



# Mineral Industry Surveys

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## COBALT IN JANUARY 2003

U.S. consumption of cobalt in January 2003 was slightly higher than consumption during December 2002, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metals and chemicals was 12% lower in 2002 than in 2001. The cobalt content of U.S. exports of unwrought cobalt and chemicals was 35% lower in 2002 than in 2001. Trade data for January 2003 will be available in a subsequent issue.

Platts Metals Week are listed below.

<u>Date</u>	<u>Price range</u>
March 6	8.00-8.65
March 13	8.75-9.25
March 20	9.50-10.20
March 27	8.75-9.50

**Price**

Prices for electrolytic cobalt, in dollars per pound, from

<u>Month</u>	<u>Average price</u>
February	7.39

TABLE 1  
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Metal 2/	Oxide and other chemical compounds 3/	Scrap	Total
2002:				
January	358	98	215	670
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-December 4/	3,940	1,270	2,580	7,790
2003:				
January	315	147	169	631

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

2/ Includes metal powder.

3/ Data may include other cobalt materials.

4/ Data based on monthly reports.

TABLE 2  
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE 1/

(Metric tons, contained cobalt)

End use	2002		2003
	January	January- December 2/	January
Steel	46 t/	543	42
Superalloys	360 t/	3,970	318
Magnetic alloys	32 t/	374	31
Other alloys 3/	W	W	W
Cemented carbides 4/	62 t/	747	64
Chemical and ceramic uses 5/	147 t/	1,860	150
Miscellaneous and unspecified	25 t/	300	25
Total	670 t/	7,790	631

t/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

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

2/ Data based on monthly reports.

3/ Includes nonferrous alloys, welding materials, and wear-resistant alloys.

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

5/ Includes 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 MATERIALS 1/

(Metric tons, contained cobalt)

Period	Industry 2/				U.S. Government, metal 5/
	Metal 3/	Oxide and other chemical compounds 4/	Scrap	Total	
2002:					
January	415	251	134	800	NA
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	424	227	134	785	6,360

NA Not available.

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

2/ Stocks reported by cobalt processors and consumers.

3/ Includes metal powder.

4/ Data may include other cobalt materials.

5/ Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY 1/

(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/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
2001:								
December	553,000	\$9,200,000	91,900	\$1,340,000	254,000	\$1,080,000	689,000	9,410,000
January-December	7,910,000	183,000,000	1,280,000	25,700,000	2,150,000	11,000,000	9,410,000	XX
2002:								
January	729,000	11,500,000	101,000	1,550,000	267,000	1,220,000	877,000	877,000
February	564,000	9,020,000	148,000	2,300,000	202,000	727,000	725,000	1,600,000
March	679,000	11,000,000	162,000	2,690,000	216,000	849,000	854,000	2,460,000
April	660,000	10,700,000	79,000	1,230,000	268,000	1,080,000	790,000	3,250,000
May	723,000	12,200,000	155,000	2,310,000	176,000	801,000	885,000	4,130,000
June	554,000	10,000,000	82,600	1,330,000	163,000	831,000	662,000	4,790,000
July	559,000	9,580,000	102,000	1,730,000	253,000	1,090,000	702,000	5,500,000
August	294,000	5,170,000	81,600	1,400,000	188,000	886,000	406,000	5,900,000
September	588,000	8,760,000	115,000	1,690,000	235,000	815,000	733,000	6,630,000
October	545,000	8,840,000	106,000	1,480,000	274,000	942,000	695,000	7,330,000
November	307,000	5,090,000	77,000	1,040,000	195,000	657,000	415,000	7,740,000
December:								
Australia	15,000	133,000	--	--	--	--	15,000	177,000
Belgium	--	--	3,750	58,200	3,400	17,000	3,550	808,000
Brazil	20,000	282,000	--	--	5,890	61,000	22,600	292,000
Canada	64,600	1,070,000	--	--	--	--	64,600	882,000
China	--	--	--	--	--	--	--	40,500
Congo (Kinshasa)	--	--	--	--	--	--	--	271,000
Finland	19,400	477,000	42,600	559,000	90,900	247,000	74,500	1,920,000
France	745	30,900	2,220	52,900	--	--	2,340	57,500
Germany	--	--	--	--	--	--	--	45,800
Japan	696	13,900	--	--	8,110	77,600	2,720	25,500
Korea, Republic of	33	2,200	--	--	--	--	33	702
Morocco	--	--	--	--	--	--	--	56,000
Netherlands	--	--	--	--	--	--	--	54,400
Norway	121,000	1,670,000	--	--	--	--	121,000	1,710,000
Philippines	--	--	--	--	227	2,020	61	33,700
Russia	89,200	1,270,000	--	--	--	--	89,200	1,040,000
South Africa	19,600	257,000	26,500	250,000	--	--	38,700	269,000
Sweden	2,280	64,600	--	--	--	--	2,280	29,200
Switzerland	--	--	1	2,100	--	--	1	4
Uganda	--	--	--	--	--	--	--	44,000
United Kingdom	--	--	15,500	296,000	38,500	183,000	20,700	169,000
Zambia	38,000	523,000	--	--	--	--	38,000	316,000
Total	390,000	5,790,000	90,600	1,220,000	147,000	587,000	495,000	8,240,000

