

# Mineral Industry Surveys

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## COBALT IN JULY 2014

U.S. cobalt consumption during January through July 2014 was slightly higher than consumption during the same period in 2013. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals during January through July 2014 was 11% more than that imported during the same period in 2013. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals during January through July 2014 was 28% more than that exported during the same period in 2013.

**Prices**

Prices for cobalt metal, in dollars per pound, in July 2014 are listed below.

Type	Price range	Average price
U.S. spot <sup>1</sup>	13.60–16.25	14.89
LME cash mean <sup>2</sup>	13.88–14.86	14.43

<sup>1</sup>Source: Platts Metals Daily, 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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TABLE 1  
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS<sup>1</sup>

(Metric tons, contained cobalt)

Period	Metal <sup>2</sup>	Oxide and other chemical compounds <sup>3</sup>	Scrap	Total
2013: <sup>P</sup>				
July	291	168 <sup>r</sup>	180	639 <sup>r</sup>
August	280	169 <sup>r</sup>	180	629 <sup>r</sup>
September	297	163 <sup>r</sup>	180	640 <sup>r</sup>
October	270	174 <sup>r</sup>	180	624 <sup>r</sup>
November	289	165 <sup>r</sup>	180	633 <sup>r</sup>
December	286	159 <sup>r</sup>	180	624 <sup>r</sup>
January–July <sup>r</sup>	2,030	1,170	1,260	4,460
January–December <sup>4</sup>	3,450	2,000	2,160	7,610 <sup>r</sup>
2014:				
January	302 <sup>r</sup>	165 <sup>r</sup>	180	647 <sup>r</sup>
February	298 <sup>r</sup>	165 <sup>r</sup>	180	643 <sup>r</sup>
March	319 <sup>r</sup>	165 <sup>r</sup>	180	663 <sup>r</sup>
April	284 <sup>r</sup>	164 <sup>r</sup>	180	628 <sup>r</sup>
May	294 <sup>r</sup>	163 <sup>r</sup>	180	637 <sup>r</sup>
June	293	168 <sup>r</sup>	180	641 <sup>r</sup>
July	295	172	180	647
January–July	2,090	1,160	1,260	4,510

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

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

<sup>2</sup>Includes metal powder.

<sup>3</sup>Data may include other cobalt materials.

<sup>4</sup>Based on monthly reports.

TABLE 2  
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE<sup>1</sup>

(Metric tons, contained cobalt)

End use	2013 <sup>P</sup>		2014	
	January–July	January–December <sup>2,3</sup>	July	January–July
Steel	313	536	45	313
Superalloys	2,080 <sup>r</sup>	3,540	301	2,130
Magnetic alloys	173 <sup>r</sup>	296	25	172
Other alloys <sup>4</sup>	W	W	W	W
Cemented carbides <sup>5</sup>	411 <sup>r</sup>	705	60	420
Chemical and ceramic uses <sup>6</sup>	1,220 <sup>r</sup>	2,090 <sup>r</sup>	180	1,220
Miscellaneous and unspecified	258 <sup>r</sup>	443	37	258
Total	4,460 <sup>r</sup>	7,610 <sup>r</sup>	647	4,510

<sup>P</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

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

<sup>2</sup>Data based on monthly reports.

<sup>3</sup>May include revisions to previously published data.

<sup>4</sup>Includes nonferrous alloys, welding materials, and wear-resistant alloys.

<sup>5</sup>Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

<sup>6</sup>Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3  
U.S. REPORTED STOCKS OF COBALT MATERIALS<sup>1</sup>

(Metric tons, contained cobalt)

Period	U.S. industry <sup>p,2</sup>			U.S. Government, metal <sup>6</sup>	LME, <sup>3</sup> metal		Total
	Metal and scrap <sup>4</sup>	Oxide and other chemical compounds <sup>5</sup>	Total		U.S. warehouse	Non-U.S. warehouse	
2013:							
July	543 <sup>r</sup>	169	711 <sup>r</sup>	301	46	436	482
August	545 <sup>r</sup>	169	713 <sup>r</sup>	301	46	497	543
September	533 <sup>r</sup>	203	736 <sup>r</sup>	301	46	488	534
October	525 <sup>r</sup>	209 <sup>r</sup>	735 <sup>r</sup>	301	46	487	533
November	516 <sup>r</sup>	226	741 <sup>r</sup>	301	41	481	522
December <sup>7</sup>	561 <sup>r</sup>	228 <sup>r</sup>	789 <sup>r</sup>	301	41	519	560
2014:							
January	638 <sup>r</sup>	161	798 <sup>r</sup>	301	41	517	558
February	651 <sup>r</sup>	162	813 <sup>r</sup>	301	36	548	584
March	635 <sup>r</sup>	160	795 <sup>r</sup>	301	36	530	566
April	634 <sup>r</sup>	160 <sup>r</sup>	794 <sup>r</sup>	301	34	514	548
May	629 <sup>r</sup>	161	790 <sup>r</sup>	301	22	517	539
June	617 <sup>r</sup>	160 <sup>r</sup>	777 <sup>r</sup>	301	20	527	547
July	616 <sup>r</sup>	160 <sup>r</sup>	776 <sup>r</sup>	301 <sup>e</sup>	19	523	542

