

Mineral Industry Surveys

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COBALT IN JULY 2005

Preliminary data for 2004 and 2005 indicate that U.S. cobalt consumption during January through July 2005 was 7% higher than that consumed during the first 7 months of 2004, according to the U.S. Geological Survey.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 28% higher in January through June 2005 than that during the same period in 2004. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 8% lower in January through June 2005 than that during the same period in 2004.

Price

U.S. spot prices for electrolytic cobalt, in dollars per pound from Platts Metals Week, are listed below.

<u>Date</u>	<u>Price range</u>
August 25	16.25-17.00
September 1	16.50-17.00
September 8	16.00-16.75
September 15	16.00-16.75
September 22	15.50-16.00

<u>Month</u>	<u>Average price</u>
August	16.57

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2004:				
July	245	155	162	562
August	234	161	162	557
September	232	163	162	558
October	304	154	162	620
November	257	159	162	578
December	260	164	162	587
January-July ^r	1,620	1,220	1,180	4,020
January-December ⁴	2,910	2,020	1,990	6,920
2005:				
January	281	175	168	624
February	296	178	168	641
March	247	200	168	615
April	262	176	168	606
May	261 ^r	179 ^r	168	608 ^r
June	255	202	168	625
July	245	174	168	587
January-July	1,850	1,280	1,180	4,310

^rRevised.

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

²Includes metal powder.

³Data may include other cobalt materials.

⁴Data based on monthly reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE¹

(Metric tons, contained cobalt)

End use	2004		2005	
	January- July ^r	January- December ²	July	January- July ³
Steel	255	440	50	348
Superalloys	1,760	3,100	256	1,910
Magnetic alloys	197	344	18	132
Other alloys ⁴	W	W	W	W
Cemented carbides ⁵	406	700	62	444
Chemical and ceramic uses ⁶	1,250	2,060	179	1,310
Miscellaneous and unspecified	158	270	23	158
Total	4,020	6,920	587	4,310

^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

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

²Data based on monthly reports.

³May include revisions to prior months.

⁴Includes nonferrous alloys, welding materials, and wear-resistant alloys.

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

⁶Includes 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 MATERIALS¹

(Metric tons, contained cobalt)

Period	Industry ²			U.S. Government, metal ⁵	
	Metal ³	Oxide and other chemical compounds ⁴	Scrap		
Total					
2004:					
July	343	189	104	636	2,740
August	329	201	104	634	2,730
September	332	196	104	631	2,700
October	308	217	104	629	2,700
November	324	216	104	644	2,700
December ⁶	323	210	104	637	2,660
2005:					
January	349	200	154	703	2,590
February	349	210	154	713	2,540
March	344	195	154	692	2,340
April	341	207	154	702	2,220
May	349	200	154	703	2,180
June	346	185	154	685	2,070
July	369	199	154	722	1,930

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

²Stocks reported by cobalt processors and consumers.

³Includes metal powder.

⁴Data may include other cobalt materials.

⁵Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁶Data based on monthly reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY¹