XX Not applicable. -- Zero.

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

2/ Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder.

3/ Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

4/ Customs value.

5/ Estimated from gross weights.

6/ May include revisions to prior months.

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		Other cobalt: matte, waste and scrap 2/		Wrought cobalt and cobalt articles	
	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
2001:						
December	2,130	\$47,500	49,200	\$1,010,000	21,800	\$1,370,000
January-December	76,100	1,770,000	583,000	10,200,000	233,000	13,400,000
2002:						
January	6,990	152,000	73,900 4/	1,170,000 4/	23,000	925,000
February	3,650	154,000	15,800	379,000	15,300	932,000
March	1,420	187,000	88,200	1,270,000	20,900	1,080,000
April	210	6,350	30,500	546,000	33,500	1,320,000
May	3,600	144,000	21,000	417,000	29,000	977,000
June	679	24,700	27,800	384,000	13,200	855,000
July	11,400	135,000	16,300	389,000	18,900	1,060,000
August	1,860	126,000	25,300	429,000	14,100 4/	811,000 4/
September	21,300	241,000	31,700	530,000	14,600	779,000
October	4,680	84,800	64,300	1,050,000	12,300	854,000
November	200	13,900	24,000	552,000	19,300	1,010,000
December:						
Austria	250	13,900	--	--	--	--
Belgium	--	--	3,690	84,500	465	21,600
Canada	--	--	60	2,600	1,180	277,000
China	--	--	2,000	41,300	--	--
France	--	--	151	10,500	2,560	209,000
Germany	343	14,300	800	40,300	991	55,500
Ireland	--	--	5,160	191,000	--	--
Japan	250	17,400	14,000	309,000	3,060	74,400
Sweden	--	--	1,010	18,800	--	--
Switzerland	--	--	316	13,600	--	--
United Kingdom	--	--	3,940	80,000	8,330	322,000
Total	843	45,700	31,200	792,000	16,600	960,000

-- Zero.

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

2/ Includes other intermediate products of cobalt metallurgy; may include other cobalt-bearing materials from which cobalt is extracted, or from which cobalt-containing chemical compounds are manufactured.

3/ Customs value.

4/ All 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 MATERIALS 1/

(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/		
2001:								
December	182,000	\$3,220,000	32,500	\$701,000	9,110	\$77,100	207,000	3,210,000
January-December	2,240,000	57,300,000	1,260,000	10,200,000	254,000	1,980,000	3,210,000	XX
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

XX Not applicable.

1/ Data 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.

3/ Cobalt acetates and cobalt chlorides.

4/ Free alongside ship (f.a.s.) value.

5/ Estimated from gross weights.

6/ Year 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 CONCENTRATES 1/

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value 2/	Quantity	Value 2/
2001:				
December	82,300	\$2,710,000	2,330	\$72,000
January-December	741,000	25,500,000	408,000	3,000,000
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

-- Zero.

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

2/ Free alongside ship (f.a.s.) value.

3/ All 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.