

Mineral Industry Surveys

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COBALT IN MAY 2000

U.S. consumption of cobalt in January through May 2000 was approximately the same as that during the first 5 months of 1999, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metal and chemicals was 10% lower during January through April 2000 than during the first 4 months of 1999. The cobalt content of U.S. exports of unwrought cobalt and chemicals during January through April 2000 was more than 80% higher than that during the first 4 months 1999. Trade data for May 2000 will be available in a subsequent issue.

Note

With the exception of prices, all data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

Price

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

<u>Date</u>	<u>Price range</u>
June 22	15.00-16.00
June 29	14.00-15.00
July 6	13.25-14.25
July 13	13.00-14.00

<u>Month</u>	<u>Average price</u>
June	15.60

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
1999:				
May	297 r/	153	230 r/	680 r/
June r/	297	193	224	714
July r/	276	140	233	649
August r/	284	152	230	666
September r/	269	163	223	655
October	282 r/	135	224 r/	641 r/
November	283 r/	121	224 r/	628 r/
December r/	285	167	220	672
January-May r/	1,410	840	1,140	3,390
January-December r/ 4/	3,390	1,910	2,710	8,010
Year p/ 5/	3,780	1,910	2,720	8,420
2000:				
January	276 r/	173 r/	225	675 r/
February r/	271	149	220	640
March	270 r/	158 r/	233	662 r/
April	284 r/	161 r/	226	671 r/
May	290	165	233	688
January-May	1,390	806	1,140	3,340

p/ Preliminary. r/ Revised.

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.

5/ Includes annual reports.

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

(Metric tons, contained cobalt)

End use	1999			2000	
	January- May	January- December 2/	Year p/ 3/	May	January- May 4/
Steel	68	154 r/	154	15	60
Superalloys	1,460	3,510 r/	3,830	307	1,480
Magnetic alloys	321	765 r/	794	65	312
Other alloys 5/	W	W	291	W	W
Cemented carbides 6/	314	754 r/	755	62	303
Chemical and ceramic uses 7/	1,090	2,510 r/	2,530	215	1,060
Miscellaneous and unspecified	132	317 r/	64	24	121
Total	3,390	8,010 r/	8,420	688	3,340

p/ Preliminary. r/ 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 annual reports.

4/ May include revisions to prior month's data.

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

6/ Includes diamond bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

7/ 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/			Total	U.S. Government, metal 5/
	Metal 3/	Oxide and other chemical compounds 4/	Scrap		
1999:					
May	327 r/	229 r/	119 r/	675 r/	14,100
June	296 r/	216 r/	127 r/	639 r/	13,800
July	336 r/	217 r/	121 r/	675 r/	13,600
August	316 r/	205 r/	150 r/	672 r/	13,400
September	324 r/	213 r/	152 r/	690 r/	13,300
October	333 r/	248 r/	159 r/	741 r/	13,300
November	325 r/	247 r/	156 r/	729 r/	13,200
December 6/	314 r/	231 r/	150 r/	695 r/	13,200
Yearend p/ 7/	322	251	165	739	13,200
2000:					
January	288 r/	225 r/	167 r/	679 r/	13,100
February	307 r/	207 r/	172 r/	687 r/	12,700
March	335 r/	204 r/	160 r/	699 r/	12,100
April	311 r/	207 r/	150 r/	668 r/	12,100
May	326	210	146	682	12,100

p/ Preliminary. r/ Revised.

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.

6/ Data based on monthly reports.

7/ Includes annual reports.

