

Mineral Industry Surveys

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COBALT IN OCTOBER, NOVEMBER, AND DECEMBER 2007

Preliminary data for 2007 indicate that U.S. cobalt consumption during 2007 was slightly more than that consumed during 2006, according to the U.S. Geological Survey. U.S. cobalt consumption during the quarter ending December 31, 2007, was slightly more than that consumed during the quarter ending September 30, 2007.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 11% lower during January through November 2007 than that during the same period in 2006. The amount of cobalt contained in U.S. exports of unwrought cobalt

and chemicals during January through November 2007 was 6% greater than that exported during the same period in 2006.

Update

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

<u>Month</u>	Price range	Average price
October 2007	30.00-32.25	31.09
November 2007	31.20-39.00	34.05
December 2007	39.50-44.00	42.00

TABLE 1 U.S. REPORTED CONSUMPTION OF COBALT MATERIALS $^{\rm l}$

(Metric tons, contained cobalt)

		Oxide and other chemical		
Period	Metal ²	compounds ³	Scrap	Total
2006:	ivictai	compounds	Бегар	10111
October		232	158	711
November	308	222	166	696
December		229	162	688
January-October ^r	3,140	2,310	1,670	7,110
January-November ^r	3,450	2,530	1,840	7,810
January-December ⁴	3,740	2,760	2,000	8,500
Year ⁵	4,500	2,760	2,010	9,270
2007:				
January	309	226	172	707
February		225	162	685
March	327	233	169	729
April	336	231	164	731
May	325	224	153	702
June	288	240	163	691
July	316	226	158	700
August	323	227	157	707
September	345	226	155	726
October	320	230	168	718
November	325	225	162	712
December	324	231	158	713
January-October	3,190	2,290	1,620	7,100
January-November	3,510	2,510	1,780	7,810
January-December ⁴	3,840	2,740	1,940	8,520

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.

 ${\bf TABLE~2} \\ {\bf U.S.~REPORTED~CONSUMPTION~OF~COBALT,~BY~END~USE}^1 \\$

(Metric tons, contained cobalt)

	2006							2007		
	January-	January-	January-					January-	January-	January-
End use	October	November	December ²	Year ³	October	November	December	October ⁴	November ⁴	December ^{2, 4}
Steel	492 ^r	541 ^r	588	700	49	51	50	488	539	589
Superalloys	3,040 ^r	3,340 ^r	3,630	4,180	313	309	306	3,060	3,360	3,670
Magnetic alloys	250 ^r	273 ^r	299	386	25	25	25	246	271	296
Other alloys ⁵	W	W	W	224	W	W	W	W	W	W
Cemented carbides ⁶	666 ^r	733 ^r	796	796	66	66	65	661	727	792
Chemical and ceramic uses ⁷	2,440 ^r	2,670 ^r	2,920	2,920	243	238	245	2,420	2,660	2,900
Miscellaneous and unspecified	225 ^r	248 ^r	271	63	22	23	22	227	250	272
Total	7,110	7,810	8,500	9,270	718	712	713	7,100	7,810	8,520

^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.

$\label{eq:table 3} \text{U.S. REPORTED STOCKS OF COBALT MATERIALS}^1$

(Metric tons, contained cobalt)

		Oxide and			U.S.	
		other chemical			Government,	
Period	Metal ³	compounds ⁴	Scrap	Total	metal ⁵	
2006:						
October	296	170	120	586	1,420	
November	289	171	126	586	1,300	
December	288	176	126	590	1,290	
2007:						
January	293	180	125	598	1,250	
February	331	177	129	637	1,180	
March	340	171	127	637	1,140	
April	325	169	121	615	1,100	
May	321	166	131	618	1,040	
June	341	166	118	625	1,030	
July	336	161	113	610	1,030	
August	341	158	114	613	1,020	
September	349	161	128	638	989	
October	343	184	118	645	925	
November	345	180	113	638	784	
December	309	171	116	596	676	

Data 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. Data through June 2007 include material committed for sale pending shipment; data after June 2007 are uncommitted material only.

