

Mineral Industry Surveys

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COBALT IN DECEMBER 2006

On the basis of preliminary data, U.S. cobalt consumption during 2006 was slightly lower than consumption during 2005, according to the U.S. Geological Survey. U.S. cobalt consumption during the quarter ending December 31, 2006, was slightly lower than consumption during the quarter ending September 30, 2006.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was slightly higher in January through November 2006 than that imported during the same period in 2005. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 18% higher in January through November 2006 than that exported during the same period in 2005.

Update

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

<u>Date</u>	<u>Price range</u>
January 18	24.00-25.50
January 25	25.00-26.00
February 1	26.00-27.00
February 8	26.50-27.50
February 15	27.75-28.00

<u>Month</u>	<u>Average price</u>
January	25.44

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2005:				
December	312	147	164	622
January-December ⁴	3,790	1,850	2,020	7,660
Year ⁵	4,550	1,860	2,030	8,430
2006:				
January	323	149	173	646
February	316	151	167	633
March	320	153	172	645
April	298	146	175	619
May	314	161	180	655
June	309	156	168	633
July	304	148	161	613
August	308	158	179	644
September	296 ^r	151	179	626 ^r
October	290 ^r	155	179	624 ^r
November	296 ^r	144 ^r	179	619 ^r
December	283	151	179	613
January-December	3,660	1,820	2,090	7,570

^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.

⁵Includes annual reports.

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

(Metric tons, contained cobalt)

End use	2005		2006	
	January-December ²	Year ³	December	January-December ⁴
Steel	714	857	57	684
Superalloys	3,590	4,140	285	3,590
Magnetic alloys	287	337	24	293
Other alloys ⁵	W	227	W	W
Cemented carbides ⁶	761	763	57	727
Chemical and ceramic uses ⁷	2,040	2,040	166	2,000
Miscellaneous and unspecified	272	63	23	273
Total	7,660	8,430	613	7,570

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 annual reports.

⁴Includes revisions to prior months' data.

⁵Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁶Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁷Includes 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		
2005:					
December ⁶	296	189	70	555	1,550
Yearend ⁷	383	209	72	664	1,550
2006:					
January	311	187	80	578	1,520
February	321	183	81	585	1,500
March	335	176	84	595	1,480
April	339	173	74	586	1,480
May	334	183	57	574	1,480
June	340	170	65	575	1,480
July	336	169	69	573	1,470
August	328	167	65	560	1,470
September	317 ^r	183	65	564 ^r	1,470
October	304 ^r	174	65	543 ^r	1,420
November	297 ^r	174 ^r	65	537 ^r	1,300
December	296	180	65	540	1,290

^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.