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/		
1999:								
April	739,000 7/	\$23,300,000 7/	129,000	\$3,720,000	72,200	\$599,000	851,000	3,020,000
May	517,000 7/	16,400,000 7/	88,500	2,330,000	126,000	931,000	615,000	3,630,000
June	800,000 7/	26,300,000 7/	128,000	3,370,000	153,000	950,000	942,000	4,580,000
July	550,000 7/	22,300,000 7/	81,000	2,230,000	147,000	1,330,000	648,000	5,220,000
August	297,000 8/	12,300,000 8/	76,200	2,290,000	166,000	1,350,000	397,000	5,620,000
September	672,000 7/	25,800,000 7/	81,300	2,460,000	225,000	1,850,000	791,000	6,410,000
October	405,000 7/	15,300,000 7/	117,000	3,130,000	207,000	1,580,000	544,000	6,960,000
November	489,000 7/	16,700,000 7/	137,000	3,710,000	170,000	1,310,000	633,000	7,590,000
December	447,000 7/	14,900,000 7/	87,100	2,410,000	182,000	1,270,000	558,000	8,150,000
January-December	6,800,000 r/	229,000,000 r/	1,260,000	33,700,000	1,610,000	12,400,000	8,150,000	XX
2000:								
January	443,000 9/	12,700,000 9/	173,000	4,100,000	384,000	2,490,000	670,000	670,000
February	597,000 9/	17,200,000 9/	109,000	2,700,000	213,000 9/	1,380,000 9/	733,000	1,400,000
March	450,000 9/	12,400,000 9/	206,000	4,960,000	90,100	605,000	622,000	2,020,000
April:								
Australia	--	--	13	10,000	14	3,640	13	4,050
Belgium	5,900	319,000	19,000	533,000	--	--	19,600	112,000
Brazil	60,000	1,650,000	--	--	--	--	60,000	150,000
Canada	73,000	2,250,000	--	--	--	--	73,000	336,000
Congo (Brazzaville)	--	--	--	--	--	--	--	152,000
Congo (Kinshasa)	39,600	985,000	--	--	--	--	39,600	157,000
Finland	26,700	792,000	27,600	532,000	21,000	119,000	52,200	701,000
France	4,920 9/	182,000 9/	5,800	259,000	--	--	9,090	17,900
Germany	5,310	231,000	--	--	--	--	5,310	18,500
Italy	--	--	--	--	--	--	--	284
Japan	667	39,500	--	--	--	--	667	19,500
Korea, Republic of	24	2,160	--	--	--	--	24	103
Morocco	--	--	--	--	--	--	--	56,200
Norway	210,000	6,370,000	--	--	--	--	210,000	607,000
Russia	53,600	1,670,000	--	--	--	--	53,600	125,000
South Africa	499	16,700	5,600	124,000	--	--	4,530	10,400
Sweden	--	--	--	--	--	--	--	180
United Kingdom	63,000 9/	402,000 9/	3,460	105,000	6	5,110	65,500	108,000
Zambia	87,000	1,890,000	--	--	--	--	87,000	129,000
Total	630,000	16,800,000	61,500	1,560,000	21,000	128,000	680,000	2,700,000

r/ Revised. 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.

7/ Data adjusted by the U.S. Geological Survey.

8/ Data revised by the Bureau of the Census.

9/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census, 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/
1999:						
April	60,900 4/	\$2,120,000 4/	59,800 4/	\$416,000 4/	16,100	\$651,000
May	40,000	493,000	24,000 4/	251,000 4/	11,200	723,000
June	12,600 4/	549,000 4/	27,800 4/	308,000 4/	16,200	710,000
July	3,450	126,000	79,600 4/	602,000 4/	17,800	772,000
August	4,720	165,000	15,300 5/	282,000 5/	6,710	591,000
September	10,500 4/	315,000 4/	21,500 4/	151,000 4/	12,700	686,000
October	24,500 4/	840,000 4/	13,800 4/	96,400 4/	9,560	841,000
November	11,800	457,000	52,300 4/	521,000 4/	11,400	786,000
December	7,260 4/	237,000 4/	32,600 4/	685,000 4/	10,800	643,000
January-December	255,000 r/	9,360,000 r/	391,000 r/	4,060,000 r/	173,000	9,130,000
2000:						
January	11,300	349,000	77,700 6/	2,190,000 6/	15,800	969,000
February	26,900	640,000	52,300 6/	1,500,000 6/	24,100	1,030,000
March	9,010	399,000	87,100 6/	1,710,000 6/	22,500	1,200,000
April:						
Belgium	1,120	25,000	9,540 6/	234,000 6/	1,030	58,400
Canada	225	28,200	28,000 6/	159,000 6/	1,140	164,000
Chile	--	--	--	--	2,000	132,000
China	--	--	680	8,780	--	--
Finland	--	--	15,400 6/	410,000 6/	--	--
France	--	--	2,720 6/	223,000 6/	--	--
Germany	--	--	4,010 6/	93,200 6/	2,550	81,800
Hong Kong	--	--	--	--	258	40,200
Japan	310	26,700	29,200 6/	991,000 6/	5,410	252,000
Luxembourg	--	--	500 6/	16,300 6/	--	--
Sweden	2,350	52,300	--	--	--	--
United Kingdom	--	--	601 6/	16,500 6/	9,890	596,000
Total	4,010	132,000	90,700	2,150,000	22,300	1,320,000

