

# Mineral Industry Surveys

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## COBALT IN JUNE 2010

Preliminary data for 2010 indicate that U.S. cobalt consumption during the first half of 2010 was 4% higher than that consumed during the first half of 2009, according to the U.S. Geological Survey. U.S. cobalt consumption during the quarter ending June 30, 2010, was slightly lower than that consumed during the quarter ending March 31, 2010.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 71% higher during January through May 2010 than that imported during the same period in 2009. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals during January through May 2010 was 14% higher than that during the same period in 2009.

London Metal Exchange stocks are included in table 3.

**Prices**

Prices for cobalt metal, in dollars per pound, in June 2010 are listed below.

<u>Type</u>	<u>Price range</u>	<u>Average price</u>
U.S. spot <sup>1</sup>	20.00-22.50	21.06
LME cash mean <sup>2</sup>	XX	17.56

XX Not applicable.

<sup>1</sup>Source: Platts Metals Week, minimum 99.8% cobalt cathode.

<sup>2</sup>London Metal Exchange, mean of the cash buyer price and the cash seller and settlement price, minimum 99.3% cobalt briquettes, cathode, ingot, or rounds (converted from dollars per metric ton and rounded to the nearest cent).

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
2009:				
June	253	185	143	580
July	252	175	143	570
August	251	176	145	573
September	264	177	151	592
October	254	172	156	583
November	245	172	156	574
December	243	168	157	568
January-June <sup>r</sup>	1,560	1,030	874	3,470
January-December <sup>4</sup>	3,070	2,070	1,780	6,930
2010:				
January	270	170	156	597
February	290	170	148	608
March	291	171	159	622
April	284	170	156	610
May	247	176	160	583
June	268	178	159	605
January-June <sup>4</sup>	1,650	1,040	939	3,630

<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>Data based on monthly reports.

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

(Metric tons, contained cobalt)

End use	2009		2010	
	January-June	January-December <sup>2</sup>	June	January-June <sup>3</sup>
Steel	249 <sup>r</sup>	499	48	288
Superalloys	1,600 <sup>r</sup>	3,180	280	1,710
Magnetic alloys	130 <sup>r</sup>	259	21	128
Other alloys <sup>4</sup>	W	W	W	W
Cemented carbides <sup>5</sup>	297 <sup>r</sup>	593	50	297
Chemical and ceramic uses <sup>6</sup>	1,060 <sup>r</sup>	2,130	183	1,070
Miscellaneous and unspecified	135	270	22	135
Total	3,470 <sup>r</sup>	6,930	605	3,630

<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 prior months.

<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>2</sup>				U.S. Government, metal <sup>6</sup>	LME <sup>3</sup> , metal		
	Metal <sup>4</sup>	Oxide and other chemical compounds <sup>5</sup>	Scrap	Total		U.S.	Non-U.S.	Total
						warehouse	warehouse	
2009:								
June	301	154	113	569	380	XX	XX	XX
July	304	152	108	564	310	XX	XX	XX
August	298	155	103	556	310	XX	XX	XX
September	279	152	91	522	304	XX	XX	XX
October	266	156	84	506	304	XX	XX	XX
November	262	159	68	489	295	XX	XX	XX
December <sup>7</sup>	255	161	66	482	293	XX	XX	XX
2010:								
January	261	176	57	494	293	XX	XX	XX
February	270	172	66	507	293	--	--	--
March	313	167	65	545	301	--	--	--
April	313	173	62	548	301	--	38	38
May	306	166	60	532	301	--	113	113
June	296	161	60	516	301	20	132	152

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>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 National Stockpile Center; uncommitted material only.

