

Mineral Industry Surveys

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COBALT IN APRIL, MAY, AND JUNE 2008

Preliminary data for 2008 indicate that U.S. cobalt consumption during the first half of 2008 was slightly greater than that consumed during the first half of 2007, according to the U.S. Geological Survey. U.S. cobalt consumption during the quarter ending June 30, 2008, was slightly lower than that consumed during the quarter ending March 31, 2008.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 4% higher during January through May 2008 than that during the same period in 2007. The amount of cobalt contained in U.S. exports of unwrought cobalt

and chemicals during January through May 2008 was 12% lower than that exported during the same period in 2007.

Update

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

Month	Price range	Average price
April 2008	48.00-53.00	50.06
May 2008	47.00-49.50	48.46
June 2008	42.50-47.50	45 06

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

(Metric tons, contained cobalt)

		Oxide and		
ъ	2	other chemical	G.	m . 1
Period	Metal ²	compounds ³	Scrap	Total
2007:	_			
April	344	228	162	734
May	334	220	151	705
June	296	236	161	693
July	324	222	156	703
August	331	223	155	709
September	365	222	153	740
October	328	226	167	721
November	333	221	160	714
December	332	227	156	715
January-April ^r	1,300	899	660	2,860
January-May ^r	1,640	1,120	811	3,570
January-June ^r	1,930	1,360	972	4,260
January-December ⁴	3,940	2,700	1,920	8,560
Year ⁵	4,710	2,700	1,930	9,340
2008:				
January	338	223	158	720
February	331	219	160	710
March	322	223	167	712
April	303	226	170	698
May	342	223	162	727
June	320	225	164	710
January-April	1,290	891	655	2,840
January-May	1,640	1,110	817	3,570
January-June	1,960	1,340	982	4,280

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.

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⁴Data based on monthly reports.

⁵Includes annual reports.

 $\label{eq:table 2} \textbf{U.S. REPORTED CONSUMPTION OF COBALT, BY END USE}^1$

(Metric tons, contained cobalt)

		2007				2008					
	January-	January-	January-	January-					January-	January-	January-
End use	April	May	June	December ²	Year ³	April	May	June	April ⁴	May^4	June ⁴
Steel	203 ^r	255 г	305 ^r	612	725	51	51	51	203	253	304
Superalloys	1,280 ^r	1,590 ^r	1,880 ^r	3,810	4,340	299	333	312	1,250	1,580	1,890
Magnetic alloys	101	125	150	297	385	23	26	23	102	128	152
Other alloys ⁵	W	W	W	W	225	W	\mathbf{W}	W	W	W	W
Cemented carbides ⁶	241 ^r	301 ^r	361 ^r	725	726	64	59	63	254	313	376
Chemical and ceramic uses ⁷	949 ^r	1,180 r	1,430 ^r	2,850	2,880	240	236	238	945	1,180	1,420
Miscellaneous and unspecified	90	112 ^r	135 ^r	270	63	22	22	22	90	112	135
Total	2,860 ^r	3,570 г	4,260 ^r	8,560	9,340	698	727	710	2,840	3,570	4,280

[&]quot;Revised. 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.

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

(Metric tons, contained cobalt)

		Indust	ry ²			
	·	Oxide and	-		U.S.	
		other chemical			Government,	
Period	Metal ³	compounds4	Scrap	Total	metal ⁵	
2007:		•				
April	336	165	105	606	1,100	
May	332	161	110	603	1,040	
June	351	160	92	603	1,030	
July	346	154	82	582	1,030	
August	351	150	77	579	1,020	
September	360	151	87	598	989	
October	354	173	71	598	925	
November	356	168	60	585	784	
December ⁶	320	158	58	536	676	
Yearend ⁷	413	178	60	651	XX	
2008:						
January	302	154	56	511	666	
February	291	161	56	509	652	
March	284	172	56	513	620	
April	312	165	52	530	620	
May	292	167	54	513	612	
June	291	160	54	504	612	

XX Not applicable.

