

# Mineral Industry Surveys

---

**For information, contact:**

Kim B. Shedd, Cobalt Commodity Specialist

U.S. Geological Survey

989 National Center

Reston, VA 20192

Telephone: (703) 648-4974, Fax: (703) 648-7757

E-mail: [kshedd@usgs.gov](mailto:kshedd@usgs.gov)

Ram C. Khatri (Data)

Telephone: (703) 648-7996

Fax: (703) 648-7975

E-mail: [rkhatri@usgs.gov](mailto:rkhatri@usgs.gov)

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

## COBALT IN APRIL, MAY, AND JUNE 2007

Preliminary data for 2007 indicate that U.S. cobalt consumption during the first half of 2007 was slightly less than that consumed during the first half of 2006, according to the U.S. Geological Survey. U.S. cobalt consumption during the quarter ending June 30, 2007, was slightly greater than that consumed during the quarter ending March 31, 2007.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 11% lower during January through May 2007 than that during the same period in 2006. The amount of cobalt contained in U.S. exports of unwrought cobalt

and chemicals during January through May 2007 was 9% greater than that exported during the same period in 2006.

### Update

Prices for electrolytic cobalt, in dollars per pound from Platts Metals Week, are listed below.

<u>Month</u>	<u>Price range</u>	<u>Average price</u>
April 2007	31.00-34.00	32.44
May 2007	29.00-31.50	30.48
June 2007	28.30-29.75	28.89

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
2006:				
April	301	224	171	696
May	317	239	176	732
June	311	234	164	709
July	306	227	158	691
August	311	235	175	721
September	305	229	168	702
October	321	232	158	711
November	308	222	166	696
December	297	229	162	688
January-April <sup>f</sup>	1,270	911	671	2,850
January-May <sup>f</sup>	1,580	1,150	847	3,580
January-June <sup>f</sup>	1,900	1,380	1,010	4,290
January-December <sup>4</sup>	3,740	2,760	2,000	8,500
2007:				
January	309	226	172	707
February	299	225	162	685
March	327	233	169	729
April	336	231	164	731
May	325	224	153	702
June	288	240	163	691
January-April	1,270	915	667	2,850
January-May	1,600	1,140	820	3,550
January-June	1,880	1,380	983	4,240

<sup>f</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	2006					2007					
	January- April	January- May	January- June	January- December <sup>2</sup>	Year <sup>3</sup>	April	May	June	January- April <sup>4</sup>	January- May <sup>4</sup>	January- June <sup>4</sup>
Steel	198 <sup>r</sup>	247 <sup>r</sup>	296 <sup>r</sup>	588	700	48	48	49	195	243	292
Superalloys	1,230 <sup>r</sup>	1,540 <sup>r</sup>	1,840 <sup>r</sup>	3,630	4,180	327	305	275	1,230	1,540	1,810
Magnetic alloys	100 <sup>r</sup>	127 <sup>r</sup>	153 <sup>r</sup>	299	386	23	24	25	101	125	150
Other alloys <sup>5</sup>	W	W	W	W	224	W	W	W	W	W	W
Cemented carbides <sup>6</sup>	269 <sup>r</sup>	335 <sup>r</sup>	402 <sup>r</sup>	796	796	65	65	66	263	328	394
Chemical and ceramic uses <sup>7</sup>	963 <sup>r</sup>	1,220 <sup>r</sup>	1,460 <sup>r</sup>	2,910	2,920	245	237	253	968	1,210	1,460
Miscellaneous and unspecified	91	113 <sup>r</sup>	135 <sup>r</sup>	271	63	23	23	23	91	114	137
Total	2,850 <sup>r</sup>	3,580 <sup>r</sup>	4,290 <sup>r</sup>	8,500	9,270	731	702	691	2,850	3,550	4,240

<sup>1</sup>Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>Data based on monthly reports.

<sup>4</sup>Includes annual reports.

<sup>5</sup>Includes revisions to prior months' data.

<sup>6</sup>Includes nonferrous alloys, welding materials, and wear-resistant alloys.

<sup>7</sup>Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

<sup>8</sup>Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, and other uses.

