

Mineral Industry Surveys

For information, contact

Kim B. Shedd, Cobalt Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4974, Fax: (703) 648-7757
E-mail: ksheddd@usgs.gov

Cheryl J. Crawford (Data)
Telephone: (703) 648-7989
Fax: (703) 648-7792
E-mail: cjcrawfo@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

COBALT IN SEPTEMBER 2011

Preliminary data indicate that U.S. cobalt consumption during January through September 2011 was 17% higher than that consumed during the first 9 months of 2010. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals during January through August 2011 was 9% less than that imported during the same period in 2010. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals during January through August 2011 was 24% more than that exported during the same period in 2010.

Prices

Prices for cobalt metal, in dollars per pound, in September 2011 are listed below.

Type	Price range	Average price
U.S. spot ¹	16.70-18.25	17.61
LME cash mean ²	XX	15.58

XX Not applicable.

¹Source: Platts Metals Week, minimum 99.8% cobalt cathode.

²London Metal Exchange, mean of the cash buyer price and the cash seller and settlement price, minimum 99.3% cobalt briquettes, cathode, ingot, or rounds (converted from dollars per metric ton and rounded to the nearest cent).

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2010:				
September	262	184	162	607
October	266	176	157	600
November	298	179	166	643
December	223	187	206	616
January–September	2,520	1,580	1,460	5,560
January–December ⁴	3,300	2,120	1,990	7,420
2011:				
January	247	176	209	633
February	256	180	219	654
March	427	179	164	769
April	341	174	170	685
May	491	182	173	846
June	577	181	194	952
July	274	176	177	626
August	307	178	170	655
September	299	176	183	657
January–September	3,220	1,600	1,660	6,480

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes metal powder.

³Data may include other cobalt materials.

⁴Data based on monthly reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE¹

(Metric tons, contained cobalt)

End use	2010		2011	
	January–September	January–December ²	September	January–September ³
Steel	401 ^r	535	45	401
Superalloys	2,520 ^r	3,350	321	3,430
Magnetic alloys	194 ^r	258	21	189
Other alloys ⁴	W	W	W	W
Cemented carbides ⁵	522 ^r	696	65	590
Chemical and ceramic uses ⁶	1,640 ^r	2,210	183	1,660
Miscellaneous and unspecified	278 ^r	371	23	203
Total	5,560 ^r	7,420	657	6,480

^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Data based on monthly reports.

³May include revisions to previously published data.

⁴Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁵Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁶Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	U.S. industry ²				U.S. Government, metal ⁶	LME ³ , metal		
	Metal ⁴	Oxide and other chemical compounds ⁵	Scrap	Total		U.S. warehouse	Non-U.S. warehouse	Total
2010:								
September	W	181	W	541	301	42	132	174
October	W	182	W	525	301	32	174	206
November	W	177	W	530	301	31	183	214
December ⁷	W	163	W	563	301	23	255	278
2011:								
January	W	158	W	516	301	19	287	306
February	W	169	W	487	301	13	219	232
March	W	160	W	539	301	88	210	298
April	W	158	W	600	301	108	283	391
May	W	169	W	583	301	108	255	363
June	W	170	W	587	301	30	219	249
July	W	168	W	606	301	35	227	262
August	W	165	W	628	301	35	262	297
September	W	170	W	612	301	33	264	297

W Withheld to avoid disclosing company proprietary data; included in "Total U.S. industry."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks reported by cobalt processors and consumers.

³London Metal Exchange.

⁴Includes metal powder.

⁵Data may include other cobalt materials.

⁶Data from Defense Logistics Agency, DLA Strategic Materials; uncommitted material only.

⁷Data based on monthly reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY¹

(Metric tons, 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 period ⁵	Cobalt content, year to date ^{5,6}
	Quantity	Value ⁴ (thousands)	Quantity	Value ⁴ (thousands)	Quantity	Value ⁴ (thousands)		
2010:								
August	800	\$30,800	227	\$6,940	61	\$705	982	7,740
September	571	22,600	138	3,820	175	2,250	729	8,470
October	671	26,100	148	4,410	94	1,090	808	9,280
November	790	31,300	224	7,830	147	1,820	998	10,300
December	632	22,600	137	4,650	166	1,330	776	11,100
January–August	6,080	247,000	1,370	40,000	2,160	22,400	7,740	XX
January–December	8,750	350,000	2,010	60,700	2,740	28,900	11,100	XX
2011:								
January	812	29,700	202	6,300	242	2,480	1,030	1,030
February	812	31,500	158	4,670	219	3,020	1,000	2,030
March	876	35,400	113	3,630	280	2,560	1,050	3,080
April	502	20,400	189	3,930	280	3,990	735	3,820
May	575	22,000	284	6,880	117	1,490	815	4,630
June	715	27,800	207	4,860	144	2,030	918	5,550
July	305	12,200	281	5,430	247	2,890	586	6,140
August:								
Australia	66	2,300	--	--	--	--	66	530
Belgium	38	1,330	42	1,250	--	--	68	262
Brazil	25	895	--	--	3	52	26	190
Canada	7	363	35	537	--	--	32	654
China	256	9,110	--	--	24	284	263	1,490
Congo (Kinshasa)	20	631	--	--	--	--	20	201
Finland	14	720	20	564	67	790	50	661
France	(7)	21	--	--	--	--	(7)	9
Germany	(7)	50	1	56	--	--	1	6
India	1	59	--	--	40	355	12	177
Japan	13	560	--	--	--	--	13	173
Morocco	20	656	--	--	--	--	20	120
Norway	127	4,650	--	--	--	--	127	827
Russia	14	461	--	--	--	--	14	688
South Africa	63	2,110	--	--	--	--	63	122
Sweden	--	--	--	--	--	--	--	8
Uganda	15	483	--	--	--	--	15	50
United Kingdom	2	83	20	620	5	63	17	215
Zambia	122	4,110	--	--	--	--	122	681
Other	(7)	8	--	--	3	59	2	8
Total	804	28,600	118	3,030	143	1,600	932	7,070
January–August	5,400	208	1,550	38,700	1,670	20,100	7,070	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

³Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁴Customs value.

⁵Estimated from gross weights.

⁶May include revisions to previously published data.

⁷Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY¹

(Metric tons, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Quantity	Value ² (thousands)	Quantity	Value ² (thousands)	Quantity	Value ² (thousands)
2010:						
August	12	\$537	94	\$1,180	17	\$1,780
September	1	60	25	461	16	1,750
October	56	2,200	36	669	29	2,670
November	38	1,760	64	920	13	1,650
December	26	1,150	56	872	13	1,570
January–August	81	3,720	639	9,970	132	11,500
January–December	202	8,890	819	12,900	202	19,100
2011:						
January	40	1,540	61	686	14	1,840
February	64	2,420	35	657	26	2,240
March	56	2,140	74	1,430	23	2,600
April	44	1,520	119	2,040	21	2,410
May	52	1,990	87	1,200	16	1,820
June	68	2,570	43	891	20	1,950
July	50	1,670	53	938	24	2,230
August:						
Austria	--	--	1	17	--	--
Belgium	2	82	--	--	1	35
Brazil	--	--	1	14	--	--
Canada	64	2,210	1	14	2	612
China	10	500	--	--	2	241
France	--	--	8	86	1	70
Germany	(3)	12	13	329	1	639
Ireland	--	--	9	170	--	--
Israel	--	--	2	31	--	--
Japan	--	--	4	68	(3)	9
Mexico	--	--	2	21	--	--
Netherlands	--	--	5	102	--	--
Singapore	--	--	(3)	4	--	--
Spain	--	--	1	22	--	--
Switzerland	--	--	2	32	--	--
Thailand	--	--	--	--	1	164
Tunisia	--	--	--	--	(3)	3
United Kingdom	1	73	6	87	9	629
Total	77	2,880	55	996	16	2,400
January–August	450	16,700	528	8,830	159	17,500

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS¹

(Metric tons, 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 period ⁵	Cobalt content, year to date ^{5,6}
	Quantity	Value ⁴ (thousands)	Quantity	Value ⁴ (thousands)	Quantity	Value ⁴ (thousands)		
2010:								
August	235	\$7,150	2	\$51	1	\$17	236	1,860
September	254	6,090	(7)	14	49	512	266	2,130
October	222	6,510	3	87	41	764	234	2,360
November	143	4,530	1	32	34	387	152	2,520
December	113	4,300	(7)	12	37	412	122	2,640
January–August	1,610	53,600	254	2,230	276	4,430	1,860	XX
January–December	2,350	75,000	258	2,380	436	6,510	2,640	XX
2011:								
January	238	7,810	19	422	53	549	264	264
February	217	6,840	6	187	32	350	229	493
March	414	9,120	40	184	34	405	451	944
April	228	7,950	49	958	42	417	273	1,220
May	340	9,470	(7)	17	25	300	346	1,560
June	204	8,070	18	55	27	312	223	1,790
July	282	9,380	47	120	65	736	332	2,120
August	194	7,440	(7)	20	33	368	202	2,320
January–August	2,120	66,100	179	1,960	311	3,440	2,320	XX

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

³Cobalt acetates and cobalt chlorides.

⁴Free alongside ship (f.a.s.) value.

⁵Estimated from gross weights.

⁶May include revisions to previously published data.

⁷Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,
AND CONCENTRATES¹

(Metric tons, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value ² (thousands)	Quantity	Value ² (thousands)
2010:				
August	126	\$7,140	64	\$2,180
September	134	7,870	675	1,630
October	148	8,190	31	2,150
November	139	8,250	4	229
December	125	8,050	277	801
January–August	1,130	63,900	1,630	8,190
January–December	1,680	96,200	2,610	13,000
2011:				
January	103	6,360	20	50
February	121	7,040	--	--
March	123	7,400	--	--
April	124	7,200	600	1,050
May	115	6,560	4	141
June	98	5,960	3	119
July	128	7,340	40	163
August	98	6,260	2	4
January–August	911	54,100	668	1,530

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Free alongside ship (f.a.s.) value.

Source: U.S. Census Bureau.