

# Mineral Industry Surveys

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## For information, contact

Kim B. Shedd, Cobalt Commodity Specialist  
National Minerals Information Center  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4974, Fax: (703) 648-7757  
Email: ksheddd@usgs.gov

Annie Hwang (Data)  
Telephone: (703) 648-7952  
Fax: (703) 648-7975  
Email: ahwang@usgs.gov

**Internet:** <http://minerals.usgs.gov/minerals/>

## COBALT IN JANUARY 2017

U.S. cobalt consumption and stocks in January 2017 will be published in a subsequent issue. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in January 2017 was 47% less than that imported during December 2016, a month in which cobalt imports were unusually high (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in January 2017 was essentially unchanged from that exported during December 2016 (table 4).

## Prices

In January, the monthly average U.S. spot cobalt price increased for the seventh consecutive month and was 49% higher than that in January 2016. The monthly average LME cash mean price increased for the ninth consecutive month and was 50% higher than that in January 2016. The following listed prices are for cobalt metal in January, in dollars per pound.

Type	Price range	Average price
U.S. spot <sup>1</sup>	15.00–17.25	16.04
LME cash mean <sup>2</sup>	14.86–16.78	15.76

<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>	U.S. Government <sup>3, 4</sup>	Stocks, end of period		Total
				U.S. warehouse	LME <sup>3, 5</sup>	
					Non-U.S. warehouse	
2016:						
January	720	1,060	301	169	450	619
February	713	1,050	301	169	445	614
March	705	1,070	301	193	458	651
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–December <sup>6</sup>	8,570	1,020	301	195	496	691
2017, January	NA	NA	301	195	458	653

<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:								
January	612	\$14,100 <sup>r</sup>	100	\$1,980	103 <sup>r</sup>	\$1,330 <sup>r</sup>	719 <sup>r</sup>	719 <sup>r</sup>
February	1,050	22,900 <sup>r</sup>	171	3,010	106	1,160	1,210	1,930
March	720	17,300 <sup>r</sup>	173	3,260	170	1,860	903	2,830
April	701	18,300 <sup>r</sup>	190	3,680	194	1,790	899	3,730
May	643	15,500	145	2,790	347	3,390	857	4,580 <sup>r</sup>
June	939 <sup>r</sup>	22,200 <sup>r</sup>	147	2,750	221	2,270	1,120 <sup>r</sup>	5,700 <sup>r</sup>
July	767	19,000 <sup>r</sup>	106	2,310	241	1,990	918	6,620 <sup>r</sup>
August	1,240	30,200 <sup>r</sup>	243	4,690	225	2,230	1,480	8,100 <sup>r</sup>
September	724	18,100 <sup>r</sup>	223	4,650	85 <sup>r</sup>	786 <sup>r</sup>	910 <sup>r</sup>	9,010 <sup>r</sup>
October	787	20,600	156	3,300	177 <sup>r</sup>	1,630	958 <sup>r</sup>	9,970 <sup>r</sup>
November	1,120	28,800 <sup>r</sup>	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–December	10,800 <sup>r</sup>	267,000	1,960	39,300	2,120	20,500 <sup>r</sup>	12,800	XX
2017, January:								
Australia	160	4,670	--	--	--	--	160	160
Belgium	--	--	24	629	11	127	20	20
Brazil	--	--	--	--	9	101	3	3
Canada	113	3,380	--	--	1	3	113	113
China	99	2,910	42	957	70	763	151	151
Finland	12	312	13	291	61	911	48	48
France	8	292	--	--	--	--	8	8
Germany	6	416	--	--	--	--	6	6
India	--	--	--	--	20	115	5	5
Italy	--	--	(7)	7	--	--	(7)	(7)
Japan	83	2,250	(7)	5	--	--	83	83
Madagascar	63	1,860	--	--	--	--	63	63
Morocco	58	1,640	--	--	--	--	58	58
Norway	44	1,590	--	--	--	--	44	44
Russia	40	1,230	--	--	--	--	40	40
South Africa	11	450	--	--	--	--	11	11
United Kingdom	4	144	57	1,410	11	105	48	48
Zambia	20	582	--	--	--	--	20	20
Total	720	21,700	135	3,300	183	2,130	880	880

<sup>1</sup>Revised. XX Not applicable. -- Zero.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

<sup>4</sup>Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

<sup>5</sup>Customs value.

<sup>6</sup>Estimated from gross weights.

<sup>7</sup>May include revisions to previously published data.

<sup>8</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:						
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	1,570 <sup>r</sup>
May	75	2,860	64	896	7	1,310
June	78	2,090	77	1,090	14 <sup>r</sup>	2,070 <sup>r</sup>
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 <sup>r</sup>	8	1,950
January–December	820	27,000	1,030	13,800	167	21,900 <sup>r</sup>
2017, January:						
Australia	--	--	--	--	3	51
Austria	(3)	3	--	--	--	--
Belgium	23	660	7	261	(3)	17
Canada	--	--	3	53	3	760
China	--	--	5	83	1	195
France	--	--	17	291	(3)	558
Germany	1	84	--	--	1	114
Hungary	--	--	--	--	(3)	2
India	--	--	--	--	(3)	2
Ireland	--	--	19	303	--	--
Italy	2	58	--	--	--	--
Japan	--	--	7	106	1	132
Korea	--	--	8	47	--	--
Mexico	--	--	(3)	3	--	--
Norway	1	42	--	--	--	--
Switzerland	--	--	--	--	1	4
Tunisia	--	--	4	49	--	--
United Kingdom	41	2,240	31	422	2	80
Total	68	3,080	100	1,620	11	1,920

<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:								
January	305	\$5,930	7	\$118	10	\$43	312	312
February	336	6,590 <sup>r</sup>	4	45	33	107	346 <sup>r</sup>	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
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 <sup>r</sup>	7,430	2	100	9	86	365	4,160
January–December	3,990	78,100	134	1,380	314	1,600	4,160	XX
2017, January	356	6,380	--	--	31	213	364	364

<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.

<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:				
January	118 <sup>r</sup>	\$6,920 <sup>r</sup>	--	--
February	128	7,360	--	--
March	163	9,130 <sup>r</sup>	--	--
April	140	8,190	--	--
May	109	8,380 <sup>r</sup>	--	--
June	137	9,970	--	--
July	106	7,820 <sup>r</sup>	(3)	\$4
August	80	6,510 <sup>r</sup>	2	59
September	93	7,790 <sup>r</sup>	(3)	3
October	120	8,000	--	--
November	90	7,910	--	--
December	103	8,490	--	--
January–December	1,390	96,500 <sup>r</sup>	2	65
2017, January	153	8,520	--	--

<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.