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

(Metric tons, contained cobalt)

Period	Industry <sup>2</sup>			Total	U.S. Government, metal <sup>5</sup>
	Metal <sup>3</sup>	Oxide and other chemical compounds <sup>4</sup>	Scrap		
2006:					
April	326	170	120	616	1,480
May	322	179	106	607	1,480
June	306	168	115	589	1,480
July	323	165	120	608	1,470
August	316	164	118	598	1,470
September	304	160	116	580	1,470
October	296	170	120	586	1,420
November	289	171	126	586	1,300
December	288	176	126	590	1,290
2007:					
January	293	180	125	598	1,250
February	331	177	129	637	1,180
March	340	171	127	637	1,140
April	325	169	121	615	1,100
May	321	166	131	618	1,040
June	341	166	118	625	1,030

<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>Includes metal powder.

<sup>4</sup>Data may include other cobalt materials.

<sup>5</sup>Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

TABLE 4a  
U.S. IMPORTS FOR CONSUMPTION OF COBALT THROUGH MARCH 2007, BY COUNTRY<sup>1</sup>

(Kilograms, 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 month <sup>5</sup>	Cobalt content, year to date <sup>5,6</sup>
	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>		
2006:								
March	1,160,000	\$30,300,000	115,000	\$2,620,000	196,000	\$2,230,000	1,320,000	3,150,000
April	942,000	26,500,000	121,000	2,850,000	165,000	1,640,000	1,090,000	4,240,000
May	640,000	19,300,000	102,000	2,360,000	195,000	2,450,000	790,000	5,030,000
June	969,000	29,500,000	42,700	1,220,000	278,000	2,310,000	1,080,000	6,110,000
July	741,000	21,800,000	85,500	2,230,000	286,000	3,030,000	900,000	7,010,000
August	694,000	21,300,000	91,700	2,260,000	217,000	1,850,000	825,000	7,840,000
September	1,110,000	36,100,000	105,000	2,770,000	83,600	874,000	1,210,000	9,050,000
October	579,000	20,800,000	103,000	2,730,000	170,000	1,800,000	706,000	9,760,000
November	720,000	23,500,000	113,000	3,280,000	105,000	982,000	830,000	10,600,000
December	917,000	32,300,000	115,000	3,040,000	68,400	533,000	1,020,000	11,600,000
January-March	2,640,000	70,900,000	296,000	6,710,000	759,000	8,780,000	3,150,000	XX
January-December	9,950,000	302,000,000	1,180,000	29,400,000	2,330,000	24,200,000	11,600,000	XX
2007:								
January	788,000	34,800,000	91,400	2,940,000	193,000	1,900,000	906,000	906,000
February	686,000	32,300,000	111,000	4,230,000	141,000	1,980,000	807,000	1,710,000
March:								
Australia	21,000	1,190,000	--	--	--	--	21,000	119,000
Belgium	17,800	671,000	52,800	2,420,000	--	--	55,800	133,000
Canada	109,000	4,440,000	--	--	--	--	109,000	324,000
China	74,000	3,500,000	20,000	522,000	36,100	407,000	98,200	238,000
Congo (Kinshasa)	--	--	--	--	--	--	--	22,000
Finland	7,650	463,000	4,050	184,000	20,400	231,000	15,900	111,000
France	561	50,900	--	--	--	--	561	6,450
Germany	2,660	114,000	648	42,000	--	--	3,130	6,000
India	--	--	--	--	--	--	--	9,230
Japan	6,270	366,000	100	5,500	160	3,200	6,390	33,500
Korea, Republic of	18,100	342,000	--	--	--	--	18,100	22,500
Morocco	--	--	--	--	--	--	--	97,000
Norway	324,000	16,500,000	--	--	--	--	324,000	698,000
Philippines	--	--	--	--	--	--	--	42
Russia	76,800	4,580,000	--	--	--	--	76,800	370,000
South Africa	20,000	1,130,000	--	--	--	--	20,000	80,500
Sweden	1,050	44,400	--	--	--	--	1,050	1,840
Uganda	--	--	--	--	--	--	--	42,100
United Kingdom	729	31,400	5,650	185,000	30,600	394,000	12,400	57,600
Zambia	10,000	521,000	--	--	--	--	10,000	113,000
Total	690,000	34,000,000	83,200	3,360,000	87,300	1,040,000	772,000	2,490,000
January-March	2,160,000	101,000,000	285,000	10,500,000	422,000	4,920,000	2,490,000	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.

Source: U.S. Census Bureau; data adjusted by the U.S. Geological Survey.