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.

 $\label{eq:table 4a} \text{U.s. IMPORTS FOR CONSUMPTION OF COBALT THROUGH MARCH 2008, BY COUNTRY}^{1}$

Desired and accordance		2	0-:11	11	0.1.	. 3	Total cobalt	Cobalt content,
Period and country		etals ²		hydroxides	Salts and c	Value ⁴	content for	year to date ^{5, 6}
of origin 2007:	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value	the period ⁵	date
	600,000	\$24,000,000	92 200	\$2.260,000	97 200	\$1,040,000	772 000	2 400 000
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	1,100,000	66,800,000	82,700	3,870,000	160,000	2,860,000	1,210,000	9,450,000
December	740,000	47,500,000	70,200	3,760,000	208,000	4,200,000	866,000	10,300,000
January-March	2,160,000	101,000,000	285,000	10,500,000	422,000	4,920,000	2,490,000	XX
January-December	8,960,000	487,000,000	1,020,000	44,400,000	1,950,000	31,100,000	10,300,000	XX
2008:								
January	939,000	65,800,000	44,100	2,320,000	194,000	4,110,000	1,040,000	1,040,000
February	942,000	69,700,000	105,000	6,710,000	401,000	4,060,000	1,140,000	2,180,000
March:								
Australia	36,000	3,070,000					36,000	111,000
Belgium	32,800	1,320,000	53,900	3,210,000			71,600	160,000
Brazil	20,000	1,020,000			48,000	185,000	33,000	83,400
Canada	139,000	9,390,000					139,000	400,000
China	82,400	5,210,000	25,000	1,970,000	14,600	735,000	107,000	403,000
Finland	45,600	2,450,000	19,300	1,360,000	98,600	559,000	88,000	339,000
France	3,470	395,000					3,470	8,070
Germany	2,010	165,000	648	66,600			2,480	5,680
India					93,700	360,000	25,300	49,400
Japan	15,400	1,210,000	51	8,420			15,400	41,800
Korea, Republic of	2,520	30,900		,			2,520	6,450
Liechtenstein	,	,					·	3,250
Morocco								110,000
Norway	10,000	860,000					10,000	461,000
Russia	60,200	5,080,000					60,200	436,000
South Africa	21,600	2,060,000	500	29,800			21,900	43,500
Switzerland	81	3,500		25,000			81	768
United Kingdom	1,290	57,400	9,000	651,000	38,200	1,310,000	22,200	60,600
Zambia	19,600	2,030,000	7,000 		50,200	1,510,000	19,600	120,000
Total	492,000	34,400,000	108,000	7,290,000	293,000	3,150,000	658,000	2,840,000
January-March	2,370,000	170,000,000	258,000	16,300,000	888,000	11,300,000	2,840,000	2,840,000 XX
XX Not applicable Zero	4,370,000	1 / 0,000,000	230,000	10,500,000	000,000	11,300,000	۷,040,000	ΛΛ

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.

