

# Mineral Industry Surveys

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## **COBALT IN NOVEMBER 2018**

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in January through November 2018 was slightly less than that imported during the same period in 2017 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in January through November 2018 was 29% more than that exported during the same period in 2017 (table 4).

### **Prices**

In November, the monthly average U.S. spot cobalt price decreased slightly from that in October 2018 and was 21% higher than that in November 2017. The monthly average LME cash mean price decreased 10% from that in October 2018 and was 15% lower than that in November 2017. The following listed prices are for cobalt metal in November, in dollars per pound.

 $\begin{array}{ccc} \text{Type} & \text{Price range} & \text{Average price} \\ \text{U.S. spot}^1 & 34.00\text{--}37.00 & 36.10 \\ \text{LME cash mean}^2 & \text{Not available} & 24.05 \end{array}$ 

<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			
2017:									
November	701	977	302	163	562	725			
December	705	996	302	160	420	580			
January-November	8,010	977	302	163	562	725			
January–December <sup>6</sup>	8,710	996	302	160	420	580			
2018:									
January	717	1,000	302	159	385	544			
February	697	1,010	302	159	360	519			
March	746	962	302	141	397	538			
April	742	934	302	141	446	587			
May	NA	NA	302	139	471	610			
June	NA	NA	302	135	501	636			
July	NA	NA	302	131	520	651			
August	NA	NA	302	131	559	690			
September	NA	NA	302	131	592	723			
October	NA	NA	302	130	611	741			
November	NA	NA	302	130	585	715			
January-November	NA	NA	302	130	585	715			

<sup>&</sup>lt;sup>p</sup>Preliminary. 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.

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

	Metals <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt	Cobalt content,
Period and country or	Gross weight	Value <sup>4</sup>	Gross weight	Value <sup>4</sup>	Gross weight	Value <sup>4</sup>	content for the period <sup>5</sup>	year to
locality of origin	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(metric tons)
2017:	()	()	()	(======================================	()	()	()	()
November	1,090	\$63,800	250	\$10,900	187	\$3,450	1,340	11,200
December	507	28,300	201	9,330	218	3,430	723	11,900
January-November	9,020 <sup>r</sup>	437,000	1,910	67,300	2,480 r	30,700 r	11,200 r	XX
January-December	9,530	465,000	2,120	76,600	2,690	34,200	11,900	XX
2018:	,	ŕ	,	ŕ	,	,	ŕ	
January	1,150	70,900	135	6,220	345	4,790	1,350	1,350
February	902	62,500	176	9,700	271	2,970	1,110	2,470
March	782	47,500	304	17,000	933	6,980	1,280	3,750
April	922	71,600	149	8,700	454	4,900	1,180	4,930
May	731	51,300	172	9,950	225	3,070	933	5,860
June	767	54,700	122	7,620	832	5,400	1,100	6,960
July	577	43,000	133	7,820	204	1,170	731	7,690
August	674	48,400	56	2,880	35	484	724	8,410
September	604	38,500	122	6,680	551	3,850	851	9,260
October	968	63,900	112	5,170	338	3,590	1,140	10,400
November:		05,500		5,170	220	2,270	1,110	10,100
Australia								578
Belgium			94	5,620			68	474
Brazil					77	391	22	172
Canada	136	7,570					136	1,500
China	26	1,860			29	418	34	1,230
Finland	48	3,220	8	314	243	1,970	121	1,680
France	2	165				,	2	15
Germany	6	492					6	40
Hong Kong								46
India					10	145	3	15
Italy								10
Japan	104	7,550					104	1,740
Korea, Republic of								ç
Madagascar	42	3,100					42	735
Morocco	10	735					10	210
Norway	65	3,720					65	1,490
Russia	1	56					1	397
South Africa	10	205					10	283
Taiwan								22
United Kingdom	11	491			26	109	18	393
Other	(7)	5					(7)	13
Total	461	29,200	102	5,930	385	3,030	640	11,000
January-November	8,540	581,000	1,580	87,700	4,570	40,200	11,000	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.