TABLE 4b  
U.S. IMPORTS FOR CONSUMPTION OF COBALT THROUGH APRIL 2007, BY COUNTRY<sup>1</sup>

(Kilograms, 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 month <sup>5</sup>	Cobalt content, year to date <sup>5,6</sup>
	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>		
2006:								
April	942,000	\$26,500,000	121,000	\$2,850,000	165,000	\$1,640,000	1,090,000	4,240,000
May	640,000	19,300,000	102,000	2,360,000	195,000	2,450,000	790,000	5,030,000
June	969,000	29,500,000	42,700	1,220,000	278,000	2,310,000	1,080,000	6,110,000
July	741,000	21,800,000	85,500	2,230,000	286,000	3,030,000	900,000	7,010,000
August	694,000	21,300,000	91,700	2,260,000	217,000	1,850,000	825,000	7,840,000
September	1,110,000	36,100,000	105,000	2,770,000	83,600	874,000	1,210,000	9,050,000
October	579,000	20,800,000	103,000	2,730,000	170,000	1,800,000	706,000	9,760,000
November	720,000	23,500,000	113,000	3,280,000	105,000	982,000	830,000	10,600,000
December	917,000	32,300,000	115,000	3,040,000	68,400	533,000	1,020,000	11,600,000
January-April	3,580,000	97,400,000	418,000	9,560,000	923,000	10,400,000	4,240,000	XX
January-December	9,950,000	302,000,000	1,180,000	29,400,000	2,330,000	24,200,000	11,600,000	XX
2007:								
January	788,000	34,800,000	91,400	2,940,000	193,000	1,900,000	906,000	906,000
February	686,000	32,300,000	111,000	4,230,000	141,000	1,980,000	807,000	1,710,000
March	690,000	34,000,000	83,200	3,360,000	87,300	1,040,000	772,000	2,490,000
April:								
Australia	46,000	2,580,000	--	--	--	--	46,000	165,000
Belgium	36,200	1,710,000	28,300	1,430,000	3,790	43,000	57,600	190,000
Canada	103,000	4,310,000	--	--	--	--	103,000	428,000
China	101,000	6,060,000	32,400	1,190,000	72,700	896,000	144,000	382,000
Congo (Kinshasa)	8,000	353,000	--	--	--	--	8,000	30,000
Finland	2,970	192,000	7,400	298,000	50,200	1,100,000	27,700	138,000
France	2,560	203,000	51	4,550	--	--	2,600	9,040
Germany	--	--	1,300	84,000	--	--	933	6,940
India	--	--	--	--	18,000	162,000	4,860	14,100
Japan	15,400	760,000	--	--	--	--	15,400	48,900
Korea, Republic of	--	--	--	--	--	--	--	22,500
Morocco	40,000	2,460,000	--	--	--	--	40,000	137,000
Norway	151,000	9,430,000	--	--	--	--	151,000	849,000
Philippines	--	--	--	--	--	--	--	42
Russia	196,000	8,980,000	--	--	--	--	196,000	566,000
South Africa	500	29,000	--	--	--	--	500	81,000
Sweden	--	--	--	--	--	--	--	1,840
Uganda	8,400	370,000	--	--	--	--	8,400	50,500
United Kingdom	981	42,200	--	--	5	4,360	982	58,500
Zambia	122,000	7,460,000	--	--	--	--	122,000	235,000
Total	834,000	44,900,000	69,400	3,010,000	145,000	2,210,000	929,000	3,410,000
January-April	3,000,000	146,000,000	355,000	13,500,000	567,000	7,130,000	3,410,000	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.

Source: U.S. Census Bureau; data adjusted by the U.S. Geological Survey.