 ${\it TABLE~4b}$ U.S. IMPORTS FOR CONSUMPTION OF COBALT THROUGH APRIL 2008, BY COUNTRY 1

Desired and accordance	Met	1.2	0		0.1.	, 3	Total cobalt	Cobalt content,
Period and country of origin	Ouantity	Value ⁴	Oxides and h	Value ⁴	Salts and co Quantity	Value ⁴	content for	year to date ^{5, 6}
2007:	Quantity	value	Quantity	value	Quantity	value	the period ⁵	date
April	834,000	\$44,900,000	69,400	\$3,010,000	145,000	\$2,210,000	929,000	3,410,000
	882,000				249,000	3,960,000	1,060,000	4,470,000
May	663,000	48,900,000	136,000 54,800	6,100,000	<i>'</i>	3,190,000	766,000	
June		38,200,000	*	2,600,000	197,000		,	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	1,100,000	66,800,000	82,700	3,870,000	160,000	2,860,000	1,210,000	9,450,000
December	740,000	47,500,000	70,200	3,760,000	208,000	4,200,000	866,000	10,300,000
January-April	3,000,000	146,000,000	355,000	13,500,000	567,000	7,130,000	3,410,000	XX
January-December	8,960,000	487,000,000	1,020,000	44,400,000	1,950,000	31,100,000	10,300,000	XX
2008:	=							
January	939,000	65,800,000	44,100	2,320,000	194,000	4,110,000	1,040,000	1,040,000
February	942,000	69,700,000	105,000	6,710,000	401,000	4,060,000	1,140,000	2,180,000
March	492,000	34,400,000	108,000	7,290,000	293,000	3,150,000	658,000	2,840,000
April:								
Australia	111,000	11,200,000					111,000	222,000
Belgium	87,000	3,380,000	20,800	1,730,000	32,500	782,000	113,000	274,000
Brazil	20,000	2,000,000			42,500	555,000	33,000	116,000
Canada	96,600	6,180,000					96,600	496,000
China	12,500	1,270,000	9,180	695,000			19,100	422,000
Finland	77,200	6,000,000	15,900	1,070,000	434,000	3,690,000	220,000	560,000
France	1,410	163,000					1,410	9,490
Germany	497	31,500	648	66,600			964	6,640
India	-				718	2,710	194	49,600
Japan	14,000	1,310,000					14,000	55,800
Korea, Republic of	120	5,320			3,000	92,600	1,500	7,950
Liechtenstein	- 	,			,	·	,	3,250
Morocco	54,700	4,020,000					54,700	164,000
Norway	69,500	6,900,000					69,500	531,000
Peru					1,140	25,600	524	524
Philippines	-				4,950	19,000	1,340	1,340
Russia	56,600	4,580,000					56,600	492,000
South Africa							50,000	43,500
Switzerland	- -							768
United Kingdom	1,170	53,800	11,000	884,000	82,500	2,400,000	39,300	99,900
Zambia Zambia	20,000	2,130,000	11,000	884,000	82,300	2,400,000	20,000	140,000
Total	622,000	49,200,000	57,400	4,450,000	601,000	7,570,000	853,000	3,700,000
	-							
January-April	3,000,000	219,000,000	315,000	20,800,000	1,490,000	18,900,000	3,700,000	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 MAY 2008, BY COUNTRY 1

		2				2	Total cobalt	Cobalt content,
Period and country	Met		Oxides and hydroxides		Salts and co		content for	year to
of origin	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴	the period ⁵	date ^{5, 6}
2007:								
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	1,100,000	66,800,000	82,700	3,870,000	160,000	2,860,000	1,210,000	9,450,000
December	740,000	47,500,000	70,200	3,760,000	208,000	4,200,000	866,000	10,300,000
January-May	3,880,000	195,000,000	491,000	19,600,000	816,000	11,100,000	4,470,000	XX
January-December	8,960,000	487,000,000	1,020,000	44,400,000	1,950,000	31,100,000	10,300,000	XX
2008:								
January	939,000	65,800,000	44,100	2,320,000	194,000	4,110,000	1,040,000	1,040,000
February	942,000	69,700,000	105,000	6,710,000	401,000	4,060,000	1,140,000	2,180,000
March	492,000	34,400,000	108,000	7,290,000	293,000	3,150,000	658,000	2,840,000
April	622,000	49,200,000	57,400	4,450,000	601,000	7,570,000	853,000	3,700,000
May:		<u> </u>	<u> </u>		*		<u> </u>	
Australia	92,000	9,540,000					92,000	314,000
Austria	1,770	270,000					1,770	1,770
Belgium	12,800	1,400,000	31,000	2,610,000			35,200	309,000
Brazil	20,000	1,980,000			11,100	56,000	23,000	139,000
Canada	125,000	10,000,000					125,000	622,000
China	101,000	8,680,000	25,500	1,850,000	26,500	892,000	131,000	553,000
Finland	23,300	2,620,000	7,060	516,000	348,000	4,040,000	150,000	709,000
France	2,970	398,000					2,970	12,500
Germany	2, ,,,,,		2,030	223,000			1,460	8,100
India	16,000	849,000			94,500	362,000	41,500	91,200
Japan	4,970	437,000	525	26.800		302,000	5,340	61,200
Korea, Republic of	2,540	36,900		20,000			2,540	10,500
Liechtenstein	2,3 10	30,700					2,3 10	3,250
Morocco	20,000	1,980,000					20,000	184,000
Norway	49,000	4,490,000					49,000	580,000
Peru		4,470,000						524
Philippines								1,340
Russia	148,000	10,000,000					148,000	641,000
South Africa	58,100	5,940,000					58,100	102,000
Switzerland	36,100	3,340,000					38,100	768
Uganda	20,000	1,980,000					20,000	20,000
	3,060		3	6,000		461,000	17,700	118,000
United Kingdom	20,000	83,500			42,900	461,000		
Zambia		2,060,000		5 220 000	522,000		20,000	160,000
Total	721,000	62,800,000	66,100	5,230,000	523,000	5,810,000	945,000	4,640,000
January-May VV Not applicable Zero	3,720,000	282,000,000	381,000	26,000,000	2,010,000	24,700,000	4,640,000	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 MARCH 2008, BY COUNTRY 1