 $TABLE\ 4a$ U.S. IMPORTS FOR CONSUMPTION OF COBALT THROUGH SEPTEMBER 2007, BY COUNTRY 1

Period and country	Meta	nlo ²	Oxides and l	nydrovides	Salts and co	mnounds ³	Total cobalt content for	Cobalt content, year to
of origin	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴	the period ⁵	date ^{5, 6}
2006:	Quantity	value	Qualitity	value	Qualitity	value	the period	date
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	720,000	23,500,000	113,000	3,280,000	105,000	982,000	830,000	10,600,000
December		, ,		, ,	68,400		,	, ,
	917,000	32,300,000	115,000	3,040,000		533,000	1,020,000	11,600,000
January-September		225,000,000	845,000	20,400,000	1,980,000	20,900,000	9,050,000	X
January-December	9,950,000	302,000,000	1,180,000	29,400,000	2,330,000	24,200,000	11,600,000	X
2007:		24.000.000	01.400	2040000	102.000	1 000 000	006000	00600
January	788,000	34,800,000	91,400	2,940,000	193,000	1,900,000	906,000	906,00
February	686,000	32,300,000	111,000	4,230,000	141,000	1,980,000	807,000	1,710,000
March	690,000	34,000,000	83,200	3,360,000	87,300	1,040,000	772,000	2,490,000
April	834,000	44,900,000	69,400	3,010,000	145,000	2,210,000	929,000	3,410,000
May	882,000	48,900,000	136,000	6,100,000	249,000	3,960,000	1,060,000	4,470,000
June	663,000	38,200,000	54,800	2,600,000	197,000	3,190,000	766,000	5,240,00
July	615,000	34,900,000	90,900	3,860,000	183,000	3,100,000	737,000	5,980,000
August	436,000	25,000,000	121,000	5,720,000	130,000	2,490,000	569,000	6,550,00
September:								
Argentina								4,11
Australia	60,000	3,040,000					60,000	432,00
Belgium	12,700	710,000	24,000	1,090,000	12,000	166,000	33,200	508,00
Brazil	40,000	2,120,000					40,000	141,00
Canada	112,000	5,820,000					112,000	981,00
China	75,000	4,100,000	3,800	164,000	15,800	343,000	83,700	859,00
Congo (Kinshasa)	·							40,00
Finland	9,450	599,000	11,000	447,000	52,100	1,050,000	36,100	494,00
France	4,330	326,000	·				4,330	19,10
Germany	1,910	118,000					1,910	13,00
India								34,40
Italy								, , .
Japan	12,700	900,000					12,700	124,00
Korea, Republic of	2,460	30,100					2,460	42,40
Morocco	20,000	1,010,000					20,000	337,00
Norway	104,000	6,240,000					104,000	1,580,00
Philippines		0,240,000						1,500,00
Russia	131,000	7,160,000			- -		131,000	815,00
South Africa	500	29,800	6,000	240,000			4,820	87,80
Sweden	2,190	80,500	0,000	240,000			2,190	4,02
		80,300					*	
Uganda							12.000	112,00
United Kingdom		60,600	16,000	698,000			12,900	138,00
Zambia	80,000	4,180,000			70.000	1.560.000	80,000	518,00
Total	669,000	36,500,000	60,800	2,640,000	79,900	1,560,000	741,000	7,290,00
January-September	6,260,000	329,000,000	818,000	34,500,000	1,410,000	21,400,000	7,290,000	X

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.