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

Period and country of origin	Metals ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2004:								
June	609,000	\$30,600,000	148,000	\$6,170,000	158,000	\$2,240,000	763,000	4,400,000
July	458,000	18,700,000	117,000	4,790,000	182,000	2,210,000	599,000	5,000,000
August	371,000	20,100,000	102,000	3,960,000	124,000	1,860,000	483,000	5,480,000
September	666,000	32,600,000	101,000	3,770,000	196,000	2,430,000	799,000	6,280,000
October	598,000	27,500,000	124,000	4,550,000	146,000	2,090,000	731,000	7,010,000
November	578,000	25,300,000	98,200	3,540,000	97,200	1,400,000	678,000	7,690,000
December:	907,000	35,300,000	90,400	3,020,000	175,000	2,290,000	1,030,000	8,720,000
January-June	3,670,000	151,000,000	666,000	21,500,000	796,000	9,800,000	4,400,000	XX
January-December	7,250,000	311,000,000	1,300,000	45,100,000	1,720,000	22,100,000	8,720,000	XX
2005:								
January	727,000	27,000,000	128,000	4,010,000	230,000	2,860,000	897,000	897,000
February	892,000	35,600,000	95,400	2,660,000	191,000	2,730,000	1,030,000	1,930,000
March	544,000	21,000,000	183,000	5,640,000	215,000	2,690,000	747,000	2,680,000
April	818,000	29,800,000	75,100	1,950,000	98,600	1,230,000	907,000	3,590,000
May	885,000	29,900,000	87,600	2,570,000	173,000	1,660,000	1,000,000	4,580,000
June:								
Australia	140,000	4,510,000	--	--	--	--	140,000	241,000
Belgium	19,000	448,000	19,300	568,000	--	--	32,900	446,000
Brazil	40,100	1,300,000	--	--	--	--	40,100	160,000
Canada	58,800	2,260,000	1	4,430	--	--	58,800	471,000
China	25,400	1,020,000	8,480	213,000	77,700	712,000	56,100	467,000
Colombia	--	--	--	--	--	--	--	176
Congo (Kinshasa)	--	--	--	--	--	--	--	19,900
Finland	110,000	4,070,000	19,900	556,000	44,000	721,000	142,000	520,000
France	5,970	362,000	3,900	178,000	--	--	8,780	26,800
Germany	--	--	648	70,000	--	--	467	6,910
India	--	--	--	--	32,400	226,000	8,750	59,800
Japan	11,300	583,000	--	--	--	--	11,300	118,000
Korea, Republic of	16,700	304,000	--	--	--	--	16,700	23,200
Morocco	30,000	1,030,000	--	--	--	--	30,000	140,000
Norway	257,000	8,690,000	--	--	--	--	257,000	1,420,000
Philippines	--	--	--	--	9,070	137,000	3,480	18,000
Russia	89,900	2,430,000	--	--	--	--	89,900	600,000
South Africa	--	--	20,000	705,000	--	--	14,400	186,000
Sweden	--	--	--	--	--	--	--	1,220
Switzerland	--	--	--	--	--	--	--	2
Taiwan	--	--	--	--	--	--	--	1,440
Uganda	--	--	--	--	--	--	--	60,300
United Kingdom	--	--	19,400	326,000	23,900	259,000	19,800	119,000
Zambia	100,000	3,110,000	--	--	--	--	100,000	508,000
Total	904,000	30,100,000	91,600	2,620,000	187,000	2,050,000	1,030,000	5,620,000
January-June	4,770,000	173,000,000	660,000	19,500,000	1,090,000	13,200,000	5,620,000	XX

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 prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

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

(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 ²	Quantity	Value ²	Quantity	Value ²
2004:						
June	3,330	\$163,000	111,000	\$1,510,000	15,700	\$1,170,000
July	14,100	687,000	57,400	955,000	20,400	1,430,000
August	949	62,800	118,000	1,380,000	9,380	858,000
September	7,310	106,000	39,400	411,000	29,500	1,760,000
October	5,710	318,000	55,400	579,000	11,300	856,000
November	6,500	366,000	38,200	366,000	38,900	2,570,000
December	1,650	76,700	93,600	815,000	27,500	1,990,000
January-June	39,300	1,590,000	615,000	6,360,000	93,100	5,980,000
January-December	75,500	3,210,000	1,020,000	10,900,000	230,000	15,400,000
2005:						
January	5,110	190,000	72,000	463,000	12,400	938,000
February	89	16,700	24,100	380,000	18,800	1,360,000
March	1,100	52,200	82,000	887,000	15,800	1,100,000
April	1,080	65,100	47,400	571,000	31,700	2,030,000
May	11,100	348,000	75,400	845,000	21,300	1,550,000
June:						
Belgium	--	--	--	--	9	5,000
Canada	--	--	58,200	260,000	1,750	281,000
China	--	--	--	--	174	14,100
France	--	--	9,020	160,000	518	36,400
Germany	--	--	7,290	182,000	3,470	340,000
India	--	--	18,000	86,800	--	--
Ireland	--	--	12,900	195,000	--	--
Italy	--	--	--	--	6	43,800
Japan	500	33,000	3,460	60,900	2,110	92,100
Malaysia	--	--	222	3,880	--	--
Netherlands	--	--	--	--	1,560	19,200
Saudi Arabia	--	--	808	9,870	--	--
Slovakia	--	--	--	--	11	3,310
Sweden	--	--	--	--	1	12,000
Taiwan	--	--	2,560	32,100	--	--
Tunisia	--	--	2,250	37,200	--	--
United Kingdom	--	--	5,170	30,900	10,900	693,000
Total	500	33,000	120,000	1,060,000	20,500	1,540,000
January-June	19,000	705,000	421,000	4,200,000	121,000	8,520,000

