

Mineral Industry Surveys

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COBALT IN SEPTEMBER 2001

U.S. consumption of cobalt in January through September 2001 was 3% lower than that during the first 9 months of 2000, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metal and chemicals was 17% higher during January through August 2001 than that of imports during the same period in 2000. The cobalt content of U.S. exports of unwrought cobalt and chemicals was 35% higher during January through August 2001 than that during the same period in 2000. Trade data for September 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>
October 18	7.75-8.00
October 25	7.25-7.75
November 1	7.15-7.50
November 8	6.75-7.25
November 15	6.50-6.95
November 20	6.50-6.95

<u>Month</u>	<u>Average price</u>
October	7.90

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:				
September	304 r/	147	205 r/	656 r/
October r/	299	151	212	661
November	317 r/	151	210 r/	678 r/
December r/	283	145	207	635
January-September r/	2,760	1,390	1,900	6,050
January-December r/ 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 r/	209	602 r/
September	279	137	209	626
January-September	2,670	1,180	1,890	5,740

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-September	January-December 2/	Year 3/	September	January-September 4/
Steel	129 r/	163 r/	163	15	163
Superalloys	2,710	3,590 r/	3,800	288	2,660
Magnetic alloys	382 r/	510 r/	544	53	524
Other alloys 5/	W	W	1,020	W	W
Cemented carbides 6/	570 r/	760 r/	760	66	602
Chemical and ceramic uses 7/	1,780 r/	2,350 r/	2,360	180	1,570
Miscellaneous and unspecified	490 r/	654 r/	63	25	224
Total	6,050 r/	8,030 r/	8,700	626	5,740

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/ Oxide and other chemical compounds 4/			Total	U.S. Government, metal 5/
	Metal 3/	Scrap			
2000:					
September	362 r/	241 r/	151 r/	754 r/	11,100
October	356 r/	223 r/	163 r/	741 r/	11,100
November	345 r/	221 r/	160 r/	726 r/	10,200
December 6/	322 r/	232 r/	158 r/	713 r/	10,200
Yearend 7/	370	252	159	780	10,200
2001:					
January	344	200	165	709	10,200
February	341	200	164	706	9,810
March	337 r/	195	163	695 r/	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 r/	236 r/	163	719 r/	8,260
September	315	237	163	715	8,180

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/		
2000:								
August	495,000 7/	\$14,600,000 7/	111,000	\$2,450,000	179,000	\$1,160,000	622,000 r/	5,370,000 r/
September	927,000 7/	27,100,000 7/	105,000	2,500,000	77,400	459,000	1,020,000 r/	6,390,000 r/
October	723,000 7/	21,500,000 7/	98,100	2,170,000	168,000	988,000	838,000 r/	7,230,000 r/
November	572,000 7/	16,300,000 7/	125,000	2,920,000	83,500 8/	544,000 8/	684,000 r/	7,910,000 r/
December	700,000 7/	19,200,000 7/	144,000 7/	3,400,000 7/	211,000	1,320,000	860,000 r/	8,770,000 r/
January-December	7,210,000 r/	213,000,000 r/	1,540,000 r/	37,100,000 r/	1,710,000	11,000,000	8,770,000 r/	XX
2001:								
January	563,000	15,600,000	185,000	4,400,000	80,400	457,000	717,000	717,000
February	714,000 9/	17,000,000 9/	136,000	3,140,000	124,000	699,000	843,000	1,560,000
March	615,000	16,700,000	96,400 9/	2,050,000 9/	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 9/	21,100,000 9/	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:								
Australia	5,000	63,500	--	--	--	--	5,000	116,000
Belgium	20,800	423,000	11,500	262,000	--	--	29,100	371,000
Brazil	41,100	799,000	--	--	--	--	41,100	226,000
Canada	66,300	1,760,000	--	--	--	--	66,300	617,000
China	--	--	--	--	3,750	15,700	936	59,700
Congo (Kinshasa)	50,000	1,070,000	--	--	--	--	50,000	493,000
Finland	63,400	1,670,000	91,500	1,520,000	171,000	856,000	174,000	1,370,000
France	1,840	98,100	2,800	123,000	--	--	3,850	32,800
Germany	2,760	41,500	--	--	--	--	2,760	31,300
India	--	--	--	--	--	--	--	267
Italy	--	--	--	--	--	--	--	6,600
Japan	1,410	83,700	--	--	--	--	1,410	14,200
Korea, Republic of	90	6,540	--	--	--	--	90	769
Morocco	20,000	485,000	--	--	--	--	20,000	165,000
Norway	114,000	2,380,000	--	--	--	--	114,000	756,000
Russia	128,000	2,820,000	--	--	--	--	128,000	1,080,000
South Africa	90,600	1,740,000	--	--	--	--	90,600	496,000
Switzerland	--	--	--	--	--	--	--	77
Taiwan	--	--	--	--	--	--	--	9,420
Uganda	--	--	--	--	--	--	--	47,100
United Kingdom	91	3,120	--	--	--	--	91	84,600
Zambia	40,000	804,000	--	--	--	--	40,000	297,000
Total	646,000	14,300,000	106,000	1,910,000	174,000	872,000	768,000	6,270,000