<sup>7</sup>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>
		Value <sup>4</sup>		Value <sup>4</sup>		Value <sup>4</sup>		
	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)		
2009:								
May	546	\$18,100	181	\$3,280	116	\$1,790	722	2,960
June	436	14,000	209	6,120	158	2,040	645	3,610
July	473	15,100	153	3,840	120	1,370	622	4,230
August	491	17,900	135	3,600	191	2,160	648	4,880
September	544	20,800	92	2,460	174	2,160	671	5,550
October	592	18,200	139	3,030	237	3,590	782	6,330
November	371	13,800	167	4,660	215	2,640	563	6,890
December	610	23,000	118	3,860	269	3,280	785	7,680
January-May	2,360	74,700	450	9,940	767	10,100	2,960	XX
January-December	5,870	198,000	1,460	37,500	2,130	27,300	7,680	XX
2010:								
January	661	26,100	174	5,050	332	3,220	882	882
February	1,050	39,500	97	2,610	394	3,610	1,240	2,130
March	606	27,500	168	4,640	513	5,640	902	3,030
April	836	32,300	159	4,650	304	2,250	1,040	4,070
May:								
Argentina	--	--	--	--	--	--	--	4
Australia	57	2,450	--	--	--	--	57	262
Belgium	12	694	53	1,910	--	--	50	237
Brazil	40	1,820	--	--	--	--	40	77
Canada	20	1,090	53	1,040	--	--	59	263
China	128	5,130	49	1,410	1	27	163	1,290
Congo (Kinshasa)	25	1,030	--	--	--	--	25	212
Finland	34	1,900	67	2,150	194	2,600	148	469
France	1	46	--	--	18	99	5	19
Germany	2	139	--	--	--	--	2	8
India	(7)	3	--	--	--	--	(7)	91
Japan	12	785	--	--	--	--	12	145
Korea, Republic of	--	--	--	--	--	--	--	1
Lithuania	--	--	--	--	--	--	--	1
Morocco	15	728	--	--	--	--	15	75
Norway	123	5,020	--	--	--	--	123	402
Romania	(7)	10	--	--	--	--	(7)	(7)
Russia	127	5,400	--	--	--	--	127	855
South Africa	22	971	--	--	--	--	22	184
Sweden	2	57	--	--	--	--	2	16
Switzerland	(7)	21	--	--	--	--	(7)	1
Taiwan	--	--	--	--	38	384	10	12
Uganda	65	2,730	--	--	--	--	65	133
United Kingdom	6	285	38	1,270	21	379	40	171
Zambia	35	1,490	--	--	--	--	35	136
Total	726	31,800	260	7,790	273	3,490	1,000	5,070
January-May	3,880	157,000	857	24,700	1,820	18,200	5,070	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 prior months.

<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)
2009:						
May	94	\$2,650	31	\$438	33	\$2,020
June	24	646	35	546	9	1,200
July	(3)	41	102	1,310	7	899
August	29	789	29	360	7	1,050
September	(3)	10	32	506	19	1,040
October	1	41	46	694	7	1,090
November	(3)	16	55	633	5	818
December	1	126	81	1,320	6	873
January-May	332	8,600	269	3,750	94	8,700
January-December	387	10,300	650	9,120	154	15,700
2010:						
January	1	41	96	1,470	5	771
February	23	1,130	85	1,340	10	815
March	2	128	95	1,900	47	2,800
April	20	860	46	642	12	1,180
May:						
Austria	(3)	10	--	--	--	--
Belgium	--	--	--	--	(3)	21
Canada	(3)	3	--	--	1	253
China	--	--	--	--	(3)	6
Egypt	--	--	(3)	6	--	--
Finland	(3)	43	--	--	--	--
France	(3)	23	1	10	2	208
Germany	--	--	12	176	(3)	135
Ireland	--	--	20	108	--	--
Japan	--	--	16	256	2	250
Singapore	--	--	(3)	3	--	--
Taiwan	--	--	--	--	(3)	2
Thailand	--	--	1	9	--	--
United Kingdom	--	--	29	516	2	162
Total	1	79	79	1,080	7	1,040
January-May	47	2,240	400	6,430	82	6,600

-- 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)		
2009:								
May	261	\$7,070	15	\$506	34	\$155	280	1,070
June	222	6,130	11	158	9	70	232	1,300
July	118	4,080	24	746	14	381	139	1,440
August	195	6,500	19	622	58	1,410	222	1,660
September	135	5,220	6	90	319	2,120	216	1,880
October	182	6,930	6	158	69	2,640	203	2,080
November	171	5,500	26	676	18	170	194	2,280
December	144	5,420	8	373	57	576	163	2,440
January-May	951	37,500	125	2,730	116	1,000	1,070	XX
January-December	2,120	77,300	225	5,550	659	8,370	2,440	XX
2010:								
January	183	6,030	75	253	31	1,340	244	244
February	211	6,990	12	444	43	825	230	474
March	210	7,490	58	562	34	380	260	734
April	216	6,340	87	296	39	535	287	1,020
May	173	6,040	11	349	61	609	196	1,220
January-May	992	32,900	243	1,900	208	3,690	1,220	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 prior months.

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)
2009:				
May	114	\$6,890	125	\$305
June	72	4,350	51	262
July	134	8,370	1,240	1,520
August	136	6,760	177	623
September	97	6,280	22	871
October	116	6,780	48	448
November	114	6,050	128	724
December	118	6,540	25	1,080
January-May	553	33,400	203	823
January-December	1,340	78,500	1,900	6,360
2010:				
January	141	7,440	269	2,050
February	142	7,080	890	1,900
March	147	8,090	22	263
April	162	9,490	(3)	8
May	135	8,310	20	914
January-May	726	40,400	1,200	5,130

<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.