

Mineral Industry Surveys

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COBALT IN SEPTEMBER 2017

On the basis of preliminary data, U.S. cobalt consumption during January through September 2017 was essentially unchanged from consumption during the same period in 2016. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in January through September 2017 was essentially unchanged from 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 September 2017 was 23% more than that exported during the same period in 2016 (table 4).

Prices

Cobalt prices continued the upward trend that began in early 2016 as a result of strong demand from consumers, limited availability of cobalt on the spot market, and an increase in metal purchases by investors. In September, the monthly average U.S. spot cobalt price was 4% lower than that in August 2017, but was 136% higher than that in September 2016. The

monthly average LME cash mean price was 4% higher than that in August 2017 and 126% higher than that in September 2016. The following listed prices are for cobalt metal in September, in dollars per pound.

Type	Price range	Average price
U.S. spot ¹	27.25-30.25	29.28
LME cash mean ²	26.65-28.24	27.24

¹Source: Platts Metals Week, minimum 99.8% cobalt cathode. ²London 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 ^{3, 5}	
	Consumption,	U.S.	U.S.	U.S.	Non-U.S.	
Period	U.S. industry ^{p, 2}	industry ^{p, 2}	Government3,4	warehouse	warehouse	Total
2016:	_	_				
September	714 ^r	964 ^r	301	190	435	625
October	727 ^r	963 ^r	301	195	425	620
November	703 ^r	954 ^r	301	195	429	624
December	700 ^r	936 ^r	301	195	496	691
January-September	6,550 ^r	964 ^r	301	190	435	625
January–December ⁶	8,680 ^r	936 ^r	301	195	496	691
Year ⁷	9,010	969	301	195	496	691
2017:						
January	713	938	301	195	458	653
February	725	941	301	185	533	718
March	747	932	301	193	533	726
April	740	935	301	188	601	789
May	734	937	301	188	557	745
June	731	929	301	193	548	741
July	728	939	301	191	503	694
August	732	966	302	191	553	744
September	731	978	302	183	622	805
January-September	6,580	978	302	183	622	805

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Data for cobalt metal, metal powder, oxide and other chemical compounds, and scrap reported by U.S. cobalt processors ³Cobalt metal.

⁴Data from Defense Logistics Agency Strategic Materials.

⁵London Metal Exchange.

⁶U.S. industry data based on monthly reports.

⁷U.S. industry data include annual reports.

 ${\it TABLE~2} \\ {\it U.S.~IMPORTS~FOR~CONSUMPTION~OF~COBALT,~B~Y~COUNTRY~OR~LOCALITY}^1$

	Meta	n1o ²	Oxides and	hydroxides	Salts and co	omnounds ³	Cobalt Total cobalt content,	
	Gross	115	Gross	nydroxides	Gross	onipounds	content for	year to
Period and country or locality of origin	weight (metric tons)	Value ⁴ (thousands)	weight (metric tons)	Value ⁴ (thousands)	weight (metric tons)	Value ⁴ (thousands)	the period ⁵ (metric tons)	date ^{5, 6} (metric tons)
2016:	(metric tons)	(tilousalius)	(metric tons)	(tilousalius)	(metric tons)	(tilousalius)	(metric tons)	(metric tons)
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–September	7,390 ^r	178,000	1,500	29,100	1,690 ^r	16,800	9,010 ^r	XX
January–December	10,800	267,000	1,960	39,300	2,120	20,500	12,800	XX
2017:	10,000	207,000	1,,,,,	25,200	2,120	20,000	12,000	
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	980	45,500	222	7,050	211	2,040	1,200	4,440
May	535	25,600	227	7,890	215	2,370	764	5,210
June	977	49,800	106	3,930	316	3,750	1,160	6,360
July	756	38,900	141	5,540	175	2,770	917	7,280
August	569	31,300	202	8,180	297	3,660	800	8,080
September:		,		2,200		2,000		
Australia								186
Belgium	1	44	23	1,160			17	288
Bolivia								199
Brazil					1	31	(7)	78
Canada	173	8,320	1	20			173	1,260
China	47	2,790	32	1,310	36	971	86	1,080
Finland	29	1,600	32	1,260	193	1,440	109	1,010
France	1	53		·		·	1	28
Germany	5	256					5	34
Hong Kong								42
India								5
Japan	100	6,030					100	957
Korea, Republic of								7
Madagascar	147	9,030					147	819
Morocco	10	613					10	138
Norway	216	13,900					216	1,680
Russia	21	1,320					21	372
South Africa	39	1,350					39	191
Switzerland								36
United Kingdom	(7)	17	52	2,220	3	58	39	402
Zambia								223
Other	1	27					1	7
Total	789	45,300	139	5,970	234	2,500	963	9,040
January-September	7,250	321,000	1,560	51,700	2,100	24,600	9,040	XX