 $\label{thm:table 4b} \text{U.s. IMPORTS FOR CONSUMPTION OF COBALT THROUGH OCTOBER 2007, BY COUNTRY}^I$

n : 1 - 1 - 4	X	. 2	0.11	1 11		. 3	Total cobalt	Cobalt content,
Period and country of origin	Quantity Met	Value ⁴	Oxides and l	Value ⁴	Salts and co Quantity	Value ⁴	content for	year to date ^{5, 6}
2006:	Qualitity	value	Qualitity	value	Qualitity	value	the period ⁵	date
October	579,000	\$20,800,000	103,000	\$2,730,000	170,000	\$1,800,000	706,000	9,760,000
November	720,000	23,500,000	113,000	3,280,000	105,000	982,000	830,000	10,600,000
December	917,000	32,300,000	115,000	3,040,000	68,400	533,000	1,020,000	11,600,000
January-October	8,320,000	246,000,000	947,000	23,100,000	2,150,000	22,700,000	9,760,000	11,000,000 XX
January-December	9,950,000	302,000,000	1,180,000	29,400,000	2,330,000	24,200,000	11,600,000	XX
2007:		302,000,000	1,100,000	25,400,000	2,550,000	24,200,000	11,000,000	7171
January	788,000	34,800,000	91,400	2,940,000	193,000	1,900,000	906,000	906,000
February	686,000	32,300,000	111,000	4,230,000	141,000	1,980,000	807,000	1,710,000
March	690,000	34,000,000	83,200	3,360,000	87,300	1,040,000	772,000	2,490,000
April	834,000	44,900,000	69,400	3,010,000	145,000	2,210,000	929,000	3,410,000
May	882,000	48,900,000	136,000	6,100,000	249,000	3,960,000	1,060,000	4,470,000
June	663,000	38,200,000	54,800	2,600,000	197,000	3,190,000	766,000	5,240,000
July	615,000	34,900,000	90,900	3,860,000	183,000	3,100,000	737,000	5,980,000
August	436,000	25,000,000	121,000	5,720,000	130,000	2,490,000	569,000	6,550,000
September	669,000	36,500,000	60,800	2,640,000	79,900	1,560,000	741,000	7,290,000
October:		30,300,000	00,800	2,040,000	79,900	1,500,000	741,000	7,290,000
Argentina	_							4,110
Australia	60,000	3,630,000					60,000	492,000
Belgium	42,100	2,400,000	20,000	873,000			56,500	564,000
Brazil	19,300	1,230,000	20,000	873,000			19,300	160,000
	_ ′						165,000	
Canada China	- 165,000 126,000	6,640,000 5,680,000				1,110,000	147,000	1,150,000 1,010,000
		3,080,000	2,000	80,200	62,600	1,110,000	147,000	40,000
Congo (Kinshasa) Finland	19,700	1,240,000	8,670	334,000		1,040,000	45,700	540,000
France	3,330	260,000	8,070	334,000	57,300	1,040,000	3,330	22,500
			1					
Germany	- 1,410 3,000	91,300		5,120			1,410 3,000	14,400
India	_	179,000					,	37,400 9
Italy		995,000					16,100	140,000
Japan Korea, Republic of	_ 16,100	995,000					10,100	,
		1 960 000						42,400 369,000
Morocco	- 32,000 55,800	1,860,000					32,000	
Norway	_	3,200,000					55,800	1,640,000 42
Philippines		11 400 000					225.000	
Russia	_ 235,000	11,400,000	4.000	154.000			235,000	1,050,000
South Africa	- 90	 (010	4,000	154,000			2,880	90,700
Sweden	_ 90	6,010					90	4,110
Uganda United Kingdom		97.900					21 600	112,000
United Kingdom	- 1,600 70,500	87,800	19,700	865,000	58,400	424,000	31,600	170,000
Zambia	79,500	4,730,000	 54 200	2 210 000	170,000	2 570 000	79,500	598,000
Total	859,000	43,600,000	54,300	2,310,000	178,000	2,570,000	954,000	8,240,000
January-October	7,120,000	373,000,000	872,000	36,800,000	1,580,000	24,000,000	8,240,000	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.

