

Mineral Industry Surveys

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COBALT IN SEPTEMBER 2009

Preliminary data for 2009 indicate that U.S. cobalt consumption during the first three quarters of 2009 was 9% lower than that consumed during the first three quarters of 2008, according to the U.S. Geological Survey. U.S. cobalt consumption during the quarter ending September 30, 2009, was slightly greater than that consumed during the quarter ending June 30, 2009.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 33% lower during January through August 2009 than that during the same period in 2008. The

amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals during January through August 2009 was 15% lower than that 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>
September 2009	17.00-22.00	19.53

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:				
September	316	185	154	655
October	318	182	170	671
November	320	178	147	644
December	303	176	148	628
January-September ^r	2,910	1,660	1,450	6,020
January-December ^{r, 4}	3,850	2,190	1,920	7,960
Year ⁵	4,640	2,250	1,930	8,810
2009:				
January	283	180	149	612
February	295	181	143	619
March	288	180	146	614
April	282	178	146	607
May	267	177	148	593
June	278	195	143	616
July	277	185	143	605
August	278	187	143	608
September	297	188	143	628
January-September	2,550	1,650	1,300	5,500

^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	2008			2009	
	January-September	January-December ²	Year ³	September	January-September ⁴
Steel	395 ^r	534	604	53	481
Superalloys	2,800 ^r	3,700	4,320	285	2,450
Magnetic alloys	219	291	368	23	201
Other alloys ⁵	W	W	226	W	W
Cemented carbides ⁶	625	827	827	52	472
Chemical and ceramic uses ⁷	1,780 ^r	2,350	2,410	192	1,690
Miscellaneous and unspecified	203	270	63	22	203
Total	6,020 ^r	7,960	8,810	628	5,500

^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	
2008:					
September	302	171	57	530	497
October	277	189	50	516	497
November	287	188	61	535	497
December ⁶	272	193	69	535	473
Yearend ⁷	307	203	72	582	XX
2009:					
January	273	191	87	551	455
February	327	186	81	594	455
March	306	182	105 ^r	594 ^r	455
April	304	181	104	589	455
May	310	181	101	592	455
June	306	166	114	587	380
July	309	164	109 ^r	582 ^r	310
August	304	168	109 ^r	581 ^r	310
September	286	165	109	560	304

^rRevised. 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; uncommitted material only.

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 period ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2008:								
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-August	5,660,000	448,000,000	708,000	47,000,000	3,650,000	40,500,000	7,320,000	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	546,000	18,100,000	181,000	3,280,000	116,000	1,790,000	722,000	2,960,000
June	436,000	14,000,000	209,000	6,120,000	158,000	2,040,000	645,000	3,610,000
July	473,000	15,100,000	153,000	3,840,000	120,000	1,370,000	622,000	4,230,000
August:								
Australia	63,000	2,420,000	--	--	--	--	63,000	330,000
Belgium	7,810	400,000	37,000	1,090,000	--	--	34,400	368,000
Brazil	--	--	--	--	--	--	--	110,000
Canada	1,340	68,400	17,700	401,000	--	--	14,100	439,000
China	115,000	4,010,000	10,200	280,000	90,700	965,000	149,000	943,000
Congo (Kinshasa)	10,000	356,000	--	--	--	--	10,000	101,000
Finland	2,700	116,000	38,400	914,000	60,500	703,000	51,000	389,000
France	3,120	155,000	--	--	--	--	3,120	10,600
Germany	2,210	166,000	1,300	125,000	--	--	3,140	6,820
Hong Kong	--	--	--	--	--	--	--	9,720
India	--	--	--	--	18,000	135,000	4,860	24,300
Italy	--	--	--	--	--	--	--	1
Japan	44,900	1,580,000	267	13,800	--	--	45,100	161,000
Korea, Republic of	--	--	--	--	--	--	--	1,840
Mexico	--	--	--	--	--	--	--	2,880
Morocco	8,000	228,000	--	--	--	--	8,000	174,000
Norway	125,000	4,630,000	--	--	--	--	125,000	891,000
Peru	--	--	--	--	--	--	--	234
Philippines	--	--	--	--	--	--	--	120
Russia	86,300	3,010,000	--	--	--	--	86,300	536,000
South Africa	11,000	389,000	--	--	--	--	11,000	16,800
Spain	--	--	--	--	--	--	--	3,430
Sweden	--	--	--	--	--	--	--	500
Taiwan	--	--	--	--	--	--	--	9,500
Uganda	10,100	411,000	--	--	--	--	10,100	29,500
United Kingdom	218	9,380	29,800	778,000	22,300	360,000	29,800	133,000
Zambia	--	--	--	--	--	--	--	183,000
Total	491,000	17,900,000	135,000	3,600,000	191,000	2,160,000	648,000	4,880,000
January-August	3,760,000	122,000,000	945,000	23,500,000	1,240,000	15,700,000	4,880,000	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:						
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-August	72,800	4,120,000	874,000	19,100,000	208,000	19,700,000
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	93,800	2,650,000	31,500	438,000	33,200	2,020,000
June	23,600	646,000	35,400	546,000	9,130	1,200,000
July	368	40,800	102,000	1,310,000	6,810	899,000
August:						
Canada	29,000	789,000	5,210	52,400	930	174,000
China	--	--	--	--	1,040	162,000
France	--	--	767	13,700	53	18,300
Germany	--	--	--	--	1,430	342,000
Ireland	--	--	14,200	207,000	--	--
Japan	--	--	--	--	388	51,000
Mexico	--	--	889	14,000	--	--
Tunisia	--	--	--	--	63	41,900
United Kingdom	--	--	7,530	72,700	3,370	257,000
Total	29,000	789,000	28,600	360,000	7,260	1,050,000
January-August	385,000	10,100,000	435,000	5,970,000	117,000	11,800,000

-- 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:								
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-August	1,630,000	78,100,000	387,000	15,600,000	195,000	4,600,000	1,960,000	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
June	222,000	6,130,000	11,300	158,000	8,750	69,500	232,000	1,300,000
July	118,000	4,080,000	24,000	746,000	13,800	381,000	139,000	1,440,000
August	195,000	6,500,000	18,600	622,000	57,800	1,410,000	222,000	1,660,000
January-August	1,490,000	54,200,000	179,000	4,250,000	196,000	2,870,000	1,660,000	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:				
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-August	898,000	69,400,000	316,000	22,800,000
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
June	71,900	4,350,000	50,500	262,000
July	134,000	8,370,000	1,240,000	1,520,000
August	136,000	6,760,000	177,000	623,000
January-August	895,000	52,900,000	1,670,000	3,230,000

-- 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.