of origin Quantity Value² Quantity Value² Quantity Value² 2007: March 794 \$89,700 172,000 \$1,660,000 15,900 \$1,560,00 April 1,530 164,000 186,000 2,720,000 25,500 1,620,00 May 15,800 1,020,000 120,000 1,740,000 18,800 1,610,00 June 1,450 147,000 74,100 1,160,000 13,800 1,570,00 August 2,290 84,800 102,000 1,630,000 19,300 1,990,00 September 452 66,000 53,000 560,000 14,400 1,680,00 September 452 66,000 53,000 560,000 14,400 1,480,00 October 9,110 487,000 88,000 1,200,000 19,600 2,380,00 November 1,230 73,700 63,600 1,220,000 19,600 2,380,00 January-Barch 5,520 289,000			rought			Wrought o	
March 794 \$89,700 172,000 \$1,660,000 15,900 \$1,560,00 April 1,530 164,000 186,000 2,720,000 25,500 1,620,00 May 15,800 1,020,000 120,000 1,740,000 18,800 1,610,00 June 1,450 147,000 74,100 1,160,000 13,800 1,570,00 July 634 82,400 132,000 2,190,000 14,000 16,500,00 August 2,290 84,800 102,000 1,630,000 19,300 1,990,00 September 452 66,000 53,000 560,000 14,400 1,440,00 0,000	Period and country						
March		Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
April							
May	March	794	\$89,700	172,000	\$1,660,000	15,900	\$1,560,000
June	April	1,530	*	186,000	2,720,000	25,500	1,620,000
July	May	15,800	1,020,000	120,000	1,740,000	18,800	1,610,000
August 2,290 84,800 102,000 1,630,000 19,300 1,990,00 September 452 66,000 53,000 560,000 14,400 1,440,00 October 9,110 487,000 88,000 1,400,000 20,000 1,890,00 November 1,230 73,700 63,600 1,220,000 19,600 2,380,00 December 2,940 189,000 85,800 1,630,000 13,900 1,460,00 January-March 5,520 289,000 301,000 3,240,000 46,200 4,360,00 January-December 41,000 2,600,000 1,210,000 17,500,000 206,000 20,000,00 Warch: 339 27,200 65,300 1,440,000 22,500 1,940,00 March: 40 4,260 Belgium 24,900 487,000 2,380 558,00 China 24,900 487,000 2,3	June	1,450	147,000	74,100	1,160,000	13,800	1,570,000
September 452 66,000 53,000 560,000 14,400 1,440,00 October 9,110 487,000 88,000 1,400,000 20,000 1,890,00 November 1,230 73,700 63,600 1,220,000 19,600 2,380,00 December 2,940 189,000 85,800 1,630,000 13,900 1,460,00 January-March 5,520 289,000 301,000 3,240,000 46,200 4,360,00 January-December 41,000 2,600,000 1,210,000 17,500,000 206,000 20,000,00 2008: January 26,500 1,410,000 34,600 599,000 17,300 1,940,00 March: Austria 90 4,260 Belgium	July	634	82,400	132,000	2,190,000	14,000	1,650,000
October 9,110 487,000 88,000 1,400,000 20,000 1,890,00 November 1,230 73,700 63,600 1,220,000 19,600 2,380,00 December 2,940 189,000 85,800 1,630,000 13,900 1,460,00 January-March 5,520 289,000 301,000 3,240,000 46,200 4,360,00 January-December 41,000 2,600,000 1,210,000 17,500,000 206,000 20,000,00 2008: January 26,500 1,410,000 34,600 599,000 17,300 1,940,00 February 339 27,200 65,300 1,440,000 22,500 1,940,00 March: Austria 90 4,260	August	2,290	84,800	102,000	1,630,000	19,300	1,990,000