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

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

<sup>2</sup>Stocks reported by cobalt processors and consumers.

<sup>3</sup>London Metal Exchange.

<sup>4</sup>Includes metal powder.

<sup>5</sup>Data may include other cobalt materials.

<sup>6</sup>Data from Defense Logistics Agency, DLA Strategic Materials; uncommitted material only.

<sup>7</sup>U.S. industry data based on monthly reports.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY<sup>1</sup>

(Metric tons, gross weight of material, except as noted)

Period and country of origin	Metals <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the period <sup>5</sup>	Cobalt content, year to date <sup>5,6</sup>
	Quantity	Value <sup>4</sup> (thousands)	Quantity	Value <sup>4</sup> (thousands)	Quantity	Value <sup>4</sup> (thousands)		
2013:								
July	887	\$24,600	224	\$5,060	147	\$1,580	1,100	6,250
August	729	20,800	212	4,860	234	2,680	963	7,220
September	680	19,800	197	4,430	91	1,380	858	8,070
October	647	17,700	283	6,630	103	1,230	887	8,960
November	476	13,700	202	4,640	63	773	645	9,610
December	729	19,900	148	3,600	27	380	845	10,500
January–July	4,970	130,000	1,380	29,500	875	9,570	6,250	XX
January–December	8,230	222,000	2,420	53,600	1,390	16,000	10,500	XX
2014:								
January	708	19,000	183	4,130	83	730	864	864
February	465	12,500	192	4,150	124	1,410	648	1,510
March	1,250	34,800	259	6,010	224	2,280	1,510	3,020
April	857	26,400	258	6,330	298	3,020	1,140	4,160
May	894	27,100	255	6,280	220	1,920	1,150	5,300
June	698	21,100	251	5,650	102	1,020	911	6,210
July:								
Australia	123	3,420	--	--	--	--	123	538
Austria	--	--	--	--	--	--	--	1
Belgium	5	227	48	1,250	(7)	2	40	320
Brazil	--	--	--	--	13	197	4	64
Canada	5	276	(7)	3	--	--	6	75
China	162	4,710	14	288	34	465	185	1,240
Congo (Kinshasa)	--	--	19	302	--	--	14	94
Finland	61	2,040	10	240	30	248	76	668
France	3	156	--	--	--	--	3	18
Germany	4	173	(7)	30	--	--	4	21
India	--	--	--	--	--	--	--	22
Ireland	--	--	--	--	--	--	--	(7)
Italy	--	--	--	--	--	--	--	1
Japan	113	3,280	--	--	--	--	113	621
Korea, Republic of	(7)	10	--	--	--	--	(7)	(7)
Madagascar	--	--	--	--	--	--	--	357
Mexico	--	--	--	--	--	--	--	11
Morocco	--	--	--	--	--	--	--	60
Netherlands	--	--	--	--	--	--	--	1
Norway	--	--	--	--	--	--	--	1,050
Peru	--	--	--	--	--	--	--	1
Philippines	--	--	--	--	--	--	--	7
Russia	40	1,160	--	--	--	--	40	561
South Africa	30	744	--	--	--	--	30	258
Sweden	--	--	--	--	--	--	--	5
Taiwan	--	--	--	--	2	20	(7)	27
United Kingdom	(7)	16	88	1,950	14	115	67	506
Zambia	30	908	--	--	--	--	30	423
Total	577	17,100	179	4,070	94	1,050	735	6,950
January–July	5,450	158,000	1,580	36,600	1,150	11,400	6,950	XX

XX Not applicable. -- Zero.

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

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

<sup>3</sup>Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

<sup>4</sup>Customs value.

