

Mineral Industry Surveys

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COBALT IN JULY 2000

U.S. consumption of cobalt in January through July 2000 was approximately the same as that during the first 7 months of 1999, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metal and chemicals was 7% lower during January through June 2000 than during the first 6 months of 1999. The cobalt content of U.S. exports of unwrought cobalt and chemicals during January through June 2000 was 34% higher than that during the first 6 months 1999. Trade data for July 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>
August 17	14.50-15.50
August 24	14.50-15.50
August 31	14.00-15.00
September 7	14.00-15.00
September 14	14.75-15.50

<u>Month</u>	<u>Average price</u>
August	14.45

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:				
July	276	140	233	649
August	284	152	230	666
September	269	163	223	655
October	282	135	224	641
November	283	121	224	628
December	285	167	220	672
January-July r/	1,990	1,170	1,590	4,750
January-December 4/	3,390	1,910	2,710	8,010
Year p/ 5/	3,780	1,910	2,720	8,420
2000:				
January	276	173	225	675
February	271	149	220	640
March	270	158	233	662
April	284	161	226	671
May	290	166	233	689
June	272	157	228	658
July	283	149	226	658
January-July	1,950	1,110	1,590	4,650

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- July r/	January- December 2/	Year p/ 3/	July	January- July 4/
Steel	95	154	154	17	86
Superalloys	2,050	3,510	3,830	294	2,070
Magnetic alloys	453	765	794	63	438
Other alloys 5/	W	W	291	W	W
Cemented carbides 6/	440	754	755	61	426
Chemical and ceramic uses 7/	1,530	2,510	2,530	199	1,460
Miscellaneous and unspecified	185	317	64	25	169
Total	4,750	8,010	8,420	658	4,650

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 months.

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:					
July	336	217	121	675	13,600
August	316	205	150	672	13,400
September	324	213	152	690	13,300
October	333	248	159	741	13,300
November	325	247	156	729	13,200
December 6/	314	231	150	695	13,200
Yearend p/ 7/	322	251	165	739	13,200
2000:					
January	288	225	167	679	13,100
February	307	207	172	687	12,700
March	335	204	160	699	12,100
April	311	207	150	668	12,100
May	329	209	146	684	12,100
June	308	212	145	665	11,700
July	325	211	145	681	11,700

p/ Preliminary.

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:								
June	800,000	\$26,300,000	128,000	\$3,370,000	153,000	\$950,000	942,000	4,580,000
July	550,000	22,300,000	81,000	2,230,000	147,000	1,330,000	648,000	5,220,000
August	297,000	12,300,000	76,200	2,290,000	166,000	1,350,000	397,000	5,620,000
September	672,000	25,800,000	81,300	2,460,000	225,000	1,850,000	791,000	6,410,000
October	405,000	15,300,000	117,000	3,130,000	207,000	1,580,000	544,000	6,960,000
November	489,000	16,700,000	137,000	3,710,000	170,000	1,310,000	633,000	7,590,000
December	447,000	14,900,000	87,100	2,410,000	182,000	1,270,000	558,000	8,150,000
January-December	6,800,000	229,000,000	1,260,000	33,700,000	1,610,000	12,400,000	8,150,000	XX
2000:								
January	467,000 7/	13,400,000 7/	178,000 7/	4,240,000 7/	384,000	2,490,000	697,000 r/	697,000
February	592,000 7/	17,200,000 8/	109,000	2,700,000	213,000	1,380,000	728,000 r/	1,420,000
March	450,000 9/	12,400,000 9/	206,000	4,960,000	90,100	605,000	622,000	2,050,000
April	630,000 9/	16,800,000 9/	61,500	1,560,000	21,000	128,000	680,000	2,730,000
May	656,000 9/	20,700,000 9/	122,000	3,010,000	18,100	145,000	749,000	3,480,000
June:								
Australia	23,000 9/	668,000 9/	--	--	--	--	23,000	45,800
Belgium	2,290	118,000	59,300	1,660,000	--	--	45,000	192,000
Brazil	40,000	1,170,000	--	--	--	--	40,000	230,000
Canada	12,400 9/	559,000 9/	--	--	--	--	12,400	460,000
China	10,000 9/	82,500 9/	8,000	189,000	--	--	15,800	15,800
Congo (Brazzaville)	50,000 9/	1,210,000 9/	--	--	--	--	50,000	110,000
Congo (Kinshasa)	64,900	1,730,000	--	--	--	--	64,900	334,000
Finland	121,000	4,230,000	59,000	1,420,000	164,000	1,140,000	207,000	1,100,000
France	1,430	97,000	3,720	162,000	--	--	4,110	25,900
Germany	20,600 9/	253,000 9/	--	--	--	--	20,600	44,800
Italy	--	--	--	--	--	--	--	138
Japan	3,370 9/	154,000 9/	720	4,310	--	--	3,890	24,600
Korea, Republic of	41	3,490	--	--	--	--	41	181
Morocco	--	--	--	--	--	--	--	56,200
Norway	101,000	3,220,000	--	--	--	--	101,000	889,000
Russia	103,000	3,130,000	--	--	--	--	103,000	338,000
South Africa	--	--	--	--	--	--	--	13,200
Sweden	--	--	--	--	--	--	--	180
United Kingdom	17,200 9/	115,000 9/	5,620	171,000	--	--	21,300	155,000
Zambia	54,000	1,410,000	--	--	--	--	54,000	211,000
Total	624,000	18,100,000	136,000	3,610,000	164,000	1,140,000	766,000	4,240,000

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/ Revised by the U.S. Census Bureau.

