

Mineral Industry Surveys

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COBALT IN JUNE 2009

Preliminary data for 2009 indicate that U.S. cobalt consumption during the first half of 2009 was 8% lower than that consumed during the first half of 2008, according to the U.S. Geological Survey. U.S. cobalt consumption during the quarter ending June 30, 2009, was slightly lower than that consumed during the quarter ending March 31, 2009.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 36% lower during January through May 2009 than that imported during the same period in 2008. The amount of cobalt contained in U.S. exports of unwrought

cobalt and chemicals during January through May 2009 was 16% lower than that exported during the same period in 2008.

Update

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

<u>Month</u>	<u>Price range</u>	<u>Average price</u>
June 2009	13.70-16.75	14.93

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2008:				
June ^r	318	185	165	668
July ^r	317	181	150	648
August ^r	310	187	166	663
September ^r	312	185	154	651
October ^r	314	182	170	667
November ^r	316	178	147	641
December ^r	299	176	148	624
January-June ^r	1,940	1,100	983	4,030
January-December ^{r, 4}	3,810	2,190	1,920	7,920
2009:				
January	290 ^r	180 ^r	149	619 ^r
February ^r	302	181	143	626
March	294 ^r	180 ^r	146	621 ^r
April	289 ^r	178 ^r	146	613 ^r
May ^r	274	177	148	600
June	285	195	143	623
January-June	1,730	1,090	875	3,700

^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.

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

(Metric tons, contained cobalt)

End use	2008		2009	
	January-June	January-December ²	June	January-June
Steel	264 ^r	534 ^r	53	321
Superalloys	1,900 ^r	3,700 ^r	266	1,640
Magnetic alloys	152	291 ^r	22	134
Other alloys ⁴	W	W	W	W
Cemented carbides ⁵	397	780 ^r	59	357
Chemical and ceramic uses ⁶	1,190 ^r	2,350 ^r	199	1,120
Miscellaneous and unspecified	135	270	22	135
Total	4,030 ^r	7,920 ^r	623	3,700

^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 revisions to prior months' data.

⁴Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁵Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁶Includes 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	
2008:					
June	286 ^r	177 ^r	45 ^r	507 ^r	612
July	295 ^r	175 ^r	53 ^r	523 ^r	606
August	294 ^r	171 ^r	53 ^r	518 ^r	576
September	302 ^r	171 ^r	57 ^r	530 ^r	497
October	277 ^r	189 ^r	50 ^r	516 ^r	497
November	287 ^r	188 ^r	61 ^r	535 ^r	497
December ⁶	273 ^r	193 ^r	69 ^r	535 ^r	473
2009:					
January	273 ^r	191 ^r	87 ^r	551 ^r	455
February	327 ^r	186 ^r	81 ^r	594 ^r	455
March	306 ^r	182 ^r	88 ^r	577 ^r	455
April	304 ^r	181 ^r	104 ^r	589 ^r	455
May	310 ^r	181 ^r	101 ^r	592 ^r	455
June	306	166	114	587	380

^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; uncommitted material only.

⁶Data based on monthly 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 period ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2008:								
May	721,000	\$62,800,000	66,100	\$5,230,000	523,000	\$5,810,000	945,000	4,640,000
June	875,000	79,000,000	135,000	8,430,000	523,000	6,670,000	1,140,000	5,780,000
July	550,000	46,100,000	100,000	6,750,000	589,000	5,000,000	793,000	6,580,000
August	523,000	40,600,000	91,500	5,770,000	529,000	4,120,000	748,000	7,320,000
September	799,000	51,000,000	77,100	4,210,000	536,000	4,180,000	1,010,000	8,340,000
October	791,000	53,000,000	80,600	4,020,000	248,000	2,200,000	922,000	9,260,000
November	685,000	43,600,000	148,000	4,710,000	234,000	2,610,000	862,000	10,100,000
December	490,000	23,200,000	96,900	3,460,000	33,400	422,000	570,000	10,700,000
January-May	3,720,000	282,000,000	381,000	26,000,000	2,010,000	24,700,000	4,640,000	XX
January-December	8,430,000	618,000,000	1,110,000	63,400,000	4,710,000	49,900,000	10,700,000	XX
2009:								
January	345,000	10,500,000	37,700	901,000	101,000	1,360,000	410,000	410,000
February	574,000	18,600,000	23,400	757,000	161,000	1,730,000	644,000	1,050,000
March	424,000	12,300,000	109,000	2,720,000	139,000	1,610,000	549,000	1,600,000
April	469,000	15,200,000	98,400	2,280,000	251,000	3,610,000	635,000	2,240,000
May:								
Australia	--	--	--	--	--	--	--	117,000
Belgium	7,870	341,000	40,000	974,000	--	--	36,700	219,000
Brazil	13,500	484,000	--	--	--	--	13,500	70,400
Canada	60,800	1,690,000	87,800	984,000	--	--	124,000	317,000
China	162,000	6,100,000	20,000	467,000	22,200	395,000	185,000	613,000
Congo (Kinshasa)	60,000	1,910,000	--	--	--	--	60,000	71,000
Finland	13,800	552,000	24,600	543,000	77,200	1,160,000	62,000	226,000
France	1,320	76,200	--	--	--	--	1,320	4,270
Germany	--	--	--	--	--	--	--	1,180
Hong Kong	--	--	--	--	--	--	--	9,720
India	--	--	--	--	--	--	--	9,720
Japan	25,200	823,000	1,200	62,000	--	--	26,100	58,600
Korea, Republic of	--	--	--	--	--	--	--	1,840
Mexico	--	--	1,730	49,500	--	--	1,240	2,880
Morocco	20,000	638,000	--	--	--	--	20,000	105,000
Norway	52,600	1,310,000	--	--	--	--	52,600	534,000
Peru	--	--	--	--	--	--	--	234
Philippines	--	--	--	--	260	5,850	120	120
Russia	128,000	4,140,000	--	--	--	--	128,000	344,000
South Africa	1,540	53,500	--	--	--	--	1,540	3,040
Spain	--	--	--	--	--	--	--	3,400
Sweden	--	--	--	--	--	--	--	500
Taiwan	--	--	--	--	--	--	--	9,500
Uganda	--	--	--	--	--	--	--	19,400
United Kingdom	--	--	6,000	196,000	16,300	225,000	9,880	46,900
Zambia	--	--	--	--	--	--	--	173,000
Total	546,000	18,100,000	181,000	3,280,000	116,000	1,790,000	722,000	2,960,000
January-May	2,360,000	74,700,000	450,000	9,940,000	767,000	10,100,000	2,960,000	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.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS BY COUNTRY¹