 $\label{eq:table 4c} TABLE~4c$ U.S. IMPORTS FOR CONSUMPTION OF COBALT THROUGH NOVEMBER 2007, BY COUNTRY l

Period and country	Me	etals ²	Oxides and	hydroxides	Salts and c	ompounds ³	Total cobalt content for	Cobalt content, year to
of origin	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴	the period ⁵	date ^{5, 6}
2006:		, 4140		7 0.100		, 4140	une periou	auto
November	720,000	\$23,500,000	113,000	\$3,280,000	105,000	\$982,000	830,000	10,600,000
December	917,000	32,300,000	115,000	3,040,000	68,400	533,000	1,020,000	11,600,000
January-November	9,040,000	270,000,000	1,060,000	26,400,000	2,260,000	23,700,000	10,600,000	XX
January-December	9,950,000	302,000,000	1,180,000	29,400,000	2,330,000	24,200,000	11,600,000	XX
2007:	- ′ ′	, ,	, ,	, ,	, ,	, ,	, ,	
January	788,000	34,800,000	91,400	2,940,000	193,000	1,900,000	906,000	906,000
February	686,000	32,300,000	111,000	4,230,000	141,000	1,980,000	807,000	1,710,000
March	690,000	34,000,000	83,200	3,360,000	87,300	1,040,000	772,000	2,490,000
April	834,000	44,900,000	69,400	3,010,000	145,000	2,210,000	929,000	3,410,000
May	882,000	48,900,000	136,000	6,100,000	249,000	3,960,000	1,060,000	4,470,000
June	663,000	38,200,000	54,800	2,600,000	197,000	3,190,000	766,000	5,240,000
July	615,000	34,900,000	90,900	3,860,000	183,000	3,100,000	737,000	5,980,000
August	436,000	25,000,000	121,000	5,720,000	130,000	2,490,000	569,000	6,550,000
September	669,000	36,500,000	60,800	2,640,000	79,900	1,560,000	741,000	7,290,000
October	859,000	43,600,000	54,300	2,310,000	178,000	2,570,000	954,000	8,240,000
November:		.5,000,000	2 .,500	2,210,000	170,000	2,570,000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0,2.0,000
Argentina	- 							4,110
Australia	90,000	5,490,000					90,000	582,000
Belgium	6,520	293,000	43,300	2,120,000			37,700	602,000
Brazil	30,000	1,680,000		2,120,000	2,690	54,500	31,200	191,000
Canada	133,000	7,300,000			2,070	34,300	133,000	1,280,000
China	50,600	3,480,000	7,500	342,000	70,100	1,100,000	76,600	1,080,000
Congo (Kinshasa)	- 50,000	3,460,000	7,500	342,000	70,100	1,100,000	70,000	40,000
Finland	52,500	3,210,000	12,800	573,000	64,100	1,120,000	82,000	622,000
France	3,630	292,000	419	22,700	04,100	1,120,000	3,930	26,400
	- 3,030 - 94		419	22,700			3,930 94	14,500
Germany	- 94 	6,310			10,000			
India					10,000	118,000	2,700	40,100
Italy	17 200	1.050.000		25 200			17.700	157.000
Japan V P	17,200	1,050,000	690	35,200			17,700	157,000
Korea, Republic of	1,870	29,700					1,870	44,200
Morocco	20,000	1,260,000					20,000	389,000
Norway	175,000	10,100,000					175,000	1,810,000
Philippines	- 445,000						445.000	4.500.000
Russia	445,000	27,900,000					445,000	1,500,000
South Africa	_ 1,500	90,800					1,500	92,200
Sweden	- 10.100						10.100	4,110
Uganda	10,100	667,000	10.000	777.000	12.000	460,000	10,100	122,000
United Kingdom	314	13,400	18,000	777,000	13,000	460,000	19,300	189,000
Zambia	60,000	3,940,000		2.050.000	1.60.000	2.060.000	60,000	658,000
Total	1,100,000	66,800,000	82,700	3,870,000	160,000	2,860,000	1,210,000	9,450,000
January-November	8,220,000	440,000,000	955,000	40,600,000	1,740,000	26,900,000	9,450,000	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.

