

Mineral Industry Surveys

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COBALT IN SEPTEMBER 2000

U.S. consumption of cobalt in January through September 2000 was approximately the same as that during the first 9 months of 1999, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metal and chemicals was 5% lower during January through August 2000 than during the first 8 months of 1999. The cobalt content of U.S. exports of unwrought cobalt and chemicals during January through August 2000 was 66% higher than that during the first 8 months of 1999. Trade data for September 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>
October 19	15.00-16.25
October 26	15.50-16.50

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:				
September	269	163	223	655
October	282	135	224	641
November	283	121	224	628
December	285	167	220	672
January-September r/	2,540	1,490	2,040	6,070
January-December 4/	3,390	1,910	2,710	8,010
Year 5/	3,780	1,910	2,720	8,420
2000:				
January	288 r/	173	225	687 r/
February	272 r/	149	220	641 r/
March	283 r/	158	233	674 r/
April	288 r/	161	226	675 r/
May	299 r/	166	233	697 r/
June	272	157	228	657 r/
July	290 r/	149	226	664 r/
August	280 r/	136	227	643 r/
September	285	149	226	660
January-September	2,560	1,400	2,040	6,000

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- September r/	January- December 2/	Year 3/	September	January- September 4/
Steel	120	154	154	8	107
Superalloys	2,620	3,510	3,830	304	2,710
Magnetic alloys	584	765	794	62	564
Other alloys 5/	W	W	291	W	W
Cemented carbides 6/	565	754	755	63	551
Chemical and ceramic uses 7/	1,940	2,510	2,530	199	1,850
Miscellaneous and unspecified	238	317	64	24	217
Total	6,070	8,010	8,420	660	6,000

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/				U.S. Government, metal 5/
	Metal 3/	Oxide and other chemical compounds 4/	Scrap	Total	
1999:					
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 7/	322	251	165	739	13,200
2000:					
January	296 r/	225	167	688 r/	13,100
February	332 r/	207	172	712 r/	12,700
March	381 r/	204	160	745 r/	12,100
April	346 r/	207	150	703 r/	12,100
May	339 r/	209	146	694 r/	12,100
June	335 r/	212	145	692 r/	11,700
July	388 r/	220	145	752 r/	11,700
August	348 r/	191	144	684 r/	11,600
September	373	224	148	745	11,100

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:								
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	13,400,000	178,000	4,240,000	384,000	2,490,000	697,000	697,000
February	592,000	17,200,000	109,000	2,700,000	213,000	1,380,000	728,000	1,420,000
March	450,000 7/	12,400,000 7/	206,000	4,960,000	90,100	605,000	622,000	2,050,000
April	630,000 7/	16,800,000 7/	61,500	1,560,000	21,000	128,000	680,000	2,730,000
May	656,000 7/	20,700,000 7/	122,000	3,010,000	18,100	145,000	749,000	3,480,000
June	624,000 7/	18,100,000 7/	136,000	3,610,000	164,000	1,140,000	766,000	4,240,000
July	390,000 7/	11,400,000 7/	121,000	2,990,000	102,000	675,000	505,000	4,750,000
August:								
Australia	59,000	1,690,000	2,000	42,800	--	--	60,400	146,000
Belgium	4,850	310,000	5,200	150,000	--	--	8,590	249,000
Brazil	--	--	--	--	--	--	--	250,000
Canada	12,800	411,000	3	3,210	--	--	12,800	565,000
China	10,000	309,000	--	--	2,240	17,200	10,600	31,400
Congo (Brazzaville)	20,000 7/	339,000 7/	--	--	--	--	20,000	130,000
Congo (Kinshasa)	--	--	--	--	--	--	--	354,000
Finland	121,000	3,890,000	76,200	1,520,000	141,000	864,000	214,000	1,410,000
France	1,560	92,900	2,610	126,000	--	--	3,440	33,300
Germany	13,100 7/	380,000 7/	--	--	--	--	13,100	64,600
Italy	--	--	--	--	--	--	--	138
Japan	2,000	119,000	50	2,460	--	--	2,040	28,000
Korea, Republic of	25	2,280	--	--	--	--	25	457
Morocco	--	--	--	--	--	--	--	61,700
Norway	187,000	4,910,000	--	--	--	--	187,000	1,180,000
Russia	17,600	600,000	--	--	--	--	17,600	372,000
South Africa	--	--	--	--	--	--	--	28,600
Sweden	--	--	--	--	--	--	--	180
Uganda	10,100	324,000	--	--	--	--	10,100	10,100
United Kingdom	--	--	24,800	608,000	30,000	227,000	25,200	204,000
Uzbekistan	--	--	--	--	5,880	54,400	1,470	1,470
Zambia	17,000	437,000	--	--	--	--	17,000	228,000
Total	476,000	13,800,000	111,000	2,450,000	179,000	1,160,000	603,000	5,350,000

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.

7/ 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:						
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	386,000	36,800	1,960,000
February	26,900	640,000	52,300 4/	1,500,000 4/	24,100	1,030,000
March	9,010	399,000	87,100 4/	1,710,000 4/	22,500	1,200,000
April	4,010	132,000	90,700 4/	2,150,000 4/	22,300	1,320,000
May	22,900	562,000	57,900 4/	1,260,000 4/	17,900	1,120,000
June	66,300	1,700,000	71,600 4/	1,770,000 4/	19,200	1,430,000
July	5,290	137,000	55,000 4/	1,620,000 4/	29,500	1,160,000
August:						
Belgium	1,870	40,900	5,060	66,200	328	19,000
Canada	221	13,600	203	2,480	709	134,000
Chile	--	--	--	--	1,500	108,000
Finland	--	--	21,000 4/	526,000 4/	--	--
France	--	--	16,600 4/	370,000 4/	3,280	212,000
Germany	--	--	437	2,520	3,050	132,000
Ireland	--	--	1,480	7,320	--	--
Japan	250	21,000	1,610	11,400	2,870	165,000
Sweden	30	2,260	--	--	--	--
Taiwan	--	--	3,320	31,100	--	--
United Kingdom	227	7,990	2,540 4/	77,800 4/	4,880	255,000
Total	2,600	85,700	52,200	1,090,000	16,600	1,030,000

-- 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/		
1999:								
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	2,440,000	143,000	1,340,000	136,000	430,000	208,000	482,000
April	123,000	5,410,000	143,000 7/	1,060,000 7/	177,000	525,000	269,000	751,000
May	132,000	5,020,000	78,600 7/	577,000 7/	29,500	289,000	195,000	946,000
June	66,000	2,770,000	111,000 7/	837,000 7/	18,000	168,000	150,000	1,100,000
July	152,000	6,580,000	138,000 7/	1,230,000 7/	23,100	219,000	257,000	1,350,000
August	191,000	5,130,000	176,000 7/	1,370,000 7/	18,400	169,000	322,000	1,680,000

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/ 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:				
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	--	--
March	72,900	3,090,000	--	--
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/
July	59,700	2,560,000	47,800 3/	1,410,000 3/
August	147,000	5,550,000	31,100 3/	618,000 3/

-- Zero.

1/ Data are rounded to no more than three significant digits.

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.