

## Mineral Industry Surveys

## 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: kshedd@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 FEBRUARY 2017**

U.S. cobalt consumption and stocks in February 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 February 2017 was 16% 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 February 2017 was 13% more than that exported during the same period in 2016 (table 4).

## **Prices**

In February, the monthly average U.S. spot cobalt price increased for the eighth consecutive month and was 75% higher than that in January 2016. The monthly average LME cash mean price increased for the 10th consecutive month and was 85% higher than that in January 2016. The following listed prices are for cobalt metal in February, in dollars per pound.

Type Price range Average price U.S. spot 17.00–21.90 18.92 LME cash mean 17.01–22.68 19.50

<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:									
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–February	1,430 <sup>r</sup>	1,050 <sup>r</sup>	301	169	445	614			
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			
January–February	NA	NA	301	185	533	718			

<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.

 ${\bf TABLE~2} \\ {\bf U.S.~IMPORTS~FOR~CONSUMPTION~OF~COBALT,~BY~COUNTRY}^{1}$ 

	Metals <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		T-4-1 1 1/2	Cobalt
		als	·	nydroxides		ompounds	Total cobalt	content,
D : 1 1	Gross	4	Gross	4	Gross	4	content for	year to date <sup>5, 6</sup>
Period and country	weight	Value <sup>4</sup>	weight	Value <sup>4</sup>	weight	Value <sup>4</sup>	the period <sup>5</sup>	
of origin	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(metric tons)
2016:	-	<b>***</b>	4.54	42.010	105	04.450	1.210	4.000
February	1,050	\$22,900	171	\$3,010	106	\$1,160	1,210	1,930
March	720	17,300	173	3,260	170	1,860	903	2,830
April	_ 701	18,300	190	3,680	194	1,790	899	3,730
May	643	15,500	145	2,790	347	3,390	857	4,580
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–February	1,660	37,100 <sup>r</sup>	271	4,990	210 <sup>r</sup>	2,490 <sup>r</sup>	1,930	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:								
Australia								160
Belgium			36	1,030			26	46
Brazil					25	241	9	12
Canada	199	6,540					199	311
China	5	215	13	286	42	326	26	177
Finland	114	3,490	37	805	157	2,020	201	250
France	(7)	7					(7)	8
Germany	_ 2	152					2	8
Hong Kong	42	1,410					42	42
India								5
Italy								(7)
Japan	94	2,720					94	177
Madagascar	126	3,940					126	189
Morocco	10	347					10	68
Norway	424	15,300					424	468
Russia	- 78	2,060					78	118
South Africa	- · · · · · · · · · · · · · · · · · · ·	_,,,,,						11
Switzerland	- 36	1,240					36	36
United Kingdom	- 30	100	94	2,140	13	134	74	122
Zambia				2,110				20
Total	1,130	37,600	180	4,260	237	2,720	1,350	2,230
January–February	1,850	59,300	315	7,560	419	4,850	2,230	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.

 $<sup>^3\</sup>mbox{Includes}$  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.

 $\label{eq:table 3} \text{U.s. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY}^1$ 

	Unwrought o	cobalt alloys	Cobalt wast	e and scran	Wrought cobalt and cobalt articles		
	Gross	ocuit unoys	Gross	e una serap	Gross	articles	
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:	(metric tons)	(tilousalius)	(metric tons)	(tilousalius)	(metric tons)	(tilousanus)	
February	109	\$3,460	58	\$793	13	\$1,550	
March	- 91	2,750	82	1,150	11	1,440	
April	- 67	2,730	43	619	9	1,570	
May	_	2,860	64	896	7	1,310	
June	- 73 78	2,090	77	1,090	14	2,070	
July	- 78 70	2,360	74	1,090	6	1,360	
	- 70 60	1,770	115	1,600	15	,	
August	_	,		· ·		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–February	_ 192	6,060	100	1,490	23	3,140	
January-December	_ 820	27,000	1,030	13,800	167	21,900	
2017:	_						
January	68	3,080	100	1,620	11	1,920	
February:	=						
Australia	_				2	47	
Austria	<del></del>				(3)	3	
Belgium	_ 1	29			(3)	12	
Canada	_		11	157	4	627	
China	_		4	100	(3)	186	
France			3	26	3	1,010	
Germany	(3)	31			1	82	
Ireland			36	374			
Japan			(3)	2	(3)	4	
Mexico			(3)	5			
Norway	1	42					
Singapore			3	50			
Taiwan			3	64			
Tunisia			6	78			
United Kingdom	31	1,450	44	611	1	76	
Total	33	1,550	111	1,470	12	2,050	
January–February	101	4,630	211	3,080	22	3,960	

<sup>--</sup> Zero.

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

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

		Unwrought cobalt, powders, matte, waste and scrap <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Cobalt content,
Period	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:								
February	336	\$6,590	4	\$45	33	\$107	346	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	7,430	2	100	9	86	365	4,160
January-February	641	12,500	11	163	43	150	659	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
January-February	733	13,000			49	425	745	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:					
February	128	\$7,360			
March	163	9,130			
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-February	246 <sup>r</sup>	14,300 <sup>r</sup>			
January-December	1,390	96,500	2	65	
2017:					
January	153	8,520			
February	84	6,430	2	26	
January-February	237	14,900	2	26	

<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.