TABLE 5a U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS THROUGH SEPTEMBER 2007, BY COUNTRY $^{\rm l}$

Period and country		ought alloys	Cobalt was	ste and scrap	_	cobalt and articles
-			Quantity			
of origin	Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
2006:	_	#20 5 00	5.4.400	0.77	1.4.200	01.260.000
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	_ 350	42,000	62,200	632,000	18,900	1,780,000
December	_ 342	39,400	59,400	1,010,000	19,900	1,550,000
January-September	_ 29,100	1,040,000	542,000	6,810,000	182,000	14,100,000
January-December	33,600	1,320,000	726,000	9,390,000	238,000	18,600,000
2007:	_					
January	4,210	136,000	61,200	683,000	14,100	1,350,000
February	515	63,400	67,500	904,000	16,200	1,450,000
March	794	89,700	172,000	1,660,000	15,900	1,560,000
April	1,530	164,000	186,000	2,720,000	25,500	1,620,000
May	15,800	1,020,000	120,000	1,740,000	18,800	1,610,000
June	1,450	147,000	74,100	1,160,000	13,800	1,570,000
July	634	82,400	132,000	2,190,000	14,000	1,650,000
August	2,290	84,800	102,000	1,630,000	19,300	1,990,000
September:						
Austria	252	15,800				
Canada					4,840	698,000
China					51	5,410
Finland	200	50,200				
France	- 	·	2,280	26,600	9	24,300
Germany	- 		17,400	205,000	2,430	130,000
Ireland	- 		14,300	205,000	316	31,200
Japan	- 		16,800	91,800	1,240	66,800
Korea, Republic of			,	´	136	8,640
Taiwan	- 				2	2,380
Thailand	- 		2,230	31,500		
United Kingdom			-,		5,410	468,000
Total	452	66,000	53,000	560,000	14,400	1,440,000
January-September	27,700	1,850,000	968,000	13,200,000	152,000	14,200,000
Zara	27,730	1,050,000	,00,000	15,200,000	152,000	11,200,000

⁻⁻ Zero.

 $^{^{1}\}mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

TABLE~5b U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS THROUGH OCTOBER 2007, BY COUNTRY 1

Period and country	Unwro cobalt a	U	Cobalt waste	and scran	Wrought cobalt and cobalt articles	
•	Quantity	Value ²	Ouantity		Quantity	
of origin 2006:	Quantity	Value-	Quantity	Value ²	Quantity	Value ²
	2.060	Ø106.000	(2.200	Ф0 2 (000	16700	#1 21 0 000
October	3,860	\$196,000	62,200	\$926,000	16,700	\$1,210,000
November	350	42,000	62,200	632,000	18,900	1,780,000
December	342	39,400	59,400	1,010,000	19,900	1,550,000
January-October	32,900	1,240,000	604,000	7,740,000	199,000	15,300,000
January-December	33,600	1,320,000	726,000	9,390,000	238,000	18,600,000
2007:	-					
January	4,210	136,000	61,200	683,000	14,100	1,350,000
February	515	63,400	67,500	904,000	16,200	1,450,000
March	794	89,700	172,000	1,660,000	15,900	1,560,000
April	1,530	164,000	186,000	2,720,000	25,500	1,620,000
May	15,800	1,020,000	120,000	1,740,000	18,800	1,610,000
June	1,450	147,000	74,100	1,160,000	13,800	1,570,000
July	634	82,400	132,000	2,190,000	14,000	1,650,000
August	2,290	84,800	102,000	1,630,000	19,300	1,990,000
September	452	66,000	53,000	560,000	14,400	1,440,000
October:						
Belgium					92	10,300
Canada			10,000	280,000	2,490	544,000
China					34	4,950
France			2,570	26,800	1,280	167,000
Germany			24,500	407,000	5,660	281,000
Hong Kong			617	3,320		
Ireland	- 		18,100	268,000	483	46,500
Japan	9,110	487,000			2,590	164,000
Malaysia	·	·	15,100	98,800		
New Zealand			266	3,420		
Taiwan				,	33	5,570
Thailand			5,580	82,100		
Tunisia			4,320	84,600		
United Kingdom			6,970	143,000	7,370	670,000
Total	9,110	487,000	88,000	1,400,000	20,000	1,890,000
January-October	36,800	2,340,000	1,060,000	14,600,000	172,000	16,100,000
	,	-,,	-,,	.,,	,	,,000

⁻⁻ Zero.

