

Mineral Industry Surveys

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COBALT IN OCTOBER 2016

U.S. cobalt consumption during January through October 2016 was slightly more than consumption during the same period in 2015. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in January through October 2016 was slightly more than revised imports during the same period in 2015. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in January through October 2016 was 8% more than revised exports during the same period in 2015.

Prices

In October, the monthly average U.S. spot cobalt price increased for the fourth consecutive month. The monthly average LME cash mean price increased for the sixth consecutive month. The following listed prices are for cobalt metal in October, in dollars per pound.

Type Price range Average price U.S. spot 12.20–13.80 13.00 LME cash mean 12.37–13.04 12.81

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}	Government ^{3, 4}	warehouse	warehouse	Total		
2015:	•	-						
October	711	1,060	301	110	448	558		
November	712	1,030	301	125	441	566		
December	701	1,050	301	165	465	630		
January-October	7,040 ^r	1,060 ^r	301	110	448	558		
January–December ⁶	8,450	1,050	301	165	465	630		
Year ⁷	8,780	1,080	301	165	465	630		
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		
January-October	7,130	1,040	301	195	425	620		

^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 and consumers. Includes estimates.

³Cobalt metal.

⁴Data from Defense Logistics Agency Strategic Materials.

⁵London Metal Exchange.

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

[']U.S. industry data include annual reports.

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

	Metals ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt	Cobalt content,
	Gross		Gross		Gross		content for	year to
Period and country	weight	Value ⁴	weight	Value ⁴	weight	Value ⁴	the period ⁵	date ^{5, 6}
of origin	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(metric tons)
2015:	(,	(* * * * * * * * * * * * * * * * * * *	((* * * * * * * * * * * * * * * * * * *	(,	(* * * * * * * * * * * * * * * * * * *		(,
October	623	\$17,900	149	\$3,340	284	\$1,930	811	9,770
November	650	17,500	110	2,500	259	1,400	799	10,600
December	714	17,900	112	2,410	142	1,550	841	11,400
January-October	7,930 ^r	232,000	1,530	35,300	2,230	23,300	9,770 ^r	XX
January-December	9,290	267,000	1,750	40,200	2,630	26,300	11,400	XX
2016:	=	,	,	.,	,	-,-	,	
January	612	14,200	100	1,980	104	1,340	720	720
February	1,050	23,100	171	3,010	106	1,160	1,210	1,930
March	720	17,500	173	3,260	170	1,860	903	2,830
April	701	18,400	190	3,680	194	1,790	899	3,730
May	643	15,500	145	2,790	347	3,390	857	4,590
June	920	22,100	147	2,750	221	2,270	1,100	5,690
July		18,900	106	2,730	241	1,990	918	6,600
August	1,240	30,100	243	4,690	225	2,230	1,480	8,090
September	724	17,800	223	4,650	95	814	912	9,000
October:	- 124	17,000	223	4,030	93	014	912	9,000
Australia	52	1 210					52	242
	=	1,310						343
Austria								1
Belgium	_ 3	119	24	587			20	374
Brazil					1	13	(7)	36
Canada	_ 117	3,420					117	1,120
China	102	2,670	20	420	26	402	126	698
Croatia								(7)
Finland	_ 7	205	50	973	101	988	79	846
France	1	54					1	29
Germany	_ 4	218					4	71
India					20	121	5	15
Ireland								1
Italy	_ 		(7)	2			(7)	(7)
Japan	193	4,420					193	1,410
Korea, Republic of	(7)	2					(7)	1
Kuwait								5
Macao								40
Madagascar	21	553					21	837
Morocco	95	2,430					95	317
Netherlands								10
New Caledonia	- 							18
Norway	60	2,110					60	1,870
Peru	-							5
Philippines								3
Russia	76	1,900			(7)	3	76	631
Singapore	(7)	3					(7)	29
Slovakia	- · · · · · · · · · · · · · · · · · · ·				20	104	5	18
South Africa	18	184					18	178
Taiwan			(7)	6			(7)	2
United Kingdom	1	38	62	1,310			46	442
Zambia	- 40	974		1,510			40	605
Total	787	20,600	156	3,300	167	1,630	956	9,950
January-October	8,160	198,000	1,650	32,400	1,870	18,500	9,950	9,930 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.

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

	Unwrought c	obalt alloys	Cobalt wast	e and scrap	Wrought cobalt and cobalt articles		
	Gross		Gross		Gross		
Period and country	weight	Value ²	weight	Value ²	weight	Value ²	
of origin	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	
2015:			· · · · · · · · · · · · · · · · · · ·				
October	95	\$2,960	53	\$903	11	\$1,390	
November	95	2,980	58	1,020	20	2,040	
December	236	5,990	59	940	24	1,450	
January-October	918 ^r	30,700 ^r	695	10,100	167 ^r	18,300	
January-December	1,250	39,700	812	12,100	211	21,800	
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	1,540	
May		2,860	64	896	7	1,310	
June		2,090	77	1,090	15	2,150	
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:	_						
Belgium	12	341			(3)	11	
Brazil	-		(3)	2			
Canada	(3)	3	7	67	20	1,080	
China			55	426	1	302	
France	(3)	3	5	75	1	650	
Germany	-		(3)	7	(3)	279	
Hungary					(3)	6	
India	-				(3)	15	
Ireland	-		41	486	(3)	86	
Japan	-		3	32	(3)	63	
Korea	-		3	28			
Mexico			4	23	(3)	11	
Netherlands			(3)	8			
Russia	-		1	11			
Singapore			3	39			
Switzerland					1	77	
Taiwan					(3)	8	
Tunisia			10	113			
Turkey			3	37			
United Kingdom	39	1,670	19	194	4	179	
Total	51	2,010	155	1,550	27	2,760	
January-October	710	23,000	824	11,100	134	17,600	

^rRevised. -- Zero.

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

²Customs value.

³Less than ½ unit.

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

	Unwrought cobalt, powders, matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt	Cobalt content,
Period	Gross weight (metric tons)	Value ⁴ (thousands)	Gross weight (metric tons)	Value ⁴ (thousands)	Gross weight (metric tons)	Value ⁴ (thousands)	content for the period ⁵ (metric tons)	year to date ^{5, 6} (metric tons)
2015:								
October	224	\$5,190	15	\$354	26	\$189	241	3,180
November	315	5,830	1	57	4	16	317	3,500
December	322	7,020			19	150	327	3,830
January-October	3,010 ^r	74,200	190	2,630	158	1,230	3,180	XX
January-December	3,640	87,000	192	2,690	180	1,400	3,830	XX
2016:								
January	305	5,930	7	118	10	43	312	312
February	336	6,600	4	45	33	107	347	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
January-October	3,260	64,500	131	1,230	281	1,410	3,430	XX

^rRevised. 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.

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

	Wrought o		Cobalt ore and concentrates		
	cobalt a	articles			
	Gross		Gross		
	weight	Value ²	weight	Value ²	
Period	(metric tons)	(thousands)	(metric tons)	(thousands)	
2015:					
October	144	\$8,880			
November	122	7,460	1	\$11	
December	143	7,730			
January-October	1,620	93,200 ^r	4	24	
January-December	1,890	108,000	6	35	
2016:					
January	117	6,880			
February	128	7,360			
March	163	9,110			
April	140	8,190			
May	109	8,370			
June	137	9,970			
July	106	7,830	(3)	4	
August	80	6,520	2	59	
September	93	7,780	(3)	3	
October	120	8,000			
January-October	1,190	80,000	2	65	

^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.