



Mineral Industry Surveys

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COBALT IN FEBRUARY 2003

U.S. consumption of cobalt in January through February 2003 was 4% lower than consumption during the first 2 months of 2002, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metals and chemicals was 14% lower in January 2003 than that of December 2002. The cobalt content of U.S. exports of unwrought cobalt and chemicals was 11% higher in January 2003 than that of December 2002. Trade data for February 2003 will be available in a subsequent issue.

<u>Date</u>	<u>Price range</u>
April 3	9.00-9.25
April 10	8.75-9.25
April 16	8.75-9.25
April 24	8.75-9.25
May 1	8.75-9.25
May 8	9.00-9.90

Price

Prices for electrolytic cobalt, in dollars per pound, from Platts Metals Week follows.

<u>Month</u>	<u>Average price</u>
March	9.08
April	9.03

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2002:				
February	345	99	215	659
March	354	105	215	673
April	341	112	215	668
May	349	101	215	665
June	300	113	215	628
July	312	105	215	632
August	321	113	215	648
September	313	119	215	646
October	311	102	215	627
November	334	102	215	651
December	305	101	215	621
January-February	709	197	430	1,330
January-December ⁴	3,940	1,270	2,580	7,790
2003:				
January	325 ^r	147	169	641 ^r
February	318	152	169	639
January-February	643	299	338	1,280

^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.

⁴Data based on monthly reports.

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

(Metric tons, contained cobalt)

End use	2002		2003	
	January- February	January- December ²	February	January- February
Steel	91 ^r	543	44	86
Superalloys	710 ^r	3,970	321	648
Magnetic alloys	64 ^r	374	31	62
Other alloys ³	W	W	W	W
Cemented carbides ⁴	120 ^r	747	63	127
Chemical and ceramic uses ⁵	295 ^r	1,860	155	306
Miscellaneous and unspecified	50 ^r	300	26	51
Total	1,330 ^r	7,790	639	1,280

^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 nonferrous alloys, welding materials, and wear-resistant alloys.

⁴Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁵Includes catalysts, driers in paints or related usage, feed or nutritive additive, 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		
2002:					
February	406	247	134	787	NA
March	379	257	135	771	NA
April	368	247	134	749	NA
May	359	240	134	733	NA
June	354	231	134	719	7,100
July	362	223	134	720	6,950
August	409	231	135	774	6,890
September	422	217	135	773	6,860
October	400	214	134	749	6,800
November	388	207	135	730	6,740
December	445	228	135	808	6,680
2003:					
January	423 ^r	227	134	784	6,360
February	404	215	134	753	6,200

^rRevised. NA Not available.

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.

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 month ⁵	Cobalt content, year to date ⁵
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2002:								
January	754,000 ^r	\$12,200,000 ^r	101,000	\$1,550,000	267,000	\$1,220,000	902,000 ^r	902,000 ^r
February	578,000 ^r	9,350,000 ^r	148,000	2,300,000	202,000	727,000	738,000 ^r	1,640,000 ^r
March	749,000 ^r	12,200,000 ^r	162,000	2,690,000	216,000	849,000	924,000 ^r	2,560,000 ^r
April	676,000 ^r	11,100,000 ^r	79,000	1,230,000	268,000	1,080,000	805,000 ^r	3,370,000 ^r
May	731,000 ^r	12,500,000 ^r	155,000	2,310,000	176,000	801,000	893,000 ^r	4,260,000 ^r
June	560,000 ^r	10,200,000 ^r	82,600	1,330,000	163,000	831,000	669,000 ^r	4,930,000 ^r
July	569,000 ^r	9,910,000 ^r	102,000	1,730,000	253,000	1,090,000	713,000 ^r	5,640,000 ^r
August	309,000 ^r	5,510,000 ^r	81,600	1,400,000	188,000	886,000	421,000 ^r	6,060,000 ^r
September	599,000 ^r	9,120,000 ^r	115,000	1,690,000	235,000	815,000	744,000 ^r	6,810,000 ^r
October	574,000 ^r	9,710,000 ^r	106,000	1,480,000	274,000	942,000	725,000 ^r	7,530,000 ^r
November	321,000 ^r	5,550,000 ^r	77,000	1,040,000	195,000	657,000	430,000 ^r	7,960,000 ^r
December	415,000 ^r	6,480,000 ^r	90,600	1,220,000	147,000	587,000	520,000 ^r	8,480,000 ^r
January-December	6,840,000	114,000,000	1,300,000	20,000,000	2,580,000	10,500,000	8,480,000	XX
2003:								
January:								
Belgium	26,500	568,000	12,000	170,000	--	--	35,100	35,100
Brazil	13,300	266,000	--	--	--	--	13,300	13,300
Canada	60,500	1,050,000	--	--	--	--	60,500	60,500
Finland	53,700	1,020,000	45,700	555,000	56,300	190,000	102,000	102,000
France	1,360	73,000	7,530	291,000	--	--	6,780	6,780
Ireland	4,570	335,000	--	--	--	--	4,570	4,570
Japan	20,500	469,000	--	--	--	--	20,500	20,500
Korea, Republic of	105	5,710	--	--	--	--	105	105
Luxembourg	62	3,730	--	--	--	--	62	62
Norway	41,000	522,000	--	--	--	--	41,000	41,000
Russia	98,600	1,430,000	--	--	--	--	98,600	98,600
Switzerland	49	6,900	--	--	--	--	49	49
Uganda	5,100	65,700	--	--	--	--	5,100	5,100
United Kingdom	139	13,300	--	--	10,000	43,900	2,840	2,840
Zambia	59,000	807,000	--	--	--	--	59,000	59,000
Total	384,000	6,640,000	65,200	1,020,000	66,300	234,000	449,000	449,000