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

²Customs value.

 $\label{eq:table 5c} \textbf{U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS THROUGH NOVEMBER 2007, BY COUNTRY }^1$

Period and country	Unwr cobalt	ought allovs	Cobalt was	te and scrap	_	cobalt and articles
of origin	Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
2006:						
November	350	\$42,000	62,200	\$632,000	18,900	\$1,780,000
December	342	39,400	59,400	1,010,000	19,900	1,550,000
January-November	33,300	1,280,000	666,000	8,370,000	218,000	17,100,000
January-December	33,600	1,320,000	726,000	9,390,000	238,000	18,600,000
2007:	_					
January	4,210	136,000	61,200	683,000	14,100	1,350,000
February		63,400	67,500	904,000	16,200	1,450,000
March	— 794	89,700	172,000	1,660,000	15,900	1,560,000
April	1,530	164,000	186,000	2,720,000	25,500	1,620,000
May	15,800	1,020,000	120,000	1,740,000	18,800	1,610,000
June	1,450	147,000	74,100	1,160,000	13,800	1,570,000
July	634	82,400	132,000	2,190,000	14,000	1,650,000
August	2,290	84,800	102,000	1,630,000	19,300	1,990,000
September	452	66,000	53,000	560,000	14,400	1,440,000
October	9,110	487,000	88,000	1,400,000	20,000	1,890,000
November:	_					
Austria	180	6,980				
Canada					2,740	915,000
China					321	41,400
Finland	854	52,700				
France			5,010	52,100	3,960	425,000
Germany			22,100	557,000	746	87,400
Hungary			4,190	92,400		
Ireland			13,700	206,000		
Japan	200	14,000	3,610	99,700	102	12,100
Korea, Republic of			3,770	60,000		
Mexico					37	5,610
Netherlands			3,240	41,200		
Spain			728	18,700		
Thailand			1,220	20,900		
Tunisia			6,000	68,900		
United Kingdom					11,700	895,000
Total	1,230	73,700	63,600	1,220,000	19,600	2,380,000
January-November	38,000	2,410,000	1,120,000	15,900,000	192,000	18,500,000

⁻⁻ Zero.

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

²Customs value.

$\label{eq:table 6} \textbf{U.S.} \ \textbf{EXPORTS} \ \textbf{OF} \ \textbf{COBALT} \ \textbf{MATERIALS}^{\textbf{I}}$

(Kilograms, gross weight of material, except as noted)