^rRevised. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

³Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁴Customs value.

⁵Estimated from gross weights.

⁶May include revisions to previously published data.

⁷Less than ½ unit.

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

	Unwrought	cobalt allovs	Cobalt waste and scrap		Wrought cobalt and cobalt articles		
	Gross	ocur unojo	Gross	e una serup	Gross		
Period and country or	weight	Value ²	weight	Value ²	weight	Value ²	
locality of origin	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	
2016:	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(tilousulus)	
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–September	658	21,000	669	9,500	106	14,800	
January–December	820	27,000	1,030	13,800	167	21,900	
2017:	020	27,000	1,030	13,000	107	21,700	
January	68	3,080	100	1,620	11	1,920	
February	33	1,550	111	1,470	12	2,050	
March	44	1,600	111	1,470	29	3,240	
April	45	1,960	134	1,780	26	3,080	
	26		158		19		
May		1,150		2,420		2,210	
June	31 12	1,300	139	1,980	13 6	2,570	
July		530	153	2,820		1,570	
August	12	484	102	1,580	24	2,510	
September:					2	60	
Australia					3	68	
Austria					(3)	3	
Belgium	1	78	6	247			
Canada			9	36	3	887	
China			13	151	(3)	204	
Czechia					(3)	23	
France			(3)	5	4	932	
Germany			1	8	2	262	
India			1	32			
Ireland			29	247			
Japan	(3)	12	3	46	1	87	
Mexico			1	9	(3)	31	
Netherlands			(3)	10			
Poland					(3)	6	
Singapore			(3)	9			
Switzerland			3	5	(3)	21	
Taiwan			3	64			
Tunisia			8	71			
United Kingdom	23	1,050	40	814	7	158	
Total	24	1,140	119	1,750	20	2,680	
January-September	296	12,800	1,130	17,200	158	21,800	

⁻⁻ Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

 $^{^2 \}mbox{Customs}$ value.

³Less than ½ unit.

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

	Unwrought co	balt, powders,						Cobalt
	matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt	content,
	Gross	•	Gross		Gross	•	content for	year to
	weight	Value ⁴	weight	Value ⁴	weight	Value ⁴	the period ⁵	date ^{5, 6}
Period	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(metric tons)
2016:								
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-September	2,990	59,300	127	1,090	281	1,410	3,150	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
May	589	12,000	40	305	36	532	626	2,230
June	398	7,520	5	139	19	281	405	2,640
July	486	9,650	9	313	4	66	494	3,130
August	347	8,490	4	138	19	277	354	3,480
September	368	10,100	13	576	19	20	382	3,870
January–September	3,700	80,700	177	2,170	146	1,610	3,870	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

³Cobalt acetates and cobalt chlorides.

⁴Free alongside ship (f.a.s.) value.

⁵Estimated from gross weights.

⁶May include revisions to previously published data.

⁷Less than ½ unit.

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

	Wrought o		Cobalt ore and concentrates		
	cobalt a	articles			
	Gross		Gross		
	weight	Value ²	weight	Value ²	
Period	(metric tons)	(thousands)	(metric tons)	(thousands)	
2016:					
September	93	\$7,790	(3)	\$3	
October	120	8,000			
November	90	7,910			
December	103	8,490			
January-September	1,070	72,100 ^r	2	65	
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	
May	70	7,590	132	533	
June	104	8,610			
July	79	7,860	1	5	
August	115	9,010	6	30	
September	98	8,990	1	5	
January-September	900 73,300		250	1,030	

^rRevised. -- Zero.

 $^{^{1}\}mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

²Free alongside ship (f.a.s.) value.

³Less than ½ unit.