

# Mineral Industry Surveys

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## COBALT IN OCTOBER 2000

U.S. consumption of cobalt in January through October 2000 was approximately the same as that during the first 10 months of 1999, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metal and chemicals was approximately the same during January through September 2000 as that during the first 9 months of 1999. The cobalt content of U.S. exports of unwrought cobalt and chemicals during January through September 2000 was 90% higher than that during the first 9 months of 1999. Trade data for October 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.

### New publication

The 1999 Cobalt Annual Review is now available. To retrieve this report from MINES FaxBack, call (703) 648-4999 from the phone attached to your fax machine and request document number

210499. The review is also available in PDF format from the USGS minerals information web page at URL <http://minerals.usgs.gov/minerals/pubs/commodity/cobalt/>.

### Price

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

<u>Date</u>	<u>Price range</u>
November 2	15.25-16.25
November 9	15.00-16.00
November 16	14.00-15.00
November 21	14.00-15.00
November 30	14.00-15.00
December 7	13.50-14.50

<u>Month</u>	<u>Average price</u>
October	16.38
November	14.95

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:				
October	282	135	224	641
November	283	121	224	628
December	285	167	220	672
January-October r/	2,820	1,620	2,270	6,710
January-December 4/	3,390	1,910	2,710	8,010
Year 5/	3,780	1,910	2,720	8,420
2000:				
January	288	173	225	687
February	272	149	220	641
March	283	158	233	674
April	288	161	226	675
May	299	166	233	697
June	272	157	228	657
July	290	149	226	664
August	280	137 r/	227	643
September	285	147 r/	226	658 r/
October	288	143	232	663
January-October	2,840	1,540	2,280	6,660

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- October r/	January- December 2/	Year 3/	October	January- October 4/
Steel	131	154	154	10	116
Superalloys	2,920	3,510	3,830	312	3,020
Magnetic alloys	645	765	794	63	627
Other alloys 5/	W	W	291	W	W
Cemented carbides 6/	628	754	755	61	612
Chemical and ceramic uses 7/	2,130	2,510	2,530	193	2,040
Miscellaneous and unspecified	264	317	64	24	241
Total	6,710	8,010	8,420	663	6,660

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:					
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	225	167	688	13,100
February	332	207	172	712	12,700
March	381	204	160	745	12,100
April	346	207	150	703	12,100
May	339	209	146	694	12,100
June	335	212	145	692	11,700
July	388	220	145	752	11,700
August	348	190 r/	144	682 r/	11,600
September	372 r/	224	148	744 r/	11,100
October	373	206	151	730	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:								
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	476,000 7/	13,800,000 7/	111,000	2,450,000	179,000	1,160,000	603,000	5,350,000
September:								
Australia	40,000	1,100,000	--	--	--	--	40,000	186,000
Belgium	2,950	135,000	27,200	725,000	--	--	22,600	272,000
Brazil	20,000	574,000	--	--	--	--	20,000	270,000
Canada	63,000	1,820,000	--	--	--	--	63,000	628,000
China	500	54,000	--	--	--	--	500	31,900
Congo (Brazzaville)	--	--	--	--	--	--	--	(8/)
Congo (Kinshasa)	151,000	4,230,000	--	--	--	--	151,000	505,000
Finland	73,300	2,320,000	68,600	1,380,000	60,700	323,000	139,000	1,550,000
France	807	63,900	4,370	251,000	--	--	3,960	37,300
Germany	7,170	319,000	--	--	--	--	7,170	71,700
Italy	--	--	--	--	--	--	--	138
Japan	3,420	176,000	99	8,600	--	--	3,490	31,500
Korea, Republic of	168	13,800	--	--	--	--	168	625
Morocco	--	--	--	--	--	--	--	61,700
Norway	72,300	2,150,000	--	--	--	--	72,300	1,260,000
Russia	375,000	10,800,000	--	--	4,710	43,600	377,000	748,000
South Africa	20,000	489,000	--	--	--	--	20,000	48,600
Sweden	8,100	212,000	--	--	--	--	8,100	8,280
Uganda	--	--	--	--	--	--	--	10,100
United Kingdom	--	--	4,320	132,000	12,000	92,400	5,990	210,000
Uzbekistan	--	--	--	--	--	--	--	1,470
Zambia	53,700	1,270,000	--	--	--	--	53,700	282,000
Total	892,000	25,800,000	105,000	2,500,000	77,400	459,000	987,000	6,340,000

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.

8/ Revised to zero by the U.S. Census Bureau.

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:						
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	2,600	85,700	52,200 4/	1,090,000 4/	16,600	1,030,000
September:						
Argentina	--	--	10,000	48,400	--	--
Belgium	3,800	93,100	10,100	122,000	195	10,200
Brazil					1,880	372,000
Canada	294	34,700	413	5,040	1,400	248,000
Chile	--	--	--	--	1,850	128,000
Finland	--	--	22,100 4/	530,000 4/	100	4,010
France	--	--	4,080 4/	265,000 4/	--	--
Germany	465	26,800	1,220	5,420	1,160	55,800
India	--	--	523	7,240	2,690	123,000
Japan	557	39,100	22,300 4/	625,000 4/	2,080	154,000
Netherlands	3,200	76,400				
Russia			596	7,270		
Sweden	3,220	65,600	--	--	--	--
United Arab Emirates	--	--	5,370	15,600	--	--
United Kingdom	456	23,500	6,350 4/	33,200 4/	6,120	301,000
Total	12,000	359,000	83,000	1,660,000	17,500	1,390,000

-- 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:								
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
September	275,000	8,090,000	201,000 7/	1,780,000 7/	58,500	242,000	434,000	2,110,000

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:				
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/
September	40,300	2,630,000	--	--

-- 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.