

## Mineral Industry Surveys

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## **COBALT IN DECEMBER 2018**

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in 2018 was slightly less than imports during 2017 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt (metal, metal powders, waste and scrap, and mattes and other intermediate products of cobalt metallurgy) and chemicals (acetates, chlorides, and oxides and hydroxides) in 2018 was 26% more than exports during 2017. In 2018, exports of unwrought cobalt, cobalt waste and scrap, and cobalt acetates were higher than those in 2017 (table 4).

## **Prices**

In December, the monthly average U.S. spot cobalt price decreased by 15% from that in November 2018 and was 13% lower than that in December 2017. The monthly average LME cash mean price increased by 4% from that in November 2018 and was 24% lower than that in December 2017. The following

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

Type	Price range	Average price
U.S. spot <sup>1</sup>	29.00-35.00	30.75
LME cash mean <sup>2</sup>	Not available	24.90

<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>	Government3,4	warehouse	warehouse	Total			
2017:	_	-							
December	705	996	302	160	420	580			
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			
December	NA	NA	302	130	733	863			
January-December	NA	NA	302	130	733	863			

<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> Gross		Oxides and hydroxides Gross		Salts and compounds <sup>3</sup>		Total cobalt	Cobalt content,
					Gross	ompounds	content for	year to
Period and country or	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>
locality of origin	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(metric tons)
2017:	(metric tons)	(thousands)	(metric tons)	(tilousunus)	(metric tons)	(tirousunus)	(metric tons)	(metric tons)
December	507	\$28,300	201	\$9,330	218	\$3,430	723	11,900
January–December	9,530	465,000	2,120	76,600	2,690	34,200	11,900	11,500 XX
2018:	9,550	405,000	2,120	70,000	2,090	34,200	11,500	AA
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
			149	8,700				
April	922	71,600			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	461	29,200	102	5,930	385	3,030	640	11,000
December:								
Australia			1	27			1	579
Belgium	7	673	20	988			22	496
Brazil								172
Canada	324	19,400					324	1,820
China	15	1,090	67	2,800	70	1,550	89	1,320
Finland	27	1,550	24	977	33	514	54	1,740
France								15
Germany	5	260	1	50			5	46
Hong Kong								46
India								15
Italy								10
Japan	25	1,720					25	1,760
Korea, Republic of								Ģ
Madagascar	63	4,650					63	798
Morocco								210
Norway								1,490
Russia	147	9,800					147	544
South Africa	9	64					9	292
Taiwan								22
United Kingdom	1	43					1	394
Other								13
Total	622	39,300	112	4,840	104	2,060	738	11,800
January-December	9,160	621,000	1,700	92,600	4,680	42,300	11,800	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>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.

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

			~		Wrought c	
	Unwrought	cobalt alloys	Cobalt wast	e and scrap	cobalt a	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:						
December	50	\$2,270	124	\$2,060	15	\$2,750
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	53	3,560	165	3,360	39	4,990
December:						
Belgium	12	737	10	378		
Canada			17	86	4	1,190
Finland	2	312				
France	(3)	29	5	151	1	456
Ireland			57	479	(3)	18
Japan	(3)	5	4	66	1	34
Korea, Republic of			3	90	1	49
Netherlands			5	157	(3)	11
Norway	62	2,590			(3)	64
Romania			38	592		
Taiwan			3	116	(3)	4
Tunisia			10	83	(3)	25
United Kingdom	9	659	60	1,160	15	1,440
Other				·	2	727
Total	85	4,330	212	3,360	23	4,020
January-December	565	31,900	2,430	41,100	355	45,100

<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>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,
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)
2017:	· · · · · · · · · · · · · · · · · · ·							
December	507	\$11,600	11	\$507	19	\$330	520	5,730
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
December	447	13,100	2	73	22	422	453	7,190
January-December	7,080	178,000	69	2,810	279	4,490	7,190	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 weight	Value <sup>2</sup>	Gross weight	Value <sup>2</sup>		
Period	(metric tons)	(thousands)	(metric tons)	(thousands)		
2017:						
December	94	\$10,400	3	\$7		
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		
December	129	13,700				
January-December	1,170	127,000	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>&</sup>lt;sup>3</sup>Less than ½ unit.