

# Mineral Industry Surveys

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### **COBALT IN APRIL 2017**

U.S. cobalt consumption and stocks in April 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 April 2017 was 19% 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 April 2017 was 14% more than that exported during the same period in 2016 (table 4).

#### **Prices**

In April, the monthly average U.S. spot cobalt price increased for the tenth consecutive month and was 145% higher than that in January 2016. The monthly average London Metal Exchange Ltd. (LME) cash mean price increased for the 12th consecutive month and was 138% higher than that in January 2016. The

following listed prices are for cobalt metal in April, in dollars per pound.

Type	Price range	Average price
U.S. spot <sup>1</sup>	25.90-27.00	26.48
LME cash mean <sup>2</sup>	24.83-25.51	25.09

<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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## $\label{eq:table 1} \textbf{TABLE 1}$ REPORTED CONSUMPTION AND STOCKS OF COBALT MATERIALS $^1$

(Metric tons, contained cobalt)

		Stocks, end of period						
		-		•	LME <sup>3, 5</sup>			
	Consumption,	U.S.	U.S.	U.S.	Non-U.S.			
Period	U.S. industry <sup>p, 2</sup>	industry <sup>p, 2</sup>	Government <sup>3, 4</sup>	warehouse	warehouse	Total		
2016:		-						
April	718	1,050	301	197	457	654		
May	734	1,050	301	186	451	637		
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-April	2,860	1,050	301	197	457	654		
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		
January–April	NA	NA	301	188	601	789		

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available.

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

<sup>&</sup>lt;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>&</sup>lt;sup>3</sup>Cobalt metal.

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

<sup>&</sup>lt;sup>5</sup>London Metal Exchange.

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

 $\label{eq:table 2} \textbf{U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY}^1$ 

	Met	als <sup>2</sup>	Oxides and	hydroxides	Salts and co	ompounds <sup>3</sup>	Total cobalt	Cobalt content,
Period and country of origin	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)	content for the period <sup>5</sup> (metric tons)	year to date <sup>5, 6</sup> (metric tons)
2016:	=							
April	701	\$18,300	190	\$3,680	194	\$1,790	899	3,730
May	643	15,500	145	2,790	347	3,390	857	4,590
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-April	3,080	72,700 <sup>r</sup>	634	11,900	574 <sup>r</sup>	6,140 <sup>r</sup>	3,730	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:								
Australia	- 							160
Belgium	-		72	2,570	14	146	56	144
Bolivia								199
Brazil	-				27	230	8	21
Canada	152	6,670	(7)	3			152	570
China	- 69	2,940	32	1,240	89	842	115	427
Finland	56	2,550	60	1,630	74	712	119	502
France		100		,			2	22
Germany	3	218					2	18
Hong Kong								42
India	- 							5
Japan	107	3,720	20	596			122	395
Madagascar	84	3,310					84	399
Morocco	10	523					10	88
Norway	345	17,600					345	813
Russia	112	5,900			(7)	4	112	230
South Africa	_ 4	265					4	60
Switzerland	- ·							36
United Kingdom	(7)	21	38	1,010	7	100	29	183
Zambia	35	1,590		1,010	,		35	125
Other	_ 2	64					2	5
Total	980	45,500	222	7,050	211	2,040	1,200	4,440
January–April	3,630	130,000	745	20,200	864	9,510	4,440	4,440 XX

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

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

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

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

<sup>&</sup>lt;sup>4</sup>Customs value.

<sup>&</sup>lt;sup>5</sup>Estimated from gross weights.

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

<sup>&</sup>lt;sup>7</sup>Less than ½ unit.

TABLE 3 U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY  $^{\!1}$ 

	77 1.	1 1, 11	C 1 1 1	1	Wrought cobalt and cobalt articles		
	Unwrought o	cobalt alloys	Cobalt wast	e and scrap		articles	
	Gross	2	Gross	2	Gross	2	
Period and country	weight	Value <sup>2</sup>	weight	Value <sup>2</sup>	weight	Value <sup>2</sup>	
of origin	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	
2016:	_						
April	67	\$2,080	43	\$619	9	\$1,570	
May	75	2,860	64	896	7	1,310	
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-April	350	10,900	225	3,260	42	6,150	
January-December	820	27,000	1,030	13,800	167	21,900	
2017:	_						
January	<del>-</del> 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:							
Australia					5	102	
Austria					1	44	
Belgium	14	493			(3)	23	
Canada	(3)	3	10	93	2	762	
China			3	50	(3)	231	
Finland	(3)	31					
France			(3)	3	4	1,070	
Germany	1	84			3	312	
India					(3)	6	
Ireland			38	503			
Japan	(3)	4	17	179	(3)	62	
Korea, Republic of			2	23			
Mexico			(3)	3	(3)	6	
Singapore			3	39			
Switzerland					(3)	5	
Taiwan			3	64	(3)	2	
Tunisia			15	131			
United Kingdom	30	1,350	43	739	11	452	
Total	45	1,960	134	1,830	26	3,080	
January–April	191	8,200	464	6,690	77	10,300	
Zero.	191	0,200	704	0,090	7.7	10,500	

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

<sup>&</sup>lt;sup>2</sup>Customs value.

<sup>&</sup>lt;sup>3</sup>Less than ½ unit.

 $\label{eq:table 4} \textbf{U.S. EXPORTS OF COBALT MATERIALS}^1$ 

	Unwrought co	-	Ovides and	hviduovidas	G 1: 1	1 3	Total cobalt	Cobalt
	matte, waste	matte, waste and scrap <sup>2</sup> Gross		Oxides and hydroxides Gross		Salts and compounds <sup>3</sup> Gross		content, year to
	weight	Value <sup>4</sup>	weight	Value <sup>4</sup>	weight	Value <sup>4</sup>	the period <sup>5</sup>	date <sup>5, 6</sup>
Period	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(metric tons)
2016:								
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
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-April	1,330	26,900	85	450	91	413	1,410	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
January-April	1,520	33,000	107	704	49	432	1,600	XX

XX Not applicable. -- Zero.

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

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

<sup>&</sup>lt;sup>3</sup>Cobalt acetates and cobalt chlorides.

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

<sup>&</sup>lt;sup>5</sup>Estimated from gross weights.

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

<sup>&</sup>lt;sup>7</sup>Less than ½ unit.

 $\label{eq:table 5} \mbox{U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,} \\ \mbox{AND CONCENTRATES}^{1}$ 

	Wrought cobalt a		Cobalt ore and concentrates		
	Gross		Gross		
	weight	Value <sup>2</sup>	weight	Value <sup>2</sup>	
Period	(metric tons)	(thousands)	(metric tons)	(thousands)	
2016:					
April	140	\$8,190			
May	109	8,380			
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-April	549 <sup>r</sup>	31,600 <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	
January-April	434	31,200	110	460	

<sup>&</sup>lt;sup>r</sup>Revised. -- Zero.

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

<sup>&</sup>lt;sup>2</sup>Free alongside ship (f.a.s.) value.

<sup>&</sup>lt;sup>3</sup>Less than ½ unit.