- C		Oxides and	hydroxides	Salts and co	mpounds ³	Total cobalt content for	Cobalt content, year to
Quantity		Quantity	Value ⁴	Quantity		the period ⁵	date ^{5, 6}
						•	
165,000	\$4,500,000	109,000	\$3,010,000	20,900	\$163,000	249,000	2,190,000
235,000	3,650,000	62,300	1,800,000	15,500	168,000	284,000	2,470,000
109,000	2,200,000	91,200	2,180,000	31,500	171,000	183,000	2,660,000
103,000	2,750,000	114,000	3,020,000	48,100	293,000	196,000	2,850,000
1,490,000	51,900,000	829,000	19,800,000	440,000	2,670,000	2,190,000	XX
1,720,000	55,500,000	891,000	21,600,000	456,000	2,840,000	2,470,000	XX
1,830,000	57,700,000	982,000	23,800,000	487,000	3,010,000	2,660,000	XX
1,930,000	60,500,000	1,100,000	26,800,000	535,000	3,300,000	2,850,000	XX
92,800	3,720,000	90,800	3,480,000	41,800	208,000	168,000	168,000
439,000	7,060,000	105,000	3,630,000	38,400	417,000	524,000	692,000
113,000	4,520,000	93,600	3,420,000	6,050	106,000	182,000	874,000
164,000	4,880,000	134,000	5,580,000	4,680	153,000	262,000	1,140,000
223,000	6,840,000	94,000	3,170,000	20,800	218,000	296,000	1,430,000
70,200	3,090,000	65,700	2,620,000	1,690	27,400	118,000	1,550,000
200,000	5,910,000	33,200	1,270,000	41,500	490,000	234,000	1,780,000
187,000	7,510,000	118,000	786,000	3,450	22,000	273,000	2,060,000
257,000	7,890,000	11,200	466,000	15,700	338,000	269,000	2,320,000
183,000	4,820,000	27,900	1,280,000	41,300	547,000	213,000	2,540,000
265,000	5,600,000	24,900	1,120,000	227	5,530	283,000	2,820,000
1,750,000	51,400,000	745,000	24,400,000	174,000	1,980,000	2,320,000	XX
1,930,000	56,300,000	773,000	25,700,000	215,000	2,530,000	2,540,000	XX
2,190,000	61,900,000	798,000	26,800,000	215,000	2,530,000	2,820,000	XX
	matte, waste Quantity 165,000 235,000 109,000 103,000 1,490,000 1,720,000 1,830,000 1,930,000 92,800 439,000 113,000 164,000 223,000 70,200 200,000 187,000 257,000 183,000 265,000 1,750,000 1,930,000	165,000 \$4,500,000 235,000 3,650,000 109,000 2,200,000 103,000 2,750,000 1,490,000 51,900,000 1,720,000 55,500,000 1,830,000 57,700,000 1,930,000 60,500,000 92,800 3,720,000 439,000 7,060,000 113,000 4,520,000 164,000 4,880,000 223,000 6,840,000 70,200 3,090,000 257,000 7,510,000 183,000 4,820,000 265,000 5,600,000 1,930,000 56,300,000	matte, waste and scrap² Oxides and Quantity Quantity Value⁴ Quantity 165,000 \$4,500,000 109,000 235,000 3,650,000 62,300 109,000 2,200,000 91,200 103,000 2,750,000 114,000 1,490,000 51,900,000 829,000 1,720,000 55,500,000 891,000 1,830,000 57,700,000 982,000 1,930,000 60,500,000 1,100,000 92,800 3,720,000 90,800 439,000 7,060,000 105,000 113,000 4,520,000 93,600 164,000 4,880,000 134,000 223,000 6,840,000 94,000 70,200 3,090,000 65,700 200,000 5,910,000 33,200 187,000 7,510,000 118,000 257,000 7,890,000 11,200 183,000 4,820,000 24,900 1,750,000 51,400,000 745,000	matte, waste and scrap² Oxides and hydroxides Quantity Value⁴ Quantity Value⁴ 165,000 \$4,500,000 109,000 \$3,010,000 235,000 3,650,000 62,300 1,800,000 109,000 2,200,000 91,200 2,180,000 103,000 2,750,000 114,000 3,020,000 1,490,000 51,900,000 829,000 19,800,000 1,720,000 55,500,000 891,000 21,600,000 1,930,000 57,700,000 982,000 23,800,000 1,930,000 60,500,000 1,100,000 26,800,000 92,800 3,720,000 90,800 3,480,000 439,000 7,060,000 105,000 3,630,000 113,000 4,520,000 93,600 3,420,000 223,000 6,840,000 94,000 3,170,000 70,200 3,090,000 65,700 2,620,000 200,000 5,910,000 33,200 1,270,000 187,000 7,890,000 118,000	matte, waste and scrap² Oxides and hydroxides Salts and co Quantity Value⁴ Quantity Value⁴ Quantity 165,000 \$4,500,000 109,000 \$3,010,000 20,900 235,000 3,650,000 62,300 1,800,000 15,500 109,000 2,200,000 91,200 2,180,000 31,500 103,000 2,750,000 114,000 3,020,000 48,100 1,490,000 51,900,000 829,000 19,800,000 440,000 1,720,000 55,500,000 891,000 21,600,000 456,000 1,830,000 57,700,000 982,000 23,800,000 487,000 1,930,000 60,500,000 1,100,000 26,800,000 535,000 92,800 3,720,000 90,800 3,480,000 41,800 439,000 7,060,000 105,000 3,630,000 38,400 113,000 4,520,000 93,600 3,420,000 6,050 164,000 4,880,000 134,000 5,580,000 4,680	matte, waste and scrap² Oxides and hydroxides Salts and compounds³ Quantity Value⁴ Quantity Value⁴ 165,000 \$4,500,000 109,000 \$3,010,000 20,900 \$163,000 235,000 3,650,000 62,300 1,800,000 15,500 168,000 109,000 2,200,000 91,200 2,180,000 31,500 171,000 103,000 2,750,000 114,000 3,020,000 48,100 293,000 1,490,000 51,900,000 829,000 19,800,000 440,000 2,670,000 1,720,000 55,500,000 891,000 21,600,000 456,000 2,840,000 1,830,000 57,700,000 982,000 23,800,000 487,000 3,010,000 1,930,000 60,500,000 1,100,000 26,800,000 535,000 3,300,000 92,800 3,720,000 90,800 3,480,000 41,800 208,000 439,000 7,060,000 105,000 3,630,000 38,400 417,000 113,000	matte, waste and scrap² Oxides and hydroxides Salts and compounds³ content for the period⁵ Quantity Value⁴ Quantity Value⁴ Quantity Value⁴ value⁴ value⁴ the period⁵ 165,000 \$4,500,000 109,000 \$3,010,000 20,900 \$163,000 249,000 235,000 3,650,000 62,300 1,800,000 15,500 168,000 284,000 109,000 2,200,000 91,200 2,180,000 31,500 171,000 183,000 103,000 2,750,000 114,000 3,020,000 48,100 293,000 196,000 1,490,000 51,900,000 829,000 19,800,000 440,000 2,670,000 2,190,000 1,720,000 55,500,000 891,000 21,600,000 487,000 3,010,000 2,470,000 1,830,000 57,700,000 982,000 23,800,000 487,000 3,010,000 2,660,000 1,930,000 60,500,000 1,100,000 26,800,000 535,000 3,300,000 2,850,000 <

