

Mineral Industry Surveys

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COBALT IN NOVEMBER 2009

Preliminary data for 2009 indicate that U.S. cobalt consumption during January through November 2009 was 8% lower than that consumed during the first 11 months of 2008, according to the U.S. Geological Survey.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 30% lower during January through October 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 October 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>
November 2009	20.00-23.50	21.94

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:				
November	320	178	147	644
December	303	176	148	628
January-November ^r	3,550	2,020	1,770	7,340
January-December 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	276 ^r	187	145 ^r	608
September	289 ^r	188	151 ^r	628
October	279 ^r	182	157 ^r	618 ^r
November	276	183	150	609
January-November	3,090	2,020	1,620	6,730

^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-November	January-December ²	Year ³	November	January-November ⁴
Steel	490 ^r	534	604	53	588
Superalloys	3,410 ^r	3,700	4,320	271	3,000
Magnetic alloys	268	291	368	23	246
Other alloys ⁵	W	W	226	W	W
Cemented carbides ⁶	762	827	827	52	577
Chemical and ceramic uses ⁷	2,160 ^r	2,350	2,410	187	2,070
Miscellaneous and unspecified	248	270	63	22	247
Total	7,340 ^r	7,960	8,810	609	6,730

^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			Total	U.S. Government, metal ⁵
	Metal ³	Oxide and other chemical compounds ⁴	Scrap		
2008:					
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	594	455
April	304	181	104	589	455
May	310	181	101	592	455
June	306	166	114	587	380
July	309	164	109	582	310
August	303	168	104 ^r	575 ^r	310
September	285	165	92 ^r	541 ^r	304
October	272 ^r	169	85 ^r	526 ^r	304
November	267	172	85	525	295

^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:								
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-October	7,250,000	552,000,000	866,000	55,200,000	4,440,000	46,900,000	9,260,000	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	491,000	17,900,000	135,000	3,600,000	191,000	2,160,000	648,000	4,880,000
September	544,000	20,800,000	91,600	2,460,000	174,000	2,160,000	671,000	5,550,000
October:								
Australia	--	--	--	--	--	--	--	375,000
Belgium	10,300	597,000	75,500	2,250,000	--	--	64,700	476,000
Brazil	--	--	--	--	--	--	--	133,000
Canada	9,610	457,000	158,000	2,400,000	--	--	123,000	576,000
China	156,000	5,510,000	4,200	127,000	137,000	2,260,000	216,000	1,360,000
Congo (Kinshasa)	--	--	--	--	--	--	--	101,000
Finland	--	--	27,700	896,000	272,000	4,060,000	121,000	552,000
France	3,370	180,000	--	--	--	--	3,370	14,200
Germany	2,790	221,000	--	--	--	--	2,790	11,500
Hong Kong	--	--	--	--	--	--	--	9,720
India	--	--	--	--	40,000	327,000	10,800	50,800
Italy	--	--	--	--	--	--	--	1
Japan	18,400	698,000	--	--	--	--	18,400	205,000
Korea, Republic of	--	--	--	--	--	--	--	1,840
Mexico	--	--	--	--	--	--	--	2,880
Morocco	27,000	894,000	--	--	--	--	27,000	207,000
Norway	289,000	6,930,000	--	--	--	--	289,000	1,330,000
Peru	--	--	--	--	3,750	84,300	1,720	1,960
Philippines	--	--	--	--	--	--	--	120
Russia	70,400	2,480,000	--	--	--	--	70,400	698,000
South Africa	2,000	75,900	--	--	--	--	2,000	18,800
Spain	--	--	--	--	--	--	--	3,430
Sweden	114	5,680	--	--	--	--	114	614
Switzerland	728	42,300	--	--	--	--	728	728
Taiwan	--	--	--	--	--	--	--	9,500
Uganda	--	--	--	--	--	--	--	29,500
United Kingdom	2,200	107,000	11,800	391,000	22,000	459,000	20,800	170,000
Zambia	--	--	--	--	--	--	--	183,000
Total	592,000	18,200,000	277,000	6,060,000	475,000	7,180,000	972,000	6,520,000
January-October	4,890,000	161,000,000	1,310,000	32,000,000	1,880,000	25,000,000	6,520,000	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:						
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-October	93,600	5,310,000	993,000	21,000,000	270,000	25,000,000
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	29,000	789,000	28,600	360,000	7,260	1,050,000
September	84	10,400	31,800	506,000	19,400	1,040,000
October:						
Canada	25	3,320	3,780	34,900	941	205,000
France	--	--	6,800	70,800	1,440	148,000
Germany	--	--	9,110	123,000	2,060	480,000
Ireland	--	--	15,200	267,000	--	--
Japan	--	--	3,430	55,600	323	16,900
Mexico	--	--	707	7,230	--	--
Tunisia	--	--	1,280	27,500	--	--
United Kingdom	561	38,000	5,980	107,000	2,170	236,000
Total	586	41,300	46,300	694,000	6,930	1,090,000
January-October	386,000	10,100,000	513,000	7,170,000	143,000	14,000,000

-- 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:								
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-October	2,050,000	93,600,000	476,000	18,200,000	246,000	5,310,000	2,460,000	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
September	135,000	5,220,000	5,630	90,000	319,000	2,120,000	216,000	1,880,000
October	182,000	6,930,000	6,230	158,000	69,100	2,640,000	203,000	2,080,000
January-October	1,800,000	66,300,000	191,000	4,500,000	584,000	7,620,000	2,080,000	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:				
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-October	1,130,000	87,100,000	621,000	28,000,000
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
September	97,200	6,280,000	22,400	871,000
October	116,000	6,780,000	48,100	448,000
January-October	1,110,000	65,900,000	1,740,000	4,550,000

-- 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.