

# Mineral Industry Surveys

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## COBALT IN NOVEMBER 2001

U.S. consumption of cobalt in January through November 2001 was 6% lower than that during the first 11 months of 2000, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metal and chemicals was 10% higher during January through October 2001 than that of imports during the same period in 2000. The cobalt content of U.S. exports of unwrought cobalt and chemicals was 18% higher during January through October 2001 than that during the same period in 2000. Trade data for November 2001 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 Platts Metals Week are listed below.

<u>Date</u>	<u>Price range</u>
December 20	6.50-7.40
December 27	6.50-7.40
January 3	6.80-7.80
January 10	7.00-8.00

  

<u>Month</u>	<u>Average price</u>
December	7.13

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
2000:				
November	317	151	210	678
December	283	145	207	635
January-November r/	3,380	1,690	2,320	7,390
January-December 4/	3,660	1,840	2,530	8,030
Year 5/	4,320	1,840	2,550	8,700
2001:				
January	296	142	211	649
February	303	145	211	659
March	321	143	210	673
April	308	122	209	640
May	298	120	210	627
June	281	147	209	638
July	303	117	209	629
August	283	110	209	602
September	279	137	209	626
October	302 r/	104	209	615 r/
November	312	105	209	626
January-November	3,290	1,390	2,310	6,990

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	2000			2001	
	January- November	January- December 2/	Year 3/	November	January- November 4/
Steel	152 r/	163	163	15	193
Superalloys	3,310 r/	3,590	3,800	322	3,290
Magnetic alloys	468 r/	510	544	53	630
Other alloys 5/	W	W	1,020	W	W
Cemented carbides 6/	696 r/	760	760	65	736
Chemical and ceramic uses 7/	2,160 r/	2,350	2,360	148	1,860
Miscellaneous and unspecified	599 r/	654	63	24	273
Total	7,390 r/	8,030	8,700	626	6,990

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 tool 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		
<u>2000:</u>					
November	345	221	160	726	10,200
December 6/	322	232	158	713	10,200
Yearend 7/	370	252	159	780	10,200
<u>2001:</u>					
January	344	200	165	709	10,200
February	341	200	164	706	9,810
March	337	195	163	695	9,780
April	365	214	163	742	9,120
May	337	211	163	711	8,850
June	302	196	163	661	8,480
July	300	219	163	682	8,420
August	321	236	163	719	8,260
September	315	238	163	715	8,180
October	341 r/	230	162	734 r/	NA
November	327	222	163	712	NA

r/ Revised. 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.

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/		
2000:								
October	723,000	\$21,500,000	98,100	\$2,170,000	168,000	\$988,000	838,000	7,230,000
November	572,000	16,300,000	125,000	2,920,000	83,500	544,000	684,000	7,910,000
December	700,000	19,200,000	144,000	3,400,000	211,000	1,320,000	860,000	8,770,000
January-December	7,210,000	213,000,000	1,540,000	37,100,000	1,710,000	11,000,000	8,770,000	XX
2001:								
January	563,000	15,600,000	185,000	4,400,000	80,400	457,000	717,000	717,000
February	714,000 7/	17,000,000 7/	136,000	3,140,000	124,000	699,000	843,000	1,560,000
March	615,000	16,700,000	96,400 7/	2,050,000 7/	256,000	1,320,000	753,000	2,310,000
April	679,000	18,600,000	106,000	2,400,000	234,000	1,240,000	817,000	3,130,000
May	836,000 7/	21,100,000 7/	50,600	1,210,000	80,400	518,000	896,000	4,030,000
June	687,000	16,300,000	152,000	2,820,000	84,700	486,000	820,000	4,850,000
July	525,000	12,500,000	119,000	2,090,000	184,000	966,000	658,000	5,500,000
August	646,000	14,300,000	106,000	1,910,000	174,000	872,000	768,000	6,270,000
September	569,000	12,300,000	64,600	1,310,000	198,000	973,000	668,000	6,940,000
October:								
Australia	19,500	364,000	--	--	--	--	19,500	153,000
Belgium	19,300	451,000	24,000	453,000	--	--	36,500	444,000
Brazil	--	--	--	--	--	--	--	246,000
Canada	66,000	1,320,000	--	--	--	--	66,000	741,000
China	75	4,440	--	--	3,000	25,200	845	65,900
Congo (Kinshasa)	79,900	1,260,000	--	--	--	--	79,900	602,000
Finland	173,000	3,880,000	55,400	923,000	295,000	1,390,000	294,000	1,810,000
France	250	19,700	4,830	162,000	--	--	3,730	36,500
Germany	600	35,400	760	60,900	--	--	1,150	32,500
India	--	--	--	--	--	--	--	267
Italy	--	--	--	--	--	--	--	6,600
Japan	817	48,400	--	--	8,110	98,500	2,850	34,100
Korea, Republic of	--	--	--	--	--	--	--	805
Morocco	7,000	141,000	--	--	--	--	7,000	172,000
Norway	179,000	3,380,000	--	--	--	--	179,000	1,040,000
Philippines	--	--	--	--	6,760	70,200	2,590	2,590
Russia	133,000	2,570,000	--	--	--	--	133,000	1,360,000
South Africa	60,000	1,300,000	--	--	--	--	60,000	598,000
Sweden	453	10,800	--	--	--	--	453	453
Switzerland	--	--	--	--	--	--	--	77
Taiwan	--	--	--	--	--	--	--	9,420
Uganda	--	--	--	--	--	--	--	59,700
United Kingdom	--	--	6,910	158,000	19,000	106,000	9,530	112,000
Zambia	86,400	1,620,000	--	--	--	--	86,400	393,000
Total	826,000	16,400,000	91,900	1,760,000	332,000	1,690,000	982,000	7,920,000