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.

⁶May include revisions to prior months.

TABLE 7 U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES 1

	Wrought co	obalt and	Cobalt or	re and
	cobalt ar	rticles	concent	rates
Period	Quantity	Value ²	Quantity	Value ²
2006:				
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
December	185,000	7,980,000	59,200	1,700,000
January-September	1,410,000	64,100,000	355,000	5,310,000
January-October	1,590,000	72,500,000	415,000	6,720,000
January-November	1,800,000	82,400,000	436,000	7,430,000
January-December	1,980,000	90,400,000	495,000	9,130,000
2007:				
January	155,000	8,360,000	10,400	436,000
February	93,000	5,870,000	13,600	713,000
March	126,000	7,950,000	21,800	1,050,000
April	128,000	8,040,000	134,000	1,950,000
May	123,000	7,450,000	19,800	883,000
June	132,000	8,670,000	6,050	79,900
July	128,000	7,550,000	110,000	279,000
August	95,300	6,180,000	7,850	180,000
September	105,000	6,560,000	40,200	1,720,000
October	120,000	7,330,000	33,200	1,490,000
November	135,000	9,060,000	82,900	2,270,000
January-September	1,090,000	66,600,000	364,000	7,290,000
January-October	1,210,000	74,000,000	398,000	8,780,000
January-November	1,340,000	83,000,000	481,000	11,100,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.
²Free alongside ship (f.a.s.) value.