November 1,230 73,700 63,600 1,220,000 19,600 2,380,00 December 2,940 189,000 85,800 1,630,000 13,900 1,460,00 January-March 5,520 289,000 301,000 3,240,000 46,200 4,360,00 January-December 41,000 2,600,000 1,210,000 17,500,000 206,000 20,000,00 2008: January 26,500 1,410,000 34,600 599,000 17,300 1,940,00 February 339 27,200 65,300 1,440,000 22,500 1,940,00 March: Austria 90 4,260 <td>September</td> <td>452</td> <td>66,000</td> <td>53,000</td> <td>560,000</td> <td>14,400</td> <td>1,440,000</td>	September	452	66,000	53,000	560,000	14,400	1,440,000
December 2,940 189,000 85,800 1,630,000 13,900 1,460,00 January-March 5,520 289,000 301,000 3,240,000 46,200 4,360,00 January-December 41,000 2,600,000 1,210,000 17,500,000 206,000 20,000,00 2008: January 26,500 1,410,000 34,600 599,000 17,300 1,940,00 March: Austria 90 4,260 Belgium 168 21,00 Canada China Finland 120 10,200 France 3,050 31,800 1,210 162,00 Germany 56 5,890 7,800 413,000 6,330	October	9,110	487,000	88,000	1,400,000	20,000	1,890,000
January-March	November	1,230	73,700	63,600	1,220,000	19,600	2,380,000
January-December 20,000	December	2,940	189,000	85,800	1,630,000	13,900	1,460,000
Damary 26,500 1,410,000 34,600 599,000 17,300 1,940,000	January-March	5,520	289,000	301,000	3,240,000	46,200	4,360,000
January 26,500 1,410,000 34,600 599,000 17,300 1,940,00 February 339 27,200 65,300 1,440,000 22,500 1,940,00 March: Austria 90 4,260 Belgium Canada 24,900 487,000 2,380 558,00 China 26 3,42 Finland 120 10,200 France 3,050 31,800 1,210 162,00 Germany 56 5,890 7,800 413,000 6,330 398,00 India 5,630 79,30 Ireland 17,600 265,000 Spain	January-December	41,000	2,600,000	1,210,000	17,500,000	206,000	20,000,000
February 339 27,200 65,300 1,440,000 22,500 1,940,00 March: Austria 90 4,260 Belgium 168 21,00 Canada 26 3,42 Finland 120 10,200 <t< td=""><td>2008:</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	2008:						
March: Austria 90 4,260	January	26,500	1,410,000	34,600	599,000	17,300	1,940,000
Austria 90 4,260 Belgium 168 21,00 Canada 24,900 487,000 2,380 558,00 China 26 3,42 Finland 120 10,200 France 3,050 31,800 1,210 162,00 Germany 56 5,890 7,800 413,000 6,330 398,00 India 5,630 79,30 Ireland 17,600 265,000 Japan 400 34,800 3,390 239,00 Russia 1,130 39,400 Taiwan 3,160 99,400 3	February	339	27,200	65,300	1,440,000	22,500	1,940,000
Belgium 168 21,00 Canada 24,900 487,000 2,380 558,00 China 26 3,42 Finland 120 10,200 France 3,050 31,800 1,210 162,00 Germany 56 5,890 7,800 413,000 6,330 398,00 India 5,630 79,30 Ireland 5,630 79,30 Ireland 5,630 79,30 Russia 1,060 13,000 Spain 1,130 39,400 Taiwan 3,160 99,400 3 2,41 Tunisi	March:						
