

Mineral Industry Surveys

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COBALT IN JANUARY 2005

U.S. cobalt consumption in January 2005 was nearly equal in amount to that consumed during December 2004, according to the U.S. Geological Survey. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 8% higher in 2004 than that imported during 2003. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 8% lower in 2004 than that of 2003. Trade data for January 2005 will be available in a subsequent issue.

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>
February 10	18.20-19.00
February 17	17.50-18.00
February 24	17.00-17.40
March 3	15.90-16.50
March 10	15.35-15.75
March 17	14.85-15.20

<u>Month</u>	<u>Average price</u>
February	18.08

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:				
January	246	219	172	636
February	254	178	158	590
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-December ⁴	2,910	2,020	1,990	6,920
2005:				
January	286	147	162	595

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
	January	January- December ²	
Steel	35 ^r	440	37
Superalloys	274 ^r	3,100	294
Magnetic alloys	27 ^r	344	28
Other alloys ³	W	W	W
Cemented carbides ⁴	55 ^r	700	63
Chemical and ceramic uses ⁵	222 ^r	2,060	151
Miscellaneous and unspecified	23	270	23
Total	636	6,920	595

^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.

³Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁴Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁵Includes 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:					
January	358	204	104	666	3,900
February	325	193	104	622	3,410
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	319	206	104	629	2,590

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		
2003:								
December	632,000	\$16,300,000	131,000	\$2,540,000	121,000	\$996,000	770,000	8,080,000
January-December	6,700,000	135,000,000	1,370,000	23,000,000	1,350,000	8,350,000	8,080,000	XX
2004:								
January	525,000	17,100,000	131,000	2,710,000	172,000	1,620,000	677,000	677,000
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:								
Australia	19,000	531,000	--	--	--	--	19,000	448,000
Belgium	23,100	827,000	52,000	1,720,000	--	--	60,500	992,000
Brazil	10,000	353,000	--	--	--	--	10,000	16,400
Bulgaria	--	--	--	--	--	--	--	3,450
Canada	88,600	3,810,000	--	--	--	--	88,600	1,130,000
China	80,500	3,970,000	6,500	158,000	56,100	636,000	103,000	701,000
Colombia	--	--	--	--	--	--	--	694
Congo (Kinshasa)	7,000	346,000	--	--	--	--	7,000	15,600
Finland	48,200	2,210,000	28,900	989,000	39,500	747,000	84,100	874,000
France	2,150	169,000	2,000	104,000	--	--	3,590	73,800
Germany	2,070	104,000	--	--	--	--	2,070	37,000
Hong Kong	2,970	116,000	--	--	--	--	2,970	2,970
India	--	--	--	--	54,000	489,000	14,600	46,400
Italy	--	--	--	--	--	--	--	819
Japan	20,800	1,360,000	--	--	--	--	20,800	178,000
Korea, Republic of	34,300	680,000	--	--	--	--	34,300	71,100
Mexico	--	--	--	--	--	--	--	629
Netherlands	--	--	--	--	--	--	--	14
Norway	134,000	5,270,000	--	--	--	--	134,000	1,420,000
Philippines	--	--	--	--	9,070	209,000	4,170	26,600
Russia	287,000	10,200,000	--	--	--	--	287,000	1,630,000
South Africa	--	--	--	--	--	--	--	110,000
Spain	--	--	--	--	--	--	--	1,120
Sweden	2,600	80,200	--	--	--	--	2,600	8,270
Switzerland	--	--	--	--	--	--	--	4,700
Taiwan	--	--	1,000	40,800	--	--	720	30,600
Uganda	19,700	689,000	--	--	--	--	19,700	50,200
United Kingdom	172	10,500	1	2,180	16,100	209,000	4,230	226,000
Zambia	124,000	4,560,000	--	--	--	--	124,000	618,000
Total	907,000	35,300,000	90,400	3,020,000	175,000	2,290,000	1,030,000	8,720,000
January-December	7,250,000	311,000,000	1,300,000	45,100,000	1,720,000	22,100,000	8,720,000	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
2003:						
December	2,140	\$66,400	53,400	\$432,000	13,100	\$1,010,000
January-December	29,000	717,000	482,000	3,970,000	167,000	10,700,000
2004:						
January	2,250	100,000	48,900	614,000	11,400	807,000
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:						
Belgium	--	--	--	--	1,630	26,100
Canada	--	--	22,600	196,000	1,820	322,000
Czech Republic	--	--	--	--	4	3,250
France	--	--	--	--	3,400	290,000
Germany	--	--	--	--	76	30,800
Ireland	--	--	13,000	177,000	--	--
Japan	--	--	20,100	184,000	2,560	132,000
United Kingdom	1,650	76,700	37,900	258,000	18,100	1,190,000
Total	1,650	76,700	93,600	815,000	27,500	1,990,000
January-December	75,500	3,210,000	1,020,000	10,900,000	230,000	15,400,000

-- Zero.

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

²Customs value.

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

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		
2003:								
December	306,000	\$6,820,000	29,500	\$778,000	46,200	\$259,000	338,000	2,710,000
January-December	2,290,000	48,600,000	375,000	6,110,000	615,000	3,370,000	2,710,000	XX
2004:								
January	183,000	4,730,000	36,600	1,430,000	75,500	458,000	228,000	228,000
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-December	2,110,000	79,400,000	324,000	13,800,000	666,000	5,490,000	2,500,000	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
2003:				
December	83,300	\$2,470,000	76,000	\$1,990,000
January-December	1,010,000	31,300,000	617,000	5,560,000
2004:				
January	50,900	2,400,000	126,000	4,320,000
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-December	1,150,000	48,400,000	917,000	20,600,000

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.