

# Mineral Industry Surveys

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**For information, contact:**

Kim B. Shedd, Cobalt Commodity Specialist  
National Minerals Information Center  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4974, Fax: (703) 648-7757  
Email: kshedd@usgs.gov

Annie Hwang (Data)  
Telephone: (703) 648-7952  
Fax: (703) 648-7975  
Email: ahwang@usgs.gov

**Internet:** <http://minerals.usgs.gov/minerals/>

## COBALT IN AUGUST 2014

U.S. cobalt consumption during January through August 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 August 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 August 2014 was 26% more than that exported during the same period in 2013.

**Prices**

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

Type	Price range	Average price
U.S. spot <sup>1</sup>	15.25–16.25	15.75
LME cash mean <sup>2</sup>	14.51–14.95	14.71

<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>				
August	280	169	180	629
September	297	163	180	640
October	270	174	180	624
November	289	165	180	633
December	286	159	180	624
January–August <sup>r</sup>	2,310	1,340	1,440	5,090
January–December <sup>4</sup>	3,450	2,000	2,160	7,610
2014:				
January	302	165	180	647
February	298	165	180	643
March	319	165	180	663
April	284	164	180	628
May	294	163	180	637
June	293	168	180	641
July	295	172	180	647
August	293	168	180	640
January–August	2,380	1,330	1,440	5,150

<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–August	January–December <sup>2,3</sup>	August	January–August
Steel	358	536	45	358
Superalloys	2,370 <sup>r</sup>	3,540	299	2,430
Magnetic alloys	198 <sup>r</sup>	296	25	197
Other alloys <sup>4</sup>	W	W	W	W
Cemented carbides <sup>5</sup>	470 <sup>r</sup>	705	60	480
Chemical and ceramic uses <sup>6</sup>	1,400 <sup>r</sup>	2,090	175	1,390
Miscellaneous and unspecified	295 <sup>r</sup>	443	37	295
Total	5,090 <sup>r</sup>	7,610	640	5,150

<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:							
August	545	169	713	301	46	497	543
September	533	203	736	301	46	488	534
October	525	209	735	301	46	487	533
November	516	226	741	301	41	481	522
December <sup>7</sup>	561	228	789	301	41	519	560
2014:							
January	638	161	798	301	41	517	558
February	651	162	813	301	36	548	584
March	635	160	795	301	36	530	566
April	634	160	794	301	34	514	548
May	629	161	790	301	22	517	539
June	617	160	777	301	20	527	547
July	616	160	776	301 <sup>e</sup>	19	523	542
August	603	160	764	301 <sup>e</sup>	19	497	516

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

<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. data industry 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:								
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–August	5,700	151,000	1,590	34,300	1,110	12,300	7,220	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	577	17,100	179	4,070	94	1,050	735	6,950
August:								
Australia	78	2,280	--	--	--	--	78	616
Austria	1	58	--	--	--	--	1	3
Belgium	5	189	24	638	--	--	22	342
Brazil	20	585	--	--	1	13	20	85
Canada	12	637	(7)	12	--	--	13	88
China	71	2,110	37	854	18	166	103	1,340
Congo (Kinshasa)	--	--	13	466	--	--	9	103
Finland	43	1,510	10	247	18	143	55	723
France	3	132	--	--	--	--	3	20
Germany	1	41	3	287	--	--	3	24
India	--	--	--	--	39	360	10	32
Ireland	(7)	5	--	--	--	--	(7)	(7)
Italy	--	--	(7)	4	16	137	4	5
Japan	78	2,190	--	--	--	--	78	699
Korea, Republic of	(7)	9	--	--	--	--	(7)	1
Madagascar	21	611	--	--	--	--	21	378
Mexico	--	--	--	--	--	--	--	11
Morocco	7	292	--	--	--	--	7	67
Netherlands	--	--	--	--	--	--	--	1
Norway	346	10,200	--	--	--	--	346	1,400
Peru	--	--	--	--	--	--	--	1
Philippines	--	--	--	--	--	--	--	7
Russia	61	1,870	--	--	(7)	3	61	623
South Africa	34	1,080	--	--	--	--	34	292
Sweden	3	141	--	--	--	--	3	7
Taiwan	--	--	--	--	31	215	8	36
United Kingdom	1	30	104	2,390	11	109	78	584
Zambia	73	1,960	--	--	--	--	73	496
Total	858	25,900	191	4,900	133	1,150	1,030	7,980
January–August	6,300	184,000	1,770	41,500	1,280	12,600	7,980	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:						
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–August	617	19,700	434	6,770	150	16,500
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	55	1,750	111	1,910	13	1,820
August:						
Australia	13	917	--	--	--	--
Austria	--	--	--	--	(3)	22
Belgium	21	724	--	--	(3)	14
Canada	41	1,300	--	--	42	1,180
China	(3)	7	--	--	2	244
Columbia	--	--	(3)	4	--	--
France	(3)	13	2	28	1	63
Germany	(3)	35	7	128	2	354
India	--	--	--	--	1	13
Ireland	--	--	34	380	--	--
Japan	--	--	9	123	1	43
New Zealand	--	--	(3)	2	--	--
Norway	10	418	2	84	--	--
Singapore	(3)	6	7	148	--	--
Taiwan	--	--	--	--	(3)	12
United Kingdom	--	--	20	310	2	209
Total	85	3,420	82	1,210	50	2,160
January–August	556	18,400	746	11,600	170	15,900

-- 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:								
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–August	2,350	63,900	217	2,590	127	1,150	2,530	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
August	310	8,590	207	1,390	(7)	34	459	3,200
January–August	2,850	73,500	438	4,800	153	3,130	3,200	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:				
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–August	1,610	79,700	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
August	164	9,700	--	--
January–August	1,210	71,600	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.