Canada 24,900 487,000 2,380 558,00 China 26 3,42 Finland 120 10,200 France 3,050 31,800 1,210 162,00 Germany 56 5,890 7,800 413,000 6,330 398,00 India 5,630 79,30 Ireland 17,600 265,000 Japan 400 34,800 3,390 239,00 Russia 1,060 13,000 Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,47	Austria	90	4,260				
China 26 3,42 Finland 120 10,200 France 3,050 31,800 1,210 162,00 Germany 56 5,890 7,800 413,000 6,330 398,00 India 5,630 79,30 Ireland 5,630 79,30 Japan 400 34,800 3,390 239,00 Russia 1,060 13,000 Spain 1,130 39,400 Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 <td>Belgium</td> <td></td> <td></td> <td></td> <td></td> <td>168</td> <td>21,000</td>	Belgium					168	21,000
Finland 120 10,200	Canada			24,900	487,000	2,380	558,000
France 3,050 31,800 1,210 162,00 Germany 56 5,890 7,800 413,000 6,330 398,00 India 5,630 79,30 Ireland 5,630 79,30 Ireland 17,600 265,000 Japan 400 34,800 3,390 239,00 Russia 1,060 13,000 Spain 1,130 39,400 Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,00	China					26	3,420
Germany 56 5,890 7,800 413,000 6,330 398,00 India 5,630 79,30 Ireland 17,600 265,000 Japan 400 34,800 3,390 239,00 Russia 1,060 13,000 Spain 1,130 39,400 Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,000 34,700 2,700,00	Finland	120	10,200				
India 5,630 79,30 Ireland 17,600 265,000 Japan 400 34,800 3,390 239,00 Russia 1,060 13,000 Spain 1,130 39,400 Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,000 34,700 2,700,00	France			3,050	31,800	1,210	162,000
Ireland 17,600 265,000 Japan 400 34,800 3,390 239,00 Russia 1,060 13,000 Spain 1,130 39,400 Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,000 34,700 2,700,00	Germany	56	5,890	7,800	413,000	6,330	398,000
Japan 400 34,800 3,390 239,00 Russia 1,060 13,000 Spain 1,130 39,400 Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,000 34,700 2,700,00	India					5,630	79,300
Russia 1,060 13,000 Spain 1,130 39,400 Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,000 34,700 2,700,00	Ireland			17,600	265,000		
Spain 1,130 39,400 Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,000 34,700 2,700,00	Japan	400	34,800			3,390	239,000
Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,000 34,700 2,700,00	Russia			1,060	13,000		
Taiwan 3,160 99,400 3 2,41 Tunisia 5,000 84,100 United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,000 34,700 2,700,00	Spain			1,130	39,400		
United Kingdom 100 32,600 50,600 1,470,000 15,600 1,240,00 Total 766 87,700 114,000 2,900,000 34,700 2,700,00	Taiwan			3,160		3	2,410
Total 766 87,700 114,000 2,900,000 34,700 2,700,00	Tunisia			5,000	84,100		
Total 766 87,700 114,000 2,900,000 34,700 2,700,00	United Kingdom	100	32,600	50,600	1,470,000	15,600	1,240,000
		766	87,700				2,700,000
	January-March	27,600	1,520,000	214,000	4,940,000	74,600	6,580,000