TABLE 4c  
U.S. IMPORTS FOR CONSUMPTION OF COBALT THROUGH MAY 2007, BY COUNTRY<sup>1</sup>

(Kilograms, 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 month <sup>5</sup>	Cobalt content, year to date <sup>5,6</sup>
	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>		
2006:								
May	640,000	\$19,300,000	102,000	\$2,360,000	195,000	\$2,450,000	790,000	5,030,000
June	969,000	29,500,000	42,700	1,220,000	278,000	2,310,000	1,080,000	6,110,000
July	741,000	21,800,000	85,500	2,230,000	286,000	3,030,000	900,000	7,010,000
August	694,000	21,300,000	91,700	2,260,000	217,000	1,850,000	825,000	7,840,000
September	1,110,000	36,100,000	105,000	2,770,000	83,600	874,000	1,210,000	9,050,000
October	579,000	20,800,000	103,000	2,730,000	170,000	1,800,000	706,000	9,760,000
November	720,000	23,500,000	113,000	3,280,000	105,000	982,000	830,000	10,600,000
December	917,000	32,300,000	115,000	3,040,000	68,400	533,000	1,020,000	11,600,000
January-May	4,220,000	117,000,000	519,000	11,900,000	1,120,000	12,900,000	5,030,000	XX
January-December	9,950,000	302,000,000	1,180,000	29,400,000	2,330,000	24,200,000	11,600,000	XX
2007:								
January	788,000	34,800,000	91,400	2,940,000	193,000	1,900,000	906,000	906,000
February	686,000	32,300,000	111,000	4,230,000	141,000	1,980,000	807,000	1,710,000
March	690,000	34,000,000	83,200	3,360,000	87,300	1,040,000	772,000	2,490,000
April	834,000	44,900,000	69,400	3,010,000	145,000	2,210,000	929,000	3,410,000
May:								
Australia	110,000	6,870,000	--	--	--	--	110,000	275,000
Belgium	18,800	1,080,000	38,000	1,720,000	1,180	15,700	46,500	237,000
Brazil	20,000	1,260,000	--	--	2,270	46,800	20,800	20,800
Canada	126,000	7,400,000	1	4,560	--	--	126,000	554,000
China	111,000	6,200,000	20,000	747,000	128,000	2,350,000	168,000	550,000
Congo (Kinshasa)	10,000	491,000	--	--	--	--	10,000	40,000
Finland	83,900	2,020,000	69,500	3,190,000	53,700	1,030,000	152,000	290,000
France	864	78,900	418	12,500	--	--	1,170	10,200
Germany	1,360	88,200	--	--	--	--	1,360	8,300
India	--	--	765	67,500	18,000	180,000	5,410	19,500
Japan	21,400	1,200,000	--	--	--	--	21,400	70,300
Korea, Republic of	--	--	--	--	--	--	--	22,500
Morocco	60,000	3,680,000	--	--	--	--	60,000	197,000
Norway	206,000	11,800,000	--	--	--	--	206,000	1,050,000
Philippines	--	--	--	--	--	--	--	42
Russia	49,500	3,060,000	--	--	--	--	49,500	616,000
South Africa	500	33,300	--	--	--	--	500	81,500
Sweden	--	--	--	--	--	--	--	1,840
Uganda	43,200	2,340,000	--	--	--	--	43,200	93,700
United Kingdom	96	6,160	7,000	355,000	45,700	342,000	17,300	75,900
Zambia	20,000	1,260,000	--	--	--	--	20,000	255,000
Total	882,000	48,900,000	136,000	6,100,000	249,000	3,960,000	1,060,000	4,470,000
January-May	3,880,000	195,000,000	491,000	19,600,000	816,000	11,100,000	4,470,000	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.

Source: U.S. Census Bureau; data adjusted by the U.S. Geological Survey.

TABLE 5a

U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS THROUGH MARCH 2007, BY COUNTRY<sup>1</sup>

(Kilograms, 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>	Quantity	Value <sup>2</sup>	Quantity	Value <sup>2</sup>
2006:						
March	1,570	\$74,900	55,200	\$731,000	25,100	\$1,940,000
April	1,050	60,800	29,000	421,000	26,700	1,820,000
May	864	78,800	26,800	450,000	23,600	1,690,000
June	233	19,300	149,000	1,780,000	23,300	1,680,000
July	1,950	26,400	47,900	519,000	23,700	1,920,000
August	21,200	676,000	51,300	708,000	18,300	1,470,000
September	447	39,700	54,400	677,000	14,200	1,360,000
October	3,860	196,000	62,200	926,000	16,700	1,210,000
November	350	42,000	62,200	632,000	18,900	1,780,000
December	342	39,400	59,400	1,010,000	19,900	1,550,000
January-March	3,340	143,000	183,000	2,260,000	52,300	4,160,000
January-December	33,600	1,320,000	726,000	9,390,000	238,000	18,600,000
2007:						
January	4,210	136,000	61,200	683,000	14,100	1,350,000
February	515	63,400	67,500	904,000	16,200	1,450,000
March:						
Austria	252	15,800	18,100	123,000	--	--
Belgium	--	--	--	--	114	7,350
Canada	--	--	--	--	3,070	588,000
China	--	--	--	--	2,180	129,000
France	--	--	257	10,500	1,900	161,000
Germany	265	43,000	55,700	569,000	725	14,700
India	--	--	51,700	341,000	--	--
Ireland	--	--	9,480	135,000	--	--
Japan	200	12,700	--	--	1,450	54,400
Korea , Republic of	--	--	4,000	10,000	--	--
Mexico	--	--	--	--	293	3,790
Singapore	--	--	126	2,480	--	--
Sweden	77	18,300	--	--	--	--
Thailand	--	--	2,580	44,500	--	--
United Kingdom	--	--	30,500	421,000	6,130	600,000
Total	794	89,700	172,000	1,660,000	15,900	1,560,000
January-March	5,520	289,000	301,000	3,240,000	46,200	4,360,000

-- 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.