r/ Revised. -- 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/ Data adjusted by the U.S. Geological Survey.

5/ Data revised by the Bureau of the Census.

6/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census, 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/		
1999:								
April	105,000	\$3,840,000	36,600	\$521,000	38,500	\$377,000	141,000	413,000
May	241,000 7/	7,100,000 7/	30,600	545,000	11,900 8/	150,000 8/	266,000 r/	679,000
June	119,000 7/	3,860,000 7/	24,100 8/	231,000 8/	7,320	88,300	139,000 r/	818,000
July	64,700	3,120,000	20,000	277,000	25,200	184,000	85,100	903,000
August	73,000 7/	2,430,000 7/	35,900	554,000	23,200	240,000	104,000 r/	1,010,000
September	82,300	2,450,000	21,100 8/	394,000 8/	14,700	165,000	101,000	1,110,000
October	71,400 7/	3,310,000 7/	92,600	1,930,000	20,200	196,000	143,000 r/	1,250,000
November	92,100 7/	2,960,000 7/	75,900	1,400,000	53,100	874,000	160,000	1,410,000
December	63,600 7/	2,300,000 7/	90,900	707,000	43,800	298,000	140,000 r/	1,550,000
January-December	1,100,000 r/	38,400,000 r/	521,000 r/	8,140,000 r/	307,000 r/	3,100,000	1,550,000	XX
2000:								
January	79,000	3,180,000	92,400	1,070,000	39,300	343,000	155,000	155,000
February	93,700	3,650,000	23,600	484,000	35,100	326,000	119,000	274,000
March	67,100	2,360,000	143,000	1,340,000	136,000	430,000	203,000	477,000
April	123,000	5,410,000	143,000 9/	1,060,000 9/	177,000	525,000	269,000	746,000

r/ Revised. 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/ May include revisions to prior months.

7/ Data adjusted by the U.S. Geological Survey.

8/ Data no longer in question.

9/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census, 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/
1999:				
April	54,300	\$2,410,000	434 3/	\$3,900 3/
May	40,600	2,170,000	20,600 4/	199,000 4/
June	61,300	3,130,000	-- 4/	-- 4/
July	31,900	2,200,000	63,000 3/	768,000 3/
August	37,400	1,820,000	-- 4/	-- 4/
September	25,000	1,730,000	--	--
October	71,200	3,270,000	-- 4/	-- 4/
November	46,000	2,010,000	468 4/	3,150 4/
December	29,300	1,690,000	-- 4/	-- 4/
January-December	546,000	26,400,000	175,000 r/	1,090,000 r/
2000:				
January	64,300	2,220,000	--	--
February	104,000	2,520,000	2,990 5/	23,500 5/
March	72,900	3,090,000	7,060 5/	99,400 5/
April	116,000	2,790,000	132,000 5/	323,000 5/

r/ Revised. -- 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/ Data no longer in question.

4/ Data adjusted by the U.S. Geological Survey.

5/ All or part of these data have been referred to the Bureau of the Census for verification.

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