⁻⁻ Zero.

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

²Customs value.

 ${\it TABLE~5b}\\ {\it U.S.~IMPORTS~FOR~CONSUMPTION~OF~ADDITIONAL~COBALT~MATERIALS~THROUGH~APRIL~2008,~BY~COUNTRY^1}$

Period and country	Unwrou cobalt all	~	Cobalt waste a	and soren	Wrought cob cobalt arti	
of origin	Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
2007:	Quantity	value	Quantity	value	Quantity	vaiue
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	- 034 2,290	84,800	102,000	1,630,000	19,300	1,990,000
	_ 2,290 452					
September	_	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	1,230	73,700	63,600	1,220,000	19,600	2,380,000
December	2,940	189,000	85,800	1,630,000	13,900	1,460,000
January-April	7,050	453,000	487,000	5,960,000	71,600	5,980,000
January-December	41,000 0	2,600,000 0	1,210,000 0	17,500,000 0	206,000 0	20,000,000
2008:	_					
January	26,500	1,410,000	34,600	599,000	17,300	1,940,000
February	339	27,200	65,300	1,440,000	22,500	1,940,000
March	766	87,700	114,000	2,900,000	34,700	2,700,000
April:						
Austria	252	22,700				
Belgium					200	24,700
Brazil			2,260	28,700		
Canada			8,220	135,000	1,510	418,000
China	- 				370	53,400
Czech Republic	- 				7	3,940
France			519	5,410	770	122,000
Germany	441	27,200	20,000	519,000	830	162,000
Ireland		·	20,200	299,000		·
Japan	200	18,600	18,400	561,000	2,500	194,000
Singapore			649	24,000	_,,_	
Sweden	- 91	20,000		2.,000		
Taiwan		20,000			4	2,180
Thailand			4,570	73,700		2,100
Tunisia	-		5,640	116,000		
United Kingdom	14,600	783,000	134,000	3,110,000	16,600	1,200,000
Total		<u> </u>				
	15,500	871,000	214,000	4,870,000	22,800	2,180,000
January-April	43,100	2,390,000	428,000	9,810,000	97,400	8,770,000

⁻⁻ Zero.

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

²Customs value.

 $\label{eq:table 5c} TABLE \ 5c$ U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS THROUGH MAY 2008, BY COUNTRY 1

Period and country	Unwro cobalt a	-	Cobalt waste	and scrap	Wrought cobalt a	
of origin	Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
2007:	Qualitity	value	Qualitity	value	Qualitity	value
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	- 1,430 634	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	- 2,290 452	66,000	53,000	560,000	14,400	1,440,000
October	- 432 9,110	487,000	88,000	1,400,000	20,000	1,890,000
November	1,230	73,700	63,600	1,220,000	19,600	2,380,000
December		189,000	85,800	1,630,000	13,900	
	- 2,940 22,900	1,470,000	607,000	7,700,000	90,400	1,460,000 7,590,000
January-May	_					
January-December	41,000	2,600,000	1,210,000	17,500,000	206,000	20,000,000
2008:	26.500	1 410 000	24 600	500,000	17 200	1 040 000
January	26,500	1,410,000	34,600	599,000	17,300	1,940,000
February	_ 339	27,200	65,300	1,440,000	22,500	1,940,000
March	_ 766	87,700	114,000	2,900,000	34,700	2,700,000
April	15,500	871,000	214,000	4,870,000	22,800	2,180,000
May:	_					
Canada	_ 		435	9,700	1,530	369,000
China	_ 				50	10,600
Czech Republic	_				7	3,800
Finland	_ 661	45,300				
France			3,540	36,800	2,370	324,000
Germany			15,100	264,000	1,460	268,000
India			1,520	55,900		
Ireland	_		15,200	218,000		
Japan	400	36,800			4,270	313,000
Korea, Republic of			3,900	100,000		
Mexico			1,150	26,600		
Singapore			2,210	67,700		
Sweden	14	2,090				
Taiwan			213	2,600		
Thailand			4,610	56,300		
Tunisia	- 		4,660	97,600		
United Kingdom	- 68	9,600	74,500	1,660,000	5,910	466,000
Total	1,140	93,800	127,000	2,600,000	15,600	1,750,000
January-May	44,300	2,490,000	555,000	12,400,000	113,000	10,500,000

⁻⁻ Zero

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

²Customs value.