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

	Unwrought cobalt alloys		Cobalt wast	e and scrap	Wrought cobalt and cobalt articles	
	Gross		Gross		Gross	
Period and country or	weight	Value <sup>2</sup>	weight	Value <sup>2</sup>	weight	Value <sup>2</sup>
locality of origin	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)
2017:						
November	27	\$1,260	103	\$1,100	20	\$3,040
December	50	2,270	124	2,060	15	2,750
January-November	368	16,200	1,420	21,200 r	193 <sup>r</sup>	27,700
January-December	418	18,400	1,550	23,300	208	30,500
2018:						
January	42	2,040	198	3,090	19	3,330
February	63	3,230	161	2,780	22	2,870
March	38	2,070	258	3,650	41	4,760
April	45	2,550	164	3,760	21	2,600
May	85	4,150	207	3,190	51	4,850
June	38	2,480	212	3,860	24	3,350
July	26	1,770	226	4,080	24	4,050
August	25	1,720	179	2,880	23	2,830
September	24	1,580	186	2,890	32	3,620
October	41	2,380	264	4,170	35	3,880
November:	-					
Austria					2	340
Belgium	(3)	28			1	50
Canada			3	50	5	1,370
Finland	2	327				
France	(3)	29	16	681	15	1,370
Germany	3	164	2	14	1	236
Ireland			43	523	(3)	51
Japan			15	366	(3)	19
Poland			1	20		
Taiwan			3	116	(3)	16
Tunisia			12	118	(3)	12
United Kingdom	48	3,010	70	1,470	15	1,360
Other		=	(3)	3	(3)	169
Total	53	3,560	165	3,360	39	4,990
January-November	480	27,500	2,220	37,700	332	41,100

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

 $<sup>^{1}\</sup>mbox{Data}$  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	balt, powders,						Cobalt
	matte, waste and scrap <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt	content,
	Gross		Gross		Gross		content for	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)
2017:								
November	841	\$11,200	4	\$169	20	\$295	849	5,210
December	507	11,600	11	507	19	330	520	5,730
January-November	5,030	106,000	189	2,580	186	2,180	5,210	XX
January-December	5,540	117,000	200	3,090	205	2,510	5,730	XX
2018:								
January	308	8,990	1	58	19	280	314	314
February	973	11,800	19	353	16	276	991	1,300
March	1,310	17,700	4	190			1,310	2,610
April	530	16,200	5	290	38	555	543	3,160
May	990	22,000	7	412	21	833	1,000	4,160
June	336	12,000	5	180	1	12	340	4,500
July	605	19,100	12	686	12	35	616	5,110
August	626	19,700	2	83	59	851	642	5,760
September	359	14,200	6	346	42	666	374	6,130
October	311	11,400	2	74	39	496	322	6,450
November	284	11,700	3	64	11	61	289	6,740
January-November	6,630	165,000	67	2,740	257	4,070	6,740	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.

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

	Wrought o		Cobalt ore and concentrates		
	Gross		Gross		
	weight	Value <sup>2</sup>	weight	Value <sup>2</sup> (thousands)	
Period	(metric tons)	(thousands)	(metric tons)		
2017:					
November	85	\$10,200			
December	94	10,400	3	\$7	
January-November	1,090	91,800	250	1,030	
January-December	1,190	102,000	253	1,040	
2018:					
January	98	9,690			
February	99	10,100	(3)	4	
March	88	10,700			
April	70	6,970	(3)	3	
May	69	8,500			
June	109	11,800	2	83	
July	92	9,850	35	302	
August	85	9,340			
September	91	10,600	18	160	
October	92	11,900			
November	147	14,000	(3)	11	
January-November	1,040	113,000	55	562	

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

<sup>3</sup>Less than ½ unit.