(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
2008:						
May	1,140	\$93,800	127,000	\$2,600,000	15,600	\$1,750,000
June	14,300	776,000	117,000	2,130,000	28,900	3,070,000
July	12,300	700,000	145,000	3,430,000	27,200	2,540,000
August	1,900	156,000	56,400	1,110,000	39,300	3,580,000
September	214	40,700	34,800	613,000	27,600	2,900,000
October	20,600	1,150,000	85,000	1,330,000	33,900	2,390,000
November	44	6,220	59,700	875,000	26,200	2,930,000
December	21,000	1,030,000	60,400	836,000	48,800	2,450,000
January-May	44,300	2,490,000	555,000	12,400,000	113,000	10,500,000
January-December	115,000	6,340,000	1,110,000	22,700,000	345,000	30,400,000
2009:						
January	29,300	694,000	68,900	992,000	9,430	1,470,000
February	59,500	2,360,000	31,500	490,000	20,600	2,190,000
March	40,300	1,030,000	57,800	865,000	20,100	1,800,000
April	109,000	1,870,000	79,100	969,000	10,400	1,220,000
May:						
Canada	93,800	2,640,000	--	--	1,590	369,000
China	--	--	--	--	863	134,000
France	--	--	--	--	627	61,400
Germany	56	5,090	--	--	4,600	255,000
Ireland	--	--	12,800	183,000	--	--
Japan	--	--	4,120	101,000	408	13,000
Mexico	--	--	1,480	13,500	--	--
Tunisia	--	--	877	20,300	24	16,900
United Kingdom	--	--	12,300	120,000	25,100	1,170,000
Total	93,800	2,650,000	31,500	438,000	33,200	2,020,000
January-May	332,000	8,600,000	269,000	3,750,000	93,700	8,700,000

-- 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 period ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2008:								
May	261,000	\$11,100,000	81,200	\$1,780,000	67,200	\$789,000	336,000	1,270,000
June	180,000	9,470,000	21,100	785,000	3,520	43,400	196,000	1,460,000
July	181,000	9,410,000	54,800	2,930,000	32,900	624,000	229,000	1,690,000
August	239,000	16,200,000	34,800	2,090,000	3,200	37,600	265,000	1,960,000
September	197,000	8,740,000	52,600	1,530,000	14,600	208,000	239,000	2,190,000
October	227,000	6,780,000	36,300	1,060,000	36,300	496,000	262,000	2,460,000
November	156,000	7,090,000	22,800	334,000	56,200	356,000	186,000	2,640,000
December	174,000	10,900,000	31,800	929,000	43,600	658,000	207,000	2,850,000
January-May	1,030,000	43,000,000	277,000	9,770,000	156,000	3,900,000	1,270,000	XX
January-December	2,380,000	112,000,000	531,000	19,400,000	346,000	6,320,000	2,850,000	XX
2009:								
January	222,000	12,600,000	49,900	1,120,000	28,100	12,300	264,000	264,000
February	138,000	5,180,000	19,500	357,000	23,600	176,000	158,000	423,000
March	166,000	7,080,000	25,600	412,000	24,600	577,000	190,000	613,000
April	164,000	5,560,000	15,300	337,000	5,800	83,300	176,000	789,000
May	261,000	7,070,000	15,000	506,000	33,600	155,000	280,000	1,070,000
January-May	951,000	37,500,000	125,000	2,730,000	116,000	1,000,000	1,070,000	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.

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
2008:				
May	98,400	\$6,990,000	19,300	\$1,830,000
June	117,000	9,900,000	103,000	9,940,000
July	93,600	7,990,000	4,610	300,000
August	109,000	8,800,000	6,190	307,000
September	98,200	8,120,000	147,000	4,360,000
October	133,000	9,580,000	158,000	843,000
November	146,000	10,500,000	17,000	436,000
December	91,200	6,230,000	2,000	106,000
January-May	578,000	42,700,000	202,000	12,300,000
January-December	1,370,000	104,000,000	640,000	28,500,000
2009:				
January	90,300	5,710,000	5,710	10,500
February	118,000	6,500,000	41,500	54,100
March	148,000	8,680,000	--	--
April	82,800	5,620,000	30,500	454,000
May	114,000	6,890,000	125,000	305,000
January-May	553,000	33,400,000	203,000	823,000

-- 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.