

Mineral Industry Surveys

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COBALT IN APRIL 2005

Preliminary data for 2004 and 2005 indicate that U.S. cobalt consumption during January through April 2005 was 6% higher than that consumed during the first 4 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 7% higher in January through March 2005 than that during the same period in 2004. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 32% lower in January through March 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>
May 5	15.50-16.25
May 12	15.15-15.75
May 19	15.15-16.20
May 26	14.85-16.00
June 2	14.85-15.80

<u>Month</u>	<u>Average price</u>
May	15.61

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:				
April	222	169	169	561
May	220	156	172	547
June	223	179	171	573
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-April ^r	935	731	674	2,340
January-December ⁴	2,910	2,020	1,990	6,920
2005:				
January	281	175	168	624
February	296 ^r	178	168	641 ^r
March	247 ^r	200 ^r	168	615 ^r
April	262	176	168	606
January-April	1,090	729	672	2,490

^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- April	January- December ²	April	January- April ³
Steel	142	440	49	198
Superalloys	1,020	3,100	273	1,120
Magnetic alloys	114	344	19	77
Other alloys ⁴	W	W	W	W
Cemented carbides ⁵	235 ^r	700	63	259
Chemical and ceramic uses ⁶	744 ^r	2,060	179	743
Miscellaneous and unspecified	90	270	23	90
Total	2,340 ^r	6,920	606	2,490

^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			Total	U.S. Government, metal ⁵
	Metal ³	Oxide and other chemical compounds ⁴	Scrap		
2004:					
April	338	207	104	650	2,980
May	338	202	104	644	2,860
June	334	202	104	640	2,800
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 ^r	195 ^r	154	692 ^r	2,340
April	341	207	154	702	2,220

^rRevised.

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:								
March	680,000	\$29,900,000	126,000	\$4,290,000	119,000	\$1,030,000	804,000	2,500,000
April	591,000	28,000,000	81,100	2,630,000	130,000	1,910,000	690,000	3,190,000
May	404,000	20,300,000	40,100	1,760,000	38,900	613,000	446,000	3,640,000
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-March	2,070,000	72,400,000	396,000	10,900,000	469,000	5,030,000	2,500,000	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:								
Australia	22,600	852,000	--	--	--	--	22,600	34,100
Belgium	19,000	580,000	66,600	2,260,000	--	--	66,900	256,000
Brazil	--	--	--	--	--	--	--	20,000
Canada	91,300	3,460,000	--	--	--	--	91,300	275,000
China	56,500	2,220,000	14,900	361,000	52,100	727,000	87,200	229,000
Colombia	--	--	--	--	--	--	--	176
Congo (Kinshasa)	--	--	--	--	--	--	--	19,900
Finland	32,100	1,510,000	52,400	1,460,000	89,700	1,200,000	101,000	272,000
France	4,480	241,000	3,840	258,000	--	--	7,250	13,700
Germany	364	17,600	324	35,900	--	--	597	4,450
India	--	--	--	--	34,200	269,000	9,230	28,700
Japan	14,600	828,000	--	--	--	--	14,600	53,300
Korea, Republic of	--	--	--	--	--	--	--	60
Morocco	20,000	666,000	--	--	--	--	20,000	50,000
Norway	116,000	4,450,000	--	--	--	--	116,000	685,000
Philippines	--	--	--	--	21,000	303,000	7,030	11,200
Russia	85,400	3,150,000	--	--	--	--	85,400	226,000
South Africa	41,300	1,550,000	--	--	--	--	41,300	122,000
Switzerland	--	--	--	--	--	--	--	1
Taiwan	--	--	1,000	36,000	--	--	720	1,440
Uganda	20,300	790,000	--	--	--	--	20,300	39,700
United Kingdom	247	10,100	43,500	1,230,000	17,600	185,000	36,100	75,600
Zambia	20,000	658,000	--	--	--	--	20,000	261,000
Total	544,000	21,000,000	183,000	5,640,000	215,000	2,690,000	747,000	2,680,000
January-March	2,160,000	83,500,000	406,000	12,300,000	635,000	8,280,000	2,680,000	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:						
March	6,630	\$363,000	102,000	\$1,030,000	20,500	\$1,290,000
April	13,300	548,000	123,000	1,190,000	10,400	843,000
May	9,330	299,000	78,000	514,000	15,000	1,020,000
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-March	13,300	581,000	304,000	3,150,000	52,000	2,950,000
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:						
Belgium	--	--	--	--	30	2,740
Canada	--	--	--	--	1,870	369,000
Czech Republic	--	--	--	--	2	3,400
France	--	--	17,200	296,000	60	18,400
Germany	--	--	1,020	22,700	2,650	84,600
India	--	--	--	--	951	43,200
Ireland	--	--	9,800	140,000	--	--
Israel	--	--	210	3,150	--	--
Japan	600	37,300	13,700	148,000	2,400	96,800
Morocco	500	14,900	--	--	--	--
Taiwan	--	--	2,680	27,200	6	3,310
United Kingdom	--	--	37,400	250,000	7,860	474,000
Total	1,100	52,200	82,000	887,000	15,800	1,100,000
January-March	6,290	259,000	178,000	1,730,000	47,000	3,400,000

-- 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:								
March	232,000	\$9,740,000	11,400	\$359,000	78,700	\$708,000	260,000	776,000
April	154,000	6,530,000	14,600	531,000	82,700	867,000	185,000	960,000
May	205,000	8,000,000	62,000	3,130,000	14,600	166,000	254,000	1,210,000
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-March	630,000	23,500,000	129,000	5,530,000	220,000	1,930,000	776,000	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
January-March	349,000	14,200,000	137,000	3,460,000	323,000	1,250,000	525,000	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:				
March	77,000	\$3,840,000	123,000	\$6,140,000
April	78,100	3,300,000	110,000	1,600,000
May	129,000	4,920,000	103,000	2,250,000
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-March	222,000	9,920,000	545,000	13,800,000
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
January-March	566,000	21,700,000	118,000	3,610,000

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.