

Mineral Industry Surveys

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COBALT IN MARCH 2005

Preliminary data for 2004 and 2005 indicate that U.S. cobalt consumption during January through March 2005 was 6% higher than that consumed during the first 3 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 14% higher in January through February 2005 than that during the same period in 2004. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 34% lower in January through February 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>
April 14	16.95-17.75
April 21	17.00-17.50
April 28	16.45-17.00

<u>Month</u>	<u>Average price</u>
March	16.20
April	17.24

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:				
March	212	165	175	552
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-March ^r	713	561	505	1,780
January-December ⁴	2,910	2,020	1,990	6,920
2005:				
January	281 ^r	175 ^r	168	624 ^r
February	295 ^r	178 ^r	168	640 ^r
March	248	201	168	617
January-March	824	554	504	1,880

^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- March ^r	January- December ²	March	January- March ³
Steel	106	440	48	150
Superalloys	769	3,100	259	848
Magnetic alloys	86	344	19	58
Other alloys ⁴	W	W	W	W
Cemented carbides ⁵	178	700	63	194
Chemical and ceramic uses ⁶	572	2,060	205	564
Miscellaneous and unspecified	68	270	23	68
Total	1,780	6,920	617	1,880

^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:					
March	363	218	104	685	3,120
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 ^r	200 ^r	154 ^r	703 ^r	2,590
February	349 ^r	210 ^r	154 ^r	713 ^r	2,540
March	349	194	154	696	2,340

^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:								
February	862,000	\$25,400,000	139,000	\$3,940,000	178,000	\$2,380,000	1,020,000	1,700,000
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-February	1,390,000	42,500,000	270,000	6,650,000	351,000	4,000,000	1,700,000	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:								
Australia	--	--	--	--	--	--	--	11,500
Belgium	43,100	1,520,000	22,800	733,000	18,100	330,000	67,900	189,000
Brazil	20,000	794,000	--	--	--	--	20,000	20,000
Canada	73,800	2,990,000	--	--	--	--	73,800	184,000
China	14,500	443,000	26,000	563,000	64,400	1,120,000	62,100	141,000
Colombia	--	--	--	--	--	--	--	176
Congo (Kinshasa)	9,970	352,000	--	--	--	--	9,970	19,900
Finland	54,700	2,200,000	29,300	817,000	59,100	757,000	98,300	171,000
France	938	66,500	1,670	112,000	--	--	2,140	6,470
Germany	--	--	--	--	--	--	--	3,860
India	--	--	--	--	18,000	161,000	4,860	19,400
Japan	20,900	1,230,000	130	6,600	--	--	21,000	38,700
Korea, Republic of	--	--	--	--	--	--	--	60
Morocco	10,000	332,000	--	--	--	--	10,000	30,000
Norway	485,000	19,400,000	--	--	--	--	485,000	569,000
Philippines	--	--	--	--	--	--	--	4,170
Russia	--	--	--	--	--	--	--	141,000
South Africa	40,000	1,600,000	--	--	--	--	40,000	81,000
Switzerland	--	--	2	4,060	--	--	1	1
Taiwan	--	--	1,000	34,300	--	--	720	720
Uganda	19,400	696,000	--	--	--	--	19,400	19,400
United Kingdom	500	28,600	14,500	395,000	31,400	356,000	18,900	39,500
Zambia	99,400	3,880,000	--	--	--	--	99,400	241,000
Total	892,000	35,600,000	95,400	2,660,000	191,000	2,730,000	1,030,000	1,930,000
January-February	1,620,000	62,500,000	223,000	6,680,000	421,000	5,590,000	1,930,000	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:						
February	4,450	\$118,000	152,000	\$1,500,000	20,000	\$856,000
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-February	6,700	218,000	201,000	2,110,000	31,500	1,660,000
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:						
Canada	14	3,380	957	8,120	1,830	381,000
France	--	--	--	--	948	96,100
Germany	75	13,400	6,740	172,000	209	27,300
Ireland	--	--	7,140	104,000	--	--
Japan	--	--	1,660	22,800	3,840	151,000
Singapore	--	--	3,620	23,900	--	--
South Africa	--	--	996	15,400	--	--
Switzerland	--	--	--	--	5	15,500
Tunisia	--	--	2,980	34,100	--	--
United Kingdom	--	--	--	--	12,000	694,000
Total	89	16,700	24,100	380,000	18,800	1,360,000
January-February	5,190	207,000	96,100	843,000	31,200	2,300,000

-- 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:								
February	214,000	\$9,000,000	80,500	\$3,750,000	65,800	\$761,000	288,000	516,000
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-February	398,000	13,700,000	117,000	5,180,000	141,000	1,220,000	516,000	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
January-February	242,000	9,570,000	79,400	2,200,000	178,000	761,000	342,000	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:				
February	94,600	\$3,680,000	295,000	\$3,290,000
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-February	145,000	6,080,000	421,000	7,610,000
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
January-February	419,000	15,200,000	77,400	3,050,000

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.