

Mineral Industry Surveys

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COBALT IN DECEMBER 2005

On the basis of preliminary data, U.S. cobalt consumption during 2005 was slightly higher than consumption during 2004, according to the U.S. Geological Survey. U.S. cobalt consumption during the quarter ending December 31, 2005, was slightly lower than consumption during the quarter ending September 30, 2005.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 37% higher during January through November 2005 than that of imports during the same period in 2004. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 4% lower during January through November 2005 than that of exports during the same period in 2004.

Price

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

<u>Date</u>	<u>Price range</u>
January 19	13.50-14.25
January 26	13.50-14.00
February 2	12.75-13.50

<u>Month</u>	<u>Average price</u>
January	14.41

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:				
December	268	166	198	633
January-December ⁴	3,090	2,040	2,180	7,310
Year ⁵	4,110	2,040	2,300	8,450
2005:				
January	278	150	197	624
February	292	153	197	641
March	253	175	187	615
April	268	151	187	605
May	256	154	198	608
June	254	176	194	624
July	261	147	177	585
August	276	151	201	628
September	263 ^r	159	201	623 ^r
October	266 ^r	154	201	621 ^r
November	259 ^r	147 ^r	201	606 ^r
December	248	148	201	597
January-December	3,170	1,860	2,340	7,380

^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	2004		2005	
	January-December ²	Year ³	December	January-December ⁴
Steel	591	722	50	598
Superalloys	3,100	3,650	266	3,300
Magnetic alloys	351	396	20	235
Other alloys ⁵	W	627	W	W
Cemented carbides ⁶	764	765	62	762
Chemical and ceramic uses ⁷	2,220	2,230	176	2,210
Miscellaneous and unspecified	270	63	23	271
Total	7,310	8,450	597	7,380

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		
2004:					
December ⁶	352	203	115	670	2,660
Yearend ⁷	379	223	117	719	2,660
2005:					
January	347	200	107	654	2,590
February	349	210	108	667	2,540
March	344	195	105	643	2,340
April	341	208	110	659	2,220
May	351	199	108	658	2,180
June	347	186	101	634	2,070
July	370	201	114	684	1,930
August	341	191	132	664	1,870
September	353 ^r	187	132	672 ^r	1,810
October	340 ^r	180	132	653 ^r	1,670
November	326 ^r	182 ^r	132	641 ^r	1,560
December	330	179	132	641	1,550

^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		
2004:								
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-November	6,340,000	275,000,000	1,210,000	42,100,000	1,540,000	19,800,000	7,690,000	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	904,000	30,100,000	91,600	2,620,000	187,000	2,050,000	1,030,000	5,620,000
July	712,000	22,600,000	119,000	2,920,000	120,000	1,130,000	835,000	6,450,000
August	829,000	23,900,000	82,500	2,210,000	150,000	1,690,000	946,000	7,400,000
September	846,000	26,800,000	113,000	2,770,000	167,000	1,400,000	980,000	8,380,000
October	846,000	26,500,000	111,000	2,610,000	237,000	2,640,000	1,010,000	9,390,000
November:								
Australia	20,000	554,000	--	--	--	--	20,000	266,000
Belgium	29,200	1,050,000	48,300	1,220,000	--	--	63,900	729,000
Brazil	25,000	711,000	--	--	--	--	25,000	285,000
Canada	63,000	1,990,000	--	--	--	--	63,000	781,000
China	15,500	794,000	1,000	19,800	96,600	1,110,000	56,000	924,000
Colombia	--	--	--	--	--	--	--	527
Congo (Kinshasa)	--	--	--	--	--	--	--	19,900
Finland	105,000	3,300,000	16,900	384,000	40,500	577,000	135,000	1,120,000
France	233	15,900	2,730	129,000	--	--	2,200	44,500
Germany	350	20,400	--	--	--	--	350	8,940
Hong Kong	--	--	--	--	--	--	--	5,280
India	20,000	507,000	--	--	16,200	110,000	24,400	108,000
Japan	19,200	662,000	40	3,500	--	--	19,300	209,000
Korea, Republic of	--	--	--	--	--	--	--	23,800
Morocco	40,000	1,140,000	--	--	--	--	40,000	322,000
Norway	299,000	8,090,000	--	--	--	--	299,000	2,630,000
Philippines	--	--	--	--	159	2,110	43	24,700
Russia	275,000	7,860,000	--	--	--	--	275,000	1,600,000
South Africa	500	15,600	--	--	--	--	500	218,000
Sweden	--	--	--	--	--	--	--	7,310
Switzerland	--	--	--	--	--	--	--	3
Taiwan	--	--	--	--	--	--	--	1,740
Uganda	--	--	--	--	--	--	--	60,300
United Kingdom	1,420	28,500	47,500	1,040,000	4,360	39,200	36,700	231,000
Zambia	56,500	1,560,000	--	--	--	--	56,500	876,000
Total	971,000	28,300,000	116,000	2,790,000	158,000	1,840,000	1,120,000	10,500,000
January-November	8,970,000	301,000,000	1,200,000	32,800,000	1,930,000	21,900,000	10,500,000	XX

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:						
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-November	73,800	3,130,000	923,000	10,100,000	203,000	13,500,000
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	500	33,000	120,000	1,060,000	20,500	1,540,000
July	1,990	95,700	17,100	276,000	27,300	1,730,000
August	675	42,800	91,800	856,000	12,400	1,060,000
September	23,500	711,000	42,700	495,000	18,300	1,150,000
October	10,700	372,000	88,200	594,000	18,700	1,520,000
November:						
Australia	100	3,690	--	--	--	--
Belgium	--	--	--	--	500	14,000
Canada	--	--	17,100	63,500	2,390	368,000
China	--	--	--	--	181	21,800
Finland	105	12,400	--	--	--	--
France	--	--	15,000	252,000	1,700	148,000
Germany	--	--	--	--	2,210	146,000
Ireland	--	--	16,400	260,000	--	--
Japan	--	--	3,590	45,700	2,220	88,600
Norway	7,000	236,000	--	--	--	--
Taiwan	--	--	--	--	29	2,160
Tunisia	--	--	3,430	45,100	--	--
United Kingdom	2,940	159,000	44,800	422,000	27,700	1,400,000
Total	10,100	410,000	100,000	1,090,000	36,900	2,190,000
January-November	66,000	2,340,000	761,000	7,510,000	234,000	16,200,000

-- 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:								
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-November	1,980,000	75,000,000	316,000	13,700,000	610,000	5,100,000	2,360,000	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
July	174,000	5,280,000	39,700	818,000	75,200	621,000	221,000	1,470,000
August	170,000	5,560,000	25,500	581,000	18,900	137,000	193,000	1,660,000
September	108,000	4,050,000	154,000	1,780,000	30,400	229,000	226,000	1,890,000
October	147,000	6,240,000	68,000	1,610,000	18,400	119,000	201,000	2,090,000
November	103,000	4,030,000	57,700	1,480,000	88,900	390,000	166,000	2,260,000
January-November	1,580,000	57,500,000	719,000	14,700,000	654,000	3,550,000	2,260,000	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:				
November	119,000	\$5,090,000	34,800	\$213,000
December	85,300	4,620,000	25,300	60,100
January-November	1,060,000	43,800,000	892,000	20,500,000
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
July	224,000	8,410,000	--	--
August	213,000	7,950,000	242,000	1,870,000
September	147,000	6,370,000	139,000	1,720,000
October	222,000	8,360,000	41,800	1,050,000
November	216,000	8,370,000	--	--
January-November	2,130,000	83,000,000	660,000	11,600,000

-- 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.