8/ Verified correct by the U.S. Census Bureau.

9/ 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 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:						
June	12,600	\$549,000	27,800	\$308,000	16,200	\$710,000
July	3,450	126,000	79,600	602,000	17,800	772,000
August	4,720	165,000	15,300	282,000	6,710	591,000
September	10,500	315,000	21,500	151,000	12,700	686,000
October	24,500	840,000	13,800	96,400	9,560	841,000
November	11,800	457,000	52,300	521,000	11,400	786,000
December	7,260	237,000	32,600	685,000	10,800	643,000
January-December	255,000	9,360,000	391,000	4,060,000	173,000	9,130,000
2000:						
January	11,300	349,000	28,200 4/	386,000 4/	36,800 4/	1,960,000 4/
February	26,900	640,000	52,300 5/	1,500,000 5/	24,100	1,030,000
March	9,010	399,000	87,100 5/	1,710,000 5/	22,500	1,200,000
April	4,010	132,000	90,700 5/	2,150,000 5/	22,300	1,320,000
May	22,900	562,000	57,900 5/	1,260,000 5/	17,900	1,120,000
June:						
Belgium	4,440	96,300	6,900 5/	97,500 5/	45	42,700
Canada	--	--	17,600	46,900	932	194,000
Chile	--	--	--	--	250	17,400
China	--	--	108 5/	3,160 5/	191	4,150
Congo (Kinshasa)	57,200	1,430,000	--	--	--	--
Finland	--	--	6,480 5/	188,000 5/	--	--
France	--	--	13,200 5/	332,000 5/	4,120	254,000
Germany	--	--	--	--	1,580	90,200
Ireland	--	--	1,350	2,990	--	--
Japan	250	20,100	24,300 5/	1,050,000 5/	1,120	142,000
Luxembourg	--	--	750 5/	32,400 5/	--	--
Sweden	2,900	74,700	--	--	--	--
Switzerland	--	--	356	4,340	--	--
United Kingdom	1,570	81,100	552 5/	17,300 5/	10,900	685,000
Total	66,300	1,700,000	71,600	1,770,000	19,200	1,430,000

-- 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/ Revised by the U.S. Census Bureau.

5/ 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/		
1999:								
June	119,000	\$3,860,000	24,100	\$231,000	7,320	\$88,300	139,000	818,000
July	64,700	3,120,000	20,000	277,000	25,200	184,000	85,100	903,000
August	73,000	2,430,000	35,900	554,000	23,200	240,000	104,000	1,010,000
September	82,300	2,450,000	21,100	394,000	14,700	165,000	101,000	1,110,000
October	71,400	3,310,000	92,600	1,930,000	20,200	196,000	143,000	1,250,000
November	92,100	2,960,000	75,900	1,400,000	53,100	874,000	160,000	1,410,000
December	63,600	2,300,000	90,900	707,000	43,800	298,000	140,000	1,550,000
January-December	1,100,000	38,400,000	521,000	8,140,000	307,000	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	71,900 7/	2,440,000 7/	143,000	1,340,000	136,000	430,000	208,000 r/	482,000
April	123,000	5,410,000	143,000 8/	1,060,000 8/	177,000	525,000	269,000	751,000
May	132,000	5,020,000	78,600 8/	577,000 8/	29,500	289,000	195,000	946,000
June	66,000	2,770,000	111,000 8/	837,000 8/	18,000	168,000	150,000	1,100,000

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/ Revised by the U.S. Census Bureau.

8/ 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 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:				
June	61,300	\$3,130,000	--	--
July	31,900	2,200,000	63,000	\$768,000
August	37,400	1,820,000	--	--
September	25,000	1,730,000	--	--
October	71,200	3,270,000	--	--
November	46,000	2,010,000	468	3,150
December	29,300	1,690,000	--	--
January-December	546,000	26,400,000	175,000	1,090,000
2000:				
January	64,300	2,220,000	--	--
February	104,000	2,520,000	-- r/	-- r/
March	72,900	3,090,000	-- r/	-- r/
April	116,000	2,790,000	132,000 3/	323,000 3/
May	49,900	2,200,000	300,000 3/	189,000 3/
June	65,300	2,940,000	34,800 3/	516,000 3/

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/ 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.