Source: U.S. Census Bureau.

TABLE 5b  
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS THROUGH APRIL 2007, BY COUNTRY<sup>1</sup>

(Kilograms, 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>	Quantity	Value <sup>2</sup>	Quantity	Value <sup>2</sup>
2006:						
April	1,050	\$60,800	29,000	\$421,000	26,700	\$1,820,000
May	864	78,800	26,800	450,000	23,600	1,690,000
June	233	19,300	149,000	1,780,000	23,300	1,680,000
July	1,950	26,400	47,900	519,000	23,700	1,920,000
August	21,200	676,000	51,300	708,000	18,300	1,470,000
September	447	39,700	54,400	677,000	14,200	1,360,000
October	3,860	196,000	62,200	926,000	16,700	1,210,000
November	350	42,000	62,200	632,000	18,900	1,780,000
December	342	39,400	59,400	1,010,000	19,900	1,550,000
January-April	4,390	203,000	212,000	2,680,000	79,000	5,970,000
January-December	33,600	1,320,000	726,000	9,390,000	238,000	18,600,000
2007:						
January	4,210	136,000	61,200	683,000	14,100	1,350,000
February	515	63,400	67,500	904,000	16,200	1,450,000
March	794	89,700	172,000	1,660,000	15,900	1,560,000
April:						
Austria	342	19,300	--	--	--	--
Belgium	191	8,140	--	--	--	--
Canada	--	--	11,100	309,000	2,690	552,000
Finland	338	64,400	--	--	--	--
France	--	--	9,930	166,000	1,840	183,000
Germany	--	--	61,900	837,000	3,340	276,000
India	--	--	19,500	161,000	9,560	40,300
Ireland	--	--	28,200	403,000	--	--
Japan	400	26,400	4,150	70,400	2,300	113,000
Mexico	--	--	--	--	83	2,110
Sweden	211	41,400	--	--	--	--
Tunisia	--	--	5,090	57,500	--	--
United Kingdom	50	4,130	46,200	716,000	5,680	455,000
Total	1,530	164,000	186,000	2,720,000	25,500	1,620,000
January-April	7,050	453,000	487,000	5,960,000	71,600	5,980,000

-- 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.

Source: U.S. Census Bureau.

TABLE 5c  
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS THROUGH MAY 2007, BY COUNTRY<sup>1</sup>

(Kilograms, 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>	Quantity	Value <sup>2</sup>	Quantity	Value <sup>2</sup>
2006:						
May	864	\$78,800	26,800	\$450,000	23,600	\$1,690,000
June	233	19,300	149,000	1,780,000	23,300	1,680,000
July	1,950	26,400	47,900	519,000	23,700	1,920,000
August	21,200	676,000	51,300	708,000	18,300	1,470,000
September	447	39,700	54,400	677,000	14,200	1,360,000
October	3,860	196,000	62,200	926,000	16,700	1,210,000
November	350	42,000	62,200	632,000	18,900	1,780,000
December	342	39,400	59,400	1,010,000	19,900	1,550,000
January-May	5,260	282,000	239,000	3,130,000	103,000	7,670,000
January-December	33,600	1,320,000	726,000	9,390,000	238,000	18,600,000
2007:						
January	4,210	136,000	61,200	683,000	14,100	1,350,000
February	515	63,400	67,500	904,000	16,200	1,450,000
March	794	89,700	172,000	1,660,000	15,900	1,560,000
April	1,530	164,000	186,000	2,720,000	25,500	1,620,000
May:						
Austria	90	3,950	--	--	--	--
Belgium	--	--	--	--	66	7,120
Canada	--	--	2,630	34,700	3,220	710,000
China	--	--	--	--	2,000	132,000
Finland	400	74,400	--	--	--	--
France	--	--	1,770	30,300	96	36,800
Germany	--	--	62,000	1,080,000	3,350	167,000
Ireland	--	--	15,400	221,000	--	--
Japan	200	13,500	17,500	230,000	900	50,500
Malaysia	--	--	--	--	10	12,800
Morocco	15,000	905,000	--	--	--	--
Sweden	50	10,400	--	--	--	--
Taiwan	--	--	--	--	10	2,300
Tunisia	--	--	5,630	60,000	--	--
United Kingdom	70	9,540	14,700	88,400	9,130	489,000
Total	15,800	1,020,000	120,000	1,740,000	18,800	1,610,000
January-May	22,900	1,470,000	607,000	7,700,000	90,400	7,590,000

-- 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.