⁷Includes annual 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		
2005:								
November	971,000	\$28,300,000	116,000	\$2,790,000	158,000	\$1,840,000	1,120,000	10,500,000
December	379,000	11,000,000	108,000	2,380,000	271,000	2,850,000	555,000	11,100,000
January-November	8,970,000	301,000,000	1,200,000	32,800,000	1,930,000	21,900,000	10,500,000	XX
January-December	9,350,000	312,000,000	1,310,000	35,100,000	2,200,000	24,800,000	11,100,000	XX
2006:								
January	906,000	25,000,000	79,300	1,890,000	245,000	2,830,000	1,060,000	1,060,000
February	571,000	15,600,000	102,000	2,200,000	317,000	3,720,000	775,000	1,830,000
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:								
Australia	10,000	218,000	--	--	--	--	10,000	428,000
Belgium	7,800	290,000	35,300	1,080,000	--	--	33,200	464,000
Brazil	20,000	716,000	--	--	--	--	20,000	252,000
Canada	66,500	2,360,000	--	--	--	--	66,500	899,000
China	94,500	3,070,000	11,000	252,000	18,300	241,000	109,000	1,160,000
Congo (Kinshasa)	--	--	--	--	--	--	--	31,000
Cote d'Ivoire	--	--	--	--	--	--	--	2,590
Finland	14,000	704,000	44,100	1,260,000	19,800	175,000	51,000	850,000
France	823	65,900	1,770	65,300	--	--	2,100	34,300
Germany	162	28,400	648	42,000	--	--	629	20,400
India	--	--	--	--	18,000	117,000	4,860	114,000
Italy	--	--	--	--	1,070	3,330	256	684
Japan	57,100	932,000	--	--	5,100	51,200	58,500	189,000
Korea, Republic of	--	--	--	--	18,000	150,000	4,320	9,350
Kyrgyzstan	--	--	--	--	--	--	--	3,390
Morocco	20,000	654,000	--	--	--	--	20,000	247,000
Norway	154,000	5,420,000	--	--	--	--	154,000	2,090,000
Philippines	--	--	--	--	--	--	--	19,500
Russia	233,000	7,510,000	--	--	--	--	233,000	2,490,000
South Africa	--	--	--	--	--	--	--	137,000
Sweden	760	54,400	--	--	--	--	760	3,440
Switzerland	--	--	--	--	--	--	--	47
Taiwan	--	--	--	--	--	--	--	360
Uganda	--	--	--	--	--	--	--	133,000
United Kingdom	1,330	67,600	20,500	584,000	24,500	243,000	22,400	208,000
Zambia	40,000	1,410,000	--	--	--	--	40,000	805,000
Total	720,000	23,500,000	113,000	3,280,000	105,000	982,000	830,000	10,600,000
January-November	9,040,000	270,000,000	1,060,000	26,400,000	2,260,000	23,700,000	10,600,000	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
2005:						
November	10,100	\$410,000	100,000	\$1,090,000	36,900	\$2,190,000
December	35,200	350,000	53,600	363,000	21,700	1,510,000
January-November	66,000	2,340,000	761,000	7,510,000	234,000	16,200,000
January-December	101,000	2,690,000	815,000	7,880,000	256,000	17,700,000
2006:						
January	385	14,000	59,800	1,090,000	14,600	1,140,000
February	1,380	53,700	68,200	441,000	12,700	1,080,000
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:						
Belgium	--	--	--	--	13	16,900
Brazil	--	--	532	7,520	--	--
Canada	--	--	391	2,690	3,920	691,000
China	--	--	--	--	14	5,290
Finland	150	30,900	--	--	--	--
France	--	--	--	--	3,730	329,000
Germany	--	--	--	--	1,810	184,000
India	--	--	3,400	28,100	--	--
Ireland	--	--	12,900	203,000	--	--
Japan	200	11,000	4,240	71,000	1,840	75,600
Netherlands	--	--	--	--	5,710	317,000
Taiwan	--	--	--	--	12	2,370
Tunisia	--	--	2,650	40,800	--	--
United Kingdom	--	--	38,100	279,000	1,820	162,000
Total	350	42,000	62,200	632,000	18,900	1,780,000
January-November	33,300	1,280,000	666,000	8,370,000	218,000	17,100,000

-- 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		
2005:								
November	103,000	\$4,030,000	57,700	\$1,480,000	88,900	\$390,000	166,000	2,260,000
December	90,100	3,130,000	110,000	2,410,000	49,200	275,000	181,000	2,440,000
January-November	1,580,000	57,500,000	719,000	14,700,000	654,000	3,550,000	2,260,000	XX
January-December	1,670,000	60,600,000	829,000	17,100,000	704,000	3,820,000	2,440,000	XX
2006:								
January	96,100	3,850,000	108,000	2,610,000	51,500	317,000	187,000	187,000
February	96,200	3,960,000	91,800	2,170,000	43,400	308,000	173,000	359,000
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
January-November	1,830,000	57,700,000	982,000	23,800,000	487,000	3,010,000	2,660,000	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
2005:				
November	216,000	\$8,370,000	--	--
December	204,000	8,800,000	69,200	\$562,000
January-November	2,130,000	83,000,000	660,000	11,600,000
January-December	2,340,000	91,800,000	729,000	12,100,000
2006:				
January	188,000	7,160,000	5,150	129,000
February	157,000	7,530,000	6,390	139,000
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
January-November	1,800,000	82,400,000	436,000	7,430,000

-- Zero.

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.