¹Revised. XX Not applicable. -- Zero.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

⁴Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁵Customs value.

⁶Estimated from gross weights.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY ¹

(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
2002:						
January	6,990	\$152,000	49,000 ^{r, 3}	\$441,000 ^{r, 3}	23,000	\$925,000
February	3,650	154,000	2,650 ^r	54,200 ^r	15,300	932,000
March	1,420	187,000	18,400 ^r	149,000 ^r	20,900	1,080,000
April	210	6,350	15,300 ^r	124,000 ^r	33,500	1,320,000
May	3,600	144,000	13,100 ^r	107,000 ^r	29,000	977,000
June	679	24,700	21,000 ^r	161,000 ^r	13,200	855,000
July	11,400	135,000	5,780 ^r	63,600 ^r	18,900	1,060,000
August	1,860	126,000	10,000 ^r	87,900 ^r	14,100 ³	811,000 ³
September	21,300	241,000	20,600 ^r	168,000 ^r	14,600	779,000
October	4,680	84,800	34,700 ^r	169,000 ^r	12,300	854,000
November	200	13,900	9,310 ^r	96,000 ^r	19,300	1,010,000
December	843	45,700	6,550 ^r	100,000 ^r	16,600	960,000
January-December	56,900	1,310,000	206,000 ^r	1,720,000 ^r	231,000	11,600,000
2003:						
January:						
Belgium	--	--	--	--	2,270	96,200
Canada	--	--	--	--	1,230	258,000
France	--	--	805	5,600	7	21,200
Germany	280	11,400	--	--	265	5,340
Ireland	--	--	11,000	162,000	--	--
Japan	--	--	--	--	2,000	84,500
Russia	--	--	--	--	3,000	43,400
United Kingdom	1,990	88,400	--	--	3,810	150,000
Total	2,270	99,800	11,900	168,000	12,600	659,000

^rRevised. -- Zero.

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

²Customs value.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

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 month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2002:								
January	127,000	\$2,870,000	25,600	\$379,000	14,100	\$98,500	149,000	149,000
February	140,000	2,850,000	6,090	88,100	13,400	85,300	148,000	297,000
March	167,000	3,370,000	5,820	71,700	12,200	67,700	174,000	471,000
April	161,000	3,690,000	35,500	483,000	19,000	97,200	191,000	662,000
May	77,700	1,800,000	57,600	656,000	36,300	185,000	128,000	790,000
June	233,000	4,800,000	71,400	663,000	29,800	208,000	292,000	1,080,000
July	69,700	1,680,000	62,800	1,150,000	12,200	52,700	118,000	1,200,000
August	132,000	3,180,000	71,100	765,000	16,600	75,100	188,000	1,390,000
September	110,000	2,380,000	46,600	511,000	12,700	59,500	146,000	1,530,000
October	99,400	2,900,000	84,700	926,000	5,970	24,600	162,000	1,700,000
November	173,000	3,520,000	47,000	741,000	61,700	233,000	221,000	1,920,000
December	110,000	1,730,000	44,100	606,000	95,000	244,000	165,000	2,080,000
January-December	1,600,000	34,800,000	558,000	7,040,000	329,000	1,430,000	2,080,000	XX
2003:								
January	151,000	2,800,000	39,200	475,000	17,100	82,000	183,000	183,000

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.

⁶Year to date may include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

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
2002:				
January	46,000	\$1,720,000	237,000 ³	\$776,000 ³
February	136,000	3,070,000	2,900 ³	85,000 ³
March	55,300	1,710,000	575 ³	16,500 ³
April	106,000	2,450,000	--	--
May	74,500	2,100,000	2,910 ³	49,200 ³
June	68,100	2,340,000	2,610 ³	25,700 ³
July	87,100	2,630,000	27,700 ³	110,000 ³
August	83,300	2,570,000	5,290 ³	70,600 ³
September	90,600	2,500,000	1,780 ³	20,700 ³
October	60,000	1,940,000	16,300 ³	87,800 ³
November	51,400	1,880,000	158 ³	5,450 ³
December	64,700	1,650,000	10,200 ³	61,000 ³
January-December	923,000	26,600,000	307,000	1,310,000
2003:				
January	76,900	2,700,000	817 ³	8,240 ³

-- Zero.

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

²Free alongside ship (f.a.s.) value.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.