brazil	--	--	--	--	5	50	1	14
Canada	100	2,910	--	--	--	--	100	653
China	23	565	18	360	103	1,320	75	372
Finland	24	747	62	1,050	59	506	87	501
France	1	54	--	--	--	--	1	20
Germany	3	196	--	--	--	--	3	42
India	(7)	10	--	--	20	96	6	6
Ireland	--	--	--	--	--	--	--	(7)
Italy	--	--	--	--	--	--	--	(7)
Japan	150	3,360	--	--	--	--	150	767
Korea, Republic of	(7)	3	--	--	(7)	2	(7)	1
Kuwait	--	--	--	--	--	--	--	5
Macao	--	--	--	--	--	--	--	20
Madagascar	147	3,430	--	--	--	--	147	585
Morocco	40	919	--	--	--	--	40	162
Netherlands	--	--	--	--	--	--	--	5
New Caledonia	--	--	--	--	--	--	--	10
Norway	306	6,990	--	--	--	--	306	950
Peru	--	--	--	--	6	135	3	3
Russia	38	867	--	--	--	--	38	381
Singapore	--	--	--	--	--	--	--	29
Slovakia	--	--	--	--	22	98	6	6
South Africa	12	158	--	--	--	--	12	116
Taiwan	--	--	--	--	--	--	--	2
United Kingdom	15	658	43	805	7	59	48	255
Zambia	60	1,250	--	--	--	--	60	280
Total	920	22,100	147	2,750	221	2,270	1,100	5,690
January–June	4,650	111,000	926	17,500	1,140	11,800	5,690	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)
2015:						
June	83	\$2,960	58 <sup>r</sup>	\$827 <sup>r</sup>	11 <sup>r</sup>	\$2,050 <sup>r</sup>
July	37	1,360	80 <sup>r</sup>	1,190 <sup>r</sup>	22 <sup>r</sup>	2,180 <sup>r</sup>
August	102 <sup>r</sup>	3,490 <sup>r</sup>	82	1,410	13	1,380
September	108	3,920	66	873	24	1,850
October	95	2,960	53	903	11 <sup>r</sup>	1,390 <sup>r</sup>
November	95 <sup>r</sup>	2,980 <sup>r</sup>	58 <sup>r</sup>	1,020 <sup>r</sup>	20 <sup>r</sup>	2,040 <sup>r</sup>
December	236	5,990	59 <sup>r</sup>	940 <sup>r</sup>	24	1,450
January-June	576	19,000	414 <sup>r</sup>	5,760 <sup>r</sup>	98 <sup>r</sup>	11,500
January-December	1,250	39,700 <sup>r</sup>	812	12,100	211	21,800
2016:						
January	82	2,600	43	698	10	1,590
February	109	3,460	58	793	13	1,550
March	91	2,750	82	1,150	11	1,440
April	67	2,080	43	619	9	1,540
May	75	2,860	64	896	7	1,310
June:						
Belgium	2	56	--	--	(3)	10
Canada	57	1,190	2	10	3	808
China	--	--	--	--	3	466
France	--	--	--	--	(3)	82
Germany	--	--	--	--	1	272
Ireland	--	--	25	352	(3)	61
Japan	--	--	5	34	(3)	58
Korea, Republic of	--	--	1	8	--	--
Mexico	--	--	(3)	5	(3)	3
Netherlands	--	--	(3)	9	--	--
Singapore	--	--	2	25	--	--
Switzerland	--	--	--	--	(3)	20
Taiwan	--	--	5	180	--	--
United Kingdom	20	842	37	472	8	370
Total	78	2,090	77	1,090	15	2,150
January-June	504	15,800	366	5,250	64	9,580

<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)		
2015:								
June	382	\$9,310	4	\$103	--	--	385	2,050 <sup>r</sup>
July	295	6,810	32	584	6	\$30	319	2,370 <sup>r</sup>
August	295	5,870	8	334	--	--	300	2,670 <sup>r</sup>
September	262 <sup>r</sup>	5,480 <sup>r</sup>	1	28	29	182	269 <sup>r</sup>	2,940
October	224 <sup>r</sup>	5,190 <sup>r</sup>	15	354	26	189	241 <sup>r</sup>	3,180
November	315 <sup>r</sup>	5,830 <sup>r</sup>	1	57	4	16	317 <sup>r</sup>	3,500 <sup>r</sup>
December	322	7,020	--	--	19	150	327	3,830 <sup>r</sup>
January–June	1,930 <sup>r</sup>	50,800 <sup>r</sup>	135	1,330	97	832	2,050 <sup>r</sup>	XX
January–December	3,640 <sup>r</sup>	87,000 <sup>r</sup>	192	2,690 <sup>r</sup>	180	1,400	3,830 <sup>r</sup>	XX
2016:								
January	305	5,930	7	118	10	43	312	312
February	336	6,600	4	45	33	107	347	659
March	289	6,850	72	236	19	132	345	1,000
April	399	7,530	2	51	29	130	408	1,410
May	317	7,170	4	39	75	371	337	1,750
June	303	6,100	10	214	68	356	327	2,080
January–June	1,950	40,200	99	703	234	1,140	2,080	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>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)
2015:				
June	144	\$8,660	--	--
July	170	9,540	3	\$18
August	176	9,840 <sup>r</sup>	--	--
September	166	9,080 <sup>r</sup>	--	--
October	144 <sup>r</sup>	8,880 <sup>r</sup>	--	--
November	122 <sup>r</sup>	7,460 <sup>r</sup>	1	11
December	143	7,730 <sup>r</sup>	--	--
January-June	964	55,900	1	6
January-December	1,890	108,000	6	35
2016:				
January	117	6,880	--	--
February	128	7,360	--	--
March	163	9,110	--	--
April	140	8,190	--	--
May	109	8,370	--	--
June	137	9,970	--	--
January-June	794	49,900	--	--

<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.

Source: U.S. Census Bureau.