-- Zero.

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

²Customs value.

Source: U.S. Census Bureau.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS¹

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

Period	Unwrought cobalt, powders, matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2004:								
June	134,000	\$5,520,000	11,300	\$440,000	17,700	\$215,000	147,000	1,360,000
July	203,000	8,580,000	15,400	527,000	41,700	480,000	224,000	1,580,000
August	289,000	7,150,000	41,100	2,060,000	66,200	683,000	334,000	1,920,000
September	118,000	5,300,000	2,450	66,300	29,100	270,000	127,000	2,050,000
October	127,000	4,700,000	20,100	671,000	12,700	136,000	145,000	2,190,000
November	119,000	5,750,000	20,700	693,000	125,000	360,000	164,000	2,360,000
December	130,000	4,350,000	7,690	180,000	56,000	381,000	149,000	2,500,000
January-June	1,120,000	43,500,000	216,000	9,630,000	335,000	3,170,000	1,360,000	XX
January-December	2,110,000	79,400,000	324,000	13,800,000	666,000	5,490,000	2,500,000	XX
2005:								
January	122,000	5,590,000	27,300	596,000	59,600	398,000	156,000	156,000
February	120,000	3,990,000	52,200	1,610,000	118,000	363,000	186,000	342,000
March	107,000	4,650,000	57,500	1,260,000	145,000	489,000	183,000	525,000
April	154,000	6,380,000	36,900	862,000	36,500	380,000	189,000	714,000
May	207,000	5,980,000	93,500	2,250,000	36,600	205,000	283,000	998,000
June	170,000	5,710,000	107,000	1,860,000	26,300	217,000	254,000	1,250,000
January-June	880,000	32,300,000	375,000	8,440,000	423,000	2,050,000	1,250,000	XX

XX Not applicable.

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.

⁶Year to date may include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,
AND CONCENTRATES¹

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

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value ²	Quantity	Value ²
2004:				
June	113,000	\$3,610,000	22,700	\$1,190,000
July	89,600	3,520,000	14,100	709,000
August	135,000	4,480,000	47,000	568,000
September	69,000	3,720,000	2,500	96,800
October	107,000	5,210,000	12,700	134,000
November	119,000	5,090,000	34,800	213,000
December	85,300	4,620,000	25,300	60,100
January-June	542,000	21,700,000	781,000	18,800,000
January-December	1,150,000	48,400,000	917,000	20,600,000
2005:				
January	184,000	6,490,000	69,000	2,800,000
February	235,000	8,710,000	8,390	254,000
March	147,000	6,540,000	40,700	556,000
April	184,000	6,530,000	33,000	818,000
May	129,000	6,080,000	49,200	1,300,000
June	230,000	9,230,000	36,200	1,200,000
January-June	1,110,000	43,600,000	237,000	6,920,000

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

²Free alongside ship (f.a.s.) value.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.