<sup>5</sup>Estimated from gross weights.

<sup>6</sup>May include revisions to previously published data.

<sup>7</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY<sup>1</sup>

(Metric tons, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Quantity	Value <sup>2</sup> (thousands)	Quantity	Value <sup>2</sup> (thousands)	Quantity	Value <sup>2</sup> (thousands)
2013:						
July	37	\$1,310	50	\$637	26	\$2,580
August	128	4,000	58	1,170	16	2,320
September	112	3,270	64	1,040	43	3,020
October	87	2,900	63	821	20	2,690
November	93	2,790	33	335	20	2,190
December	59	1,630	104	1,940	21	2,420
January–July	488	15,700	375	5,600	134	14,200
January–December	967	30,300	698	10,900	254	26,800
2014:						
January	86	2,640	69	1,040	20	1,990
February	63	1,870	54	723	24	2,310
March	54	1,730	151	2,320	19	2,040
April	73	2,640	95	1,340	15	2,140
May	88	2,710	123	2,290	12	1,940
June	51	1,630	61	734	17	1,540
July:						
Austria	--	--	--	--	(3)	8
Belgium	11	361	(3)	6	1	36
Canada	44	1,330	3	41	2	514
China	--	--	--	--	1	326
Finland	(3)	25	--	--	--	--
France	(3)	2	23	542	5	410
Germany	--	--	--	--	1	265
India	--	--	4	43	--	--
Ireland	--	--	27	277	--	--
Israel	--	--	--	--	(3)	16
Italy	--	--	--	--	(3)	4
Japan	(3)	32	14	172	(3)	45
Korea, Republic of	--	--	(3)	4	--	--
Singapore	--	--	3	36	--	--
Switzerland	--	--	--	--	(3)	8
Taiwan	--	--	7	81	(3)	14
United Kingdom	--	--	31	704	3	179
Total	55	1,750	111	1,910	13	1,820
January–July	471	15,000	664	10,300	121	13,800

-- Zero.

<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>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. EXPORTS OF COBALT MATERIALS<sup>1</sup>

(Metric tons, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the period <sup>5</sup>	Cobalt content, year to date <sup>5,6</sup>
	Quantity	Value <sup>4</sup> (thousands)	Quantity	Value <sup>4</sup> (thousands)	Quantity	Value <sup>4</sup> (thousands)		
2013:								
July	265	\$7,110	20	\$520	1	\$13	279	2,140
August	346	7,770	53	118	39	359	393	2,530
September	250	7,060	35	83	39	332	285	2,820
October	283	7,710	16	324	38	334	303	3,120
November	314	9,880	110	649	19	173	399	3,520
December	305	8,440	31	600	20	169	332	3,850
January–July	2,000	56,100	164	2,480	88	786	2,140	XX
January–December	3,500	97,000	409	4,250	243	2,150	3,850	XX
2014:								
January	245	7,200	(7)	13	58	486	260	260
February	359	10,500	15	251	21	105	375	635
March	345	9,570	72	1,070	43	349	407	1,040
April	399	10,800	62	851	20	180	448	1,490
May	505	9,600	27	538	--	--	524	2,010
June	379	9,360	51	529	1	9	415	2,430
July	309	7,930	4	149	10	1,970	314	2,740
January–July	2,540	65,000	231	3,410	153	3,100	2,740	XX

XX Not applicable.

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

<sup>2</sup>May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

<sup>3</sup>Cobalt acetates and cobalt chlorides.

<sup>4</sup>Free alongside ship (f.a.s.) value.

<sup>5</sup>Estimated from gross weights.

<sup>6</sup>May include revisions to previously published data.

<sup>7</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,  
AND CONCENTRATES<sup>1</sup>

(Metric tons, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value <sup>2</sup> (thousands)	Quantity	Value <sup>2</sup> (thousands)
2013:				
July	174	\$9,160	--	--
August	260	11,900	--	--
September	119	7,300	--	--
October	158	8,790	157	\$355
November	154	9,080	--	--
December	153	8,950	150	330
January–July	1,350	67,800	149	250
January–December	2,190	114,000	456	935
2014:				
January	109	6,630	(3)	26
February	152	9,370	1	5
March	184	9,860	(3)	4
April	150	9,020	281	365
May	126	8,060	(3)	4
June	160	9,190	165	688
July	170	9,740	6	61
January–July	1,050	61,900	453	1,150

-- Zero.

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

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

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.