 $\label{eq:table 6} \text{U.S. EXPORTS OF COBALT MATERIALS}^{\,1}$

	Unwrought col		Ovides and	hydroxides	Salts and co		Total cobalt content for	Cobalt content, year to
Period	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴	the period ⁵	date ^{5, 6}
2007:	Quantity	varue	Quantity	v aruc	Quartery	v aruc	the period	duic
March	113,000	\$4,520,000	93,600	\$3,420,000	6,050	\$106,000	182,000	874,000
April	164,000	4,880,000	134,000	5,580,000	4,680	153,000	262,000	1,140,000
May	223,000	6,840,000	94,000	3,170,000	20,800	218,000	296,000	1,430,000
June	70,200	3,090,000	65,700	2,620,000	1,690	27,400	118,000	1,550,000
July	200,000	5,910,000	33,200	1,270,000	41,500	490,000	234,000	1,780,000
August	187,000	7,510,000	118,000	786,000	3,450	22,000	273,000	2,060,000
September	257,000	7,890,000	11,200	466,000	15,700	338,000	269,000	2,320,000
October	183,000	4,820,000	27,900	1,280,000	41,300	547,000	213,000	2,540,000
November	265,000	5,600,000	24,900	1,120,000	227	5,530	283,000	2,820,000
December	226,000	7,420,000	65,200	1,640,000	19,700	125,000	278,000	3,100,000
January-March	645,000	15,300,000	289,000	10,500,000	86,200	730,000	874,000	XX
January-April	809,000	20,200,000	423,000	16,100,000	90,900	884,000	1,140,000	XX
January-May	1,030,000	27,000,000	517,000	19,300,000	112,000	1,100,000	1,430,000	XX
January-December	2,420,000	69,300,000	863,000	28,500,000	235,000	2,660,000	3,100,000	XX
2008	=							
January	155,000	5,820,000	21,000	882,000	7,430	235,000	171,000	171,000
February	190,000	8,330,000	76,200	1,800,000	56,700	2,350,000	259,000	430,000
March	243,000	9,720,000	50,400	1,320,000	22,800	495,000	285,000	715,000
April	181,000	8,030,000	48,000	3,980,000	1,770	26,600	216,000	931,000
May	261,000	11,100,000	81,200	1,780,000	67,200	789,000	336,000	1,270,000
January-March	588,000	23,900,000	148,000	4,000,000	86,900	3,080,000	715,000	XX
January-April	768,000	31,900,000	196,000	7,980,000	88,600	3,110,000	931,000	XX
January-May	1,030,000	43,000,000	277,000	9,770,000	156,000	3,900,000	1,270,000	XX

XX Not applicable.

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

 $^{^2}$ May 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.

 $\mbox{TABLE 7} \label{table 7} \mbox{U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES}^1$

	Wrought co	obalt and	Cobalt o	re and
	cobalt a	rticles	concent	
Period	Quantity	Value ²	Quantity	Value ²
2007:				
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
December	97,100	6,300,000	123,000	6,020,000
January-March	374,000	22,200,000	45,800	2,200,000
January-April	502,000	30,200,000	180,000	4,150,000
January-May	625,000	37,700,000	200,000	5,040,000
January-December	1,440,000	89,300,000	603,000	17,100,000
2008:				
January	117,000	8,520,000	31,900	2,560,000
February	143,000	11,500,000	33,400	714,000
March	92,200	6,420,000	28,600	2,630,000
April	127,000	9,300,000	89,000	4,520,000
May	98,400	6,990,000	19,300	1,830,000
January-March	352,000	26,400,000	93,900	5,910,000
January-April	480,000	35,700,000	183,000	10,400,000
January-May	578,000	42,700,000	202,000	12,300,000

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

²Free alongside ship (f.a.s.) value.