

Mineral Industry Surveys

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COBALT IN OCTOBER 2005

U.S. cobalt consumption during January through October 2005 was slightly higher than that consumed during the first 10 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 33% higher in January through

September 2005 than that during the same period in 2004. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 8% lower in January through September 2005 than that during the same period in 2004.

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:				
October	318	156	192	666
November	277	161	187	625
December	268	166	198	633
January-October ^r	2,540	1,710	1,790	6,050
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	261	159	201	622
October	271	154	201	626
January-October	2,670	1,570	1,940	6,180

^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- October ^r	January- December ²	Year ³	October	January- October ³
Steel	493	591	722	49	500
Superalloys	2,560	3,100	3,650	287	2,760
Magnetic alloys	292	351	396	21	196
Other alloys ⁵	W	W	627	W	W
Cemented carbides ⁶	635	764	765	64	636
Chemical and ceramic uses ⁷	1,840	2,220	2,230	183	1,860
Miscellaneous and unspecified	226	270	63	23	226
Total	6,050	7,310	8,450	626	6,180

^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 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			U.S. Government, metal ⁵
	Metal ³	Oxide and other chemical compounds ⁴	Scrap	Total
2004:				
October	331	210	93	634
November	350	208	103	661
December ⁶	352	203	115	670
Yearend ⁷	379	223	117	719
2005:				
January	347	200	107	654
February	349	210	108	667
March	344	195	105	643
April	341	208	110	659
May	351	199	108	658
June	347	186	101	634
July	370	201	114	684
August	341	191	132	664
September	348	187	132	667
October	342	180	132	655

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:								
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-September	5,160,000	223,000,000	985,000	34,000,000	1,300,000	16,300,000	6,280,000	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:								
Australia	--	--	--	--	--	--	--	246,000
Belgium	21,000	620,000	57,800	1,570,000	--	--	62,600	603,000
Brazil	20,100	574,000	--	--	--	--	20,100	260,000
Canada	57,000	2,260,000	--	--	--	--	57,000	657,000
China	89,000	2,750,000	15,500	308,000	59,800	367,000	116,000	786,000
Colombia	--	--	--	--	--	--	--	527
Congo (Kinshasa)	--	--	--	--	--	--	--	19,900
Finland	132,000	4,040,000	21,100	468,000	69,600	770,000	174,000	839,000
France	2,240	123,000	1,660	61,700	--	--	3,430	40,600
Germany	772	38,500	--	--	--	--	772	8,590
Hong Kong	--	--	--	--	--	--	--	5,280
India	--	--	--	--	34,200	211,000	9,230	78,800
Japan	13,300	587,000	80	7,160	--	--	13,300	177,000
Korea, Republic of	--	--	--	--	--	--	--	23,600
Morocco	--	--	--	--	--	--	--	242,000
Norway	210,000	6,950,000	--	--	--	--	210,000	2,030,000
Philippines	--	--	--	--	--	--	--	22,800
Russia	216,000	6,450,000	--	--	--	--	216,000	1,170,000
South Africa	500	15,300	--	--	--	--	500	207,000
Sweden	998	21,100	--	--	--	--	998	7,310
Switzerland	--	--	1	2,390	--	--	1	3
Taiwan	--	--	--	--	--	--	--	1,740
Uganda	--	--	--	--	--	--	--	60,300
United Kingdom	2,890	31,400	16,900	359,000	3,400	49,900	15,900	175,000
Zambia	80,000	2,310,000	--	--	--	--	80,000	720,000
Total	846,000	26,800,000	113,000	2,770,000	167,000	1,400,000	980,000	8,380,000
January-September	7,160,000	247,000,000	975,000	27,400,000	1,530,000	17,400,000	8,380,000	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:						
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-September	61,600	2,450,000	830,000	9,100,000	152,000	10,000,000
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:						
Canada	--	--	--	--	1,690	341,000
Finland	--	--	--	--	100	5,650
France	--	--	11,700	227,000	128	59,600
Germany	1,540	13,000	--	--	259	30,900
India	--	--	18,000	36,800	--	--
Ireland	--	--	12,200	223,000	--	--
Japan	--	--	--	--	2,500	93,100
Norway	22,000	698,000	--	--	--	--
Switzerland	--	--	--	--	1	2,450
Taiwan	--	--	512	5,600	--	--
United Kingdom	--	--	250	2,750	13,600	614,000
Total	23,500	711,000	42,700	495,000	18,300	1,150,000
January-September	45,200	1,550,000	572,000	5,830,000	179,000	12,500,000

-- 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:								
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-September	1,730,000	64,600,000	275,000	12,300,000	472,000	4,610,000	2,050,000	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	253,000	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
January-September	1,330,000	47,200,000	594,000	11,600,000	547,000	3,040,000	1,890,000	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:				
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-September	836,000	33,500,000	844,000	20,200,000
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
January-September	1,690,000	66,300,000	618,000	10,500,000

-- 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.