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/
2000:						
October	7,490	\$211,000	45,200	\$309,000	48,300	\$1,600,000
November	39,400	1,650,000	22,700	176,000	17,800	1,110,000
December	7,120	163,000	20,800	133,000	21,000	1,230,000
January-December	214,000	6,390,000	550,000	4,110,000	359,000	18,800,000
2001:						
January	2,200	66,500	122,000 4/	1,880,000 4/	27,500	1,570,000
February	4,920	116,000	77,200 4/	1,620,000 4/	24,900	1,380,000
March	4,090	87,100	49,200 4/	381,000 4/	26,700	1,490,000
April	4,250	91,900	67,000	1,550,000	13,100	839,000
May	8,030	193,000	22,600 4/	823,000 4/	25,100	813,000
June	22,200	445,000	67,400 4/	888,000 4/	14,600	980,000
July	6,570	147,000	57,400 4/	537,000 4/	14,500	989,000
August	3,480	64,600	46,400 4/	1,060,000 4/	13,200	845,000
September	1,140	51,500	18,500 4/	515,000 4/	15,400	947,000
October:						
Australia	--	--	10,000	124,000	--	--
Belgium	2,400	58,700	--	--	344	16,500
Canada	--	--	1,550	18,900	2,310	371,000
Finland	--	--	12,300 4/	314,000 4/	--	--
France	--	--	1,870 4/	127,000 4/	3,380	91,000
Germany	--	--	429	5,240	1,680	70,400
Ireland	--	--	--	--	18	3,470
Japan	200	14,600	2,140 4/	73,700 4/	3,310	233,000
Sweden	90	7,630	--	--	--	--
Switzerland	--	--	916	13,400	--	--
United Kingdom	722	23,900	2,760 4/	32,900 4/	8,380	381,000
Total	3,410	105,000	32,000	709,000	19,400	1,170,000

-- 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/		
2000:								
October	65,900	\$2,430,000	96,900	\$978,000	46,900	\$451,000	147,000	2,250,000
November	110,000	4,500,000	12,000	408,000	12,800	146,000	121,000	2,370,000
December	165,000	5,280,000	107,000	646,000	81,200	346,000	261,000	2,630,000
January-December	1,520,000	54,500,000	1,320,000	11,700,000	676,000	3,650,000	2,630,000	XX
2001:								
January	93,500	3,140,000	200,000	1,540,000	26,500	263,000	244,000	244,000
February	216,000	6,020,000	131,000	823,000	13,200	124,000	313,000	557,000
March	166,000	5,700,000	171,000	1,220,000	14,400	90,700	292,000	850,000
April	141,000	4,550,000	210,000	1,530,000	19,500	192,000	298,000	1,150,000
May	220,000	5,590,000	84,200	654,000	26,100	209,000	287,000	1,430,000
June	204,000	5,460,000	116,000 7/	1,070,000 7/	39,000	334,000	297,000	1,730,000
July	146,000	3,960,000	211,000 7/	1,160,000 7/	30,000	231,000	306,000	2,040,000
August	189,000	5,270,000	27,400 7/	241,000 7/	29,800	173,000	216,000	2,250,000
September	186,000	4,730,000	32,100	473,000	3,030	27,100	210,000	2,460,000
October	184,000	5,100,000	6,530	155,000	35,400	221,000	197,000	2,660,000

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/ Year to date 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/
2000:				
October	127,000	\$5,910,000	91,400	\$303,000
November	66,600	3,680,000	--	--
December	50,200	1,650,000	54,300	61,500
January-December	971,000	37,800,000	691,000	3,430,000
2001:				
January	56,500	1,790,000	42,000 3/	169,000 3/
February	89,000	2,070,000	--	--
March	118,000	3,040,000	75,200 3/	477,000 3/
April	55,000	1,860,000	95,000 3/	677,000 3/
May	44,100	2,250,000	23,200 3/	54,900 3/
June	31,300	2,200,000	95,800 3/	63,100 3/
July	73,800	2,040,000	78,300 3/	342,000 3/
August	66,400	2,320,000	21,400 3/	321,000 3/
September	50,700	1,990,000	71,500 3/	446,000 3/
October	30,600	1,250,000	19,400 3/	411,000 3/

-- 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.