Source: U.S. Census Bureau.

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

(Kilograms, 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 month <sup>5</sup>	Cobalt content, year to date <sup>5,6</sup>
	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>		
2006:								
March	232,000	\$9,530,000	93,800	\$2,030,000	76,300	\$518,000	318,000	678,000
April	326,000	12,700,000	123,000	2,710,000	19,900	177,000	419,000	1,100,000
May	134,000	4,780,000	83,300	2,060,000	79,800	461,000	213,000	1,310,000
June	157,000	3,980,000	66,000	1,680,000	50,300	111,000	217,000	1,530,000
July	150,000	4,890,000	63,300	1,370,000	33,200	224,000	203,000	1,730,000
August	130,000	3,650,000	91,000	2,180,000	64,900	390,000	211,000	1,940,000
September	165,000	4,500,000	109,000	3,010,000	20,900	163,000	249,000	2,190,000
October	235,000	3,650,000	62,300	1,800,000	15,500	168,000	284,000	2,470,000
November	109,000	2,200,000	91,200	2,180,000	31,500	171,000	183,000	2,660,000
December	103,000	2,750,000	114,000	3,020,000	48,100	293,000	196,000	2,850,000
January-March	424,000	17,300,000	294,000	6,810,000	171,000	1,140,000	678,000	XX
January-April	750,000	30,100,000	417,000	9,520,000	191,000	1,320,000	1,100,000	XX
January-May	884,000	34,900,000	500,000	11,600,000	271,000	1,780,000	1,310,000	XX
January-December	1,930,000	60,500,000	1,100,000	26,800,000	535,000	3,300,000	2,850,000	XX
2007:								
January	92,800	3,720,000	90,800	3,480,000	41,800	208,000	168,000	168,000
February	439,000	7,060,000	105,000	3,630,000	38,400	417,000	524,000	692,000
March	113,000	4,520,000	93,600	3,420,000	6,050	106,000	182,000	874,000
April	164,000	4,880,000	134,000	5,580,000	4,680	153,000	262,000	1,140,000
May	223,000	6,840,000	94,000	3,170,000	20,800	218,000	296,000	1,430,000
January-March	645,000	15,300,000	289,000	10,500,000	86,200	730,000	874,000	XX
January-April	809,000	20,200,000	423,000	16,100,000	90,900	884,000	1,140,000	XX
January-May	1,030,000	27,000,000	517,000	19,300,000	112,000	1,100,000	1,430,000	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; data adjusted by the U.S. Geological Survey.

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

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value <sup>2</sup>	Quantity	Value <sup>2</sup>
2006:				
March	219,000	\$8,340,000	28,000	\$893,000
April	183,000	8,250,000	69,200	1,170,000
May	115,000	5,260,000	19,700	493,000
June	112,000	6,110,000	31,800	423,000
July	130,000	7,020,000	81,200	1,320,000
August	140,000	6,350,000	6,690	162,000
September	165,000	8,040,000	107,000	585,000
October	178,000	8,400,000	59,700	1,410,000
November	209,000	9,960,000	20,800	716,000
December	185,000	7,980,000	59,200	1,700,000
January-March	564,000	23,000,000	39,500	1,160,000
January-April	747,000	31,300,000	109,000	2,330,000
January-May	862,000	36,500,000	128,000	2,820,000
January-December	1,980,000	90,400,000	495,000	9,130,000
2007:				
January	155,000	8,360,000	10,400	436,000
February	93,000	5,870,000	13,600	713,000
March	126,000	7,950,000	21,800	1,050,000
April	128,000	8,040,000	134,000	1,950,000
May	123,000	7,450,000	19,800	883,000
January-March	374,000	22,200,000	45,800	2,200,000
January-April	502,000	30,200,000	180,000	4,150,000
January-May	625,000	37,700,000	200,000	5,040,000

<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.

Source: U.S. Census Bureau; data adjusted by the U.S. Geological Survey.