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/ 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 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:						
August	2,600	\$85,700	30,500 4/	\$236,000 4/	19,200 4/	\$1,100,000 4/
September	12,000	359,000	47,800 4/	357,000 4/	17,600 4/	1,400,000 4/
October	7,490	211,000	45,200 4/	309,000 4/	48,300 4/	1,600,000 4/
November 5/	39,400	1,650,000	22,700	176,000	17,800	1,110,000
December 4/	7,120	163,000	20,800	133,000	21,000	1,230,000
January-December r/	214,000	6,390,000	550,000	4,110,000	359,000	18,800,000
2001:						
January	2,200	66,500	122,000 6/	1,880,000 6/	27,500	1,570,000
February	4,920	116,000	77,200 6/	1,620,000 6/	24,900	1,380,000
March	4,090	87,100	49,200 6/	381,000 6/	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 6/	823,000 6/	25,100	813,000
June	22,200	445,000	67,400 6/	888,000 6/	14,600	980,000
July	6,570	147,000	57,400 6/	537,000 6/	14,500	989,000
August:						
Australia	--	--	20,300	260,000	--	--
Belgium	800	19,100	--	--	--	--
Canada	27	2,480	3,240	16,700	1,270	235,000
Finland	--	--	566 6/	11,600 6/	--	--
France	--	--	860 6/	58,600 6/	3,420	218,000
Germany	2,310	12,300	2,430 6/	79,000 6/	1,240	24,000
Ireland	--	--	--	--	37	7,150
Japan	200	15,500	16,800 6/	607,000 6/	2,120	132,000
Sweden	148	15,300	--	--	--	--
Switzerland	--	--	951	11,600	--	--
United Arab Emirates	--	--	--	--	157	8,820
United Kingdom	--	--	1,190 6/	20,000 6/	4,920	220,000
Total	3,480	64,600	46,400	1,060,000	13,200	845,000

-- 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/ Adjusted by the U.S. Geological Survey.

5/ Data revised by the U.S. Census Bureau.

6/ 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:								
August	191,000	\$5,130,000	176,000 7/	\$1,370,000 7/	18,400	\$169,000	322,000	1,670,000 r/
September	275,000	8,090,000	201,000 7/	1,780,000 7/	58,500	242,000	434,000	2,100,000 r/
October	65,900	2,430,000	96,900 7/	978,000 7/	46,900	451,000	147,000	2,250,000 r/
November	110,000 8/	4,500,000 8/	12,000 8/	408,000 8/	12,800	146,000	121,000 t/	2,370,000 r/
December	165,000	5,280,000	107,000 7/	646,000 7/	81,200	346,000	261,000	2,630,000 r/
January-December	1,520,000	54,500,000 r/	1,320,000 r/	11,700,000 r/	676,000	3,650,000	2,630,000 r/	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 9/	1,070,000 9/	39,000	334,000	297,000	1,730,000
July	146,000	3,960,000	211,000 9/	1,160,000 9/	30,000	231,000	306,000	2,040,000
August	189,000	5,270,000	27,400 9/	241,000 9/	29,800	173,000	216,000	2,250,000

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/ Year to date may include revisions to prior months.

7/ Data no longer in question.

8/ Adjusted 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 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:				
August	147,000	\$5,550,000	31,100 3/	\$618,000 3/
September	40,300	2,630,000	--	--
October	127,000	5,910,000	91,400 3/	303,000 3/
November	66,600	3,680,000	-- 4/	-- 4/
December	50,200	1,650,000	54,300 5/	61,500 5/
January-December	971,000 r/	37,800,000	691,000 r/	3,430,000 r/
2001:				
January	56,500	1,790,000	42,000 6/	169,000 6/
February	89,000	2,070,000	--	--
March	118,000	3,040,000	75,200 6/	477,000 6/
April	55,000	1,860,000	95,000 6/	677,000 6/
May	44,100	2,250,000	23,200 6/	54,900 6/
June	31,300	2,200,000	95,800 6/	63,100 6/
July	73,800	2,040,000	78,300 6/	342,000 6/
August	66,400	2,320,000	21,400 6/	321,000 6/

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 revised by the U.S. Census Bureau.

5/ Adjusted by the U.S. Geological Survey.

6/ 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.