

# 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: kshedd@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 AUGUST 2010**

Preliminary data indicate that U.S. cobalt consumption during January through August 2010 was 4% higher than consumption during the first 8 months of 2009, according to the U.S. Geological Survey. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 60% higher during January through July 2010 than that during the same period in 2009. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals during January through July 2010 was 13% higher than that exported during the same period in 2009.

London Metal Exchange stocks are included in table 3.

### **Prices**

Prices for cobalt metal, in dollars per pound, in August 2010 are listed below.

<u>Type</u>	Price range	Average price
U.S. spot <sup>1</sup>	18.00-21.50	19.59
LME cash mean <sup>2</sup>	XX	17.43

XX Not applicable.

<sup>1</sup>Source: Platts Metals Week, minimum 99.8% cobalt cathode.

<sup>&</sup>lt;sup>2</sup>London 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).

 $\label{eq:table 1} \textbf{U.S. REPORTED CONSUMPTION OF COBALT MATERIALS}^1$ 

(Metric tons, contained cobalt)

Period	Metal <sup>2</sup>	other chemical compounds <sup>3</sup>	Scrap	Total	
2009:		*			
August	251	176	145	573	
September	264	177	151	592	
October	254	172	156	583	
November	245	172	156	574	
December	243	168	157	568	
January-August	2,070 <sup>r</sup>	1,380 °	1,160	4,610 <sup>r</sup>	
January-December <sup>4</sup>	3,070	2,070	1,780	6,930	
2010:					
January	270	170	156	597	
February	290	170	148	608	
March	291	171	159	622	
April	284	170	156	610	
May	247	176	160	583	
June	268	178	159	605	
July	250	168	159	577	
August	241	171	159	572	
January-August <sup>4</sup>	2,140	1,380	1,260	4,770	

rRevised.

 $\label{eq:table 2} \text{U.S REPORTED CONSUMPTION OF COBALT, BY END USE}^1$ 

(Metric tons, contained cobalt)

	200	19	2010		
	January-	January-		January- August <sup>3</sup>	
End use	August	December <sup>2</sup>	August		
Steel	333 <sup>r</sup>	499	48	384	
Superalloys	2,110	3,180	254	2,230	
Magnetic alloys	173 <sup>r</sup>	259	21	170	
Other alloys <sup>4</sup>	W	W	W	W	
Cemented carbides <sup>5</sup>	396 <sup>r</sup>	593	49	396	
Chemical and ceramic uses <sup>6</sup>	1,420 <sup>r</sup>	2,130	176	1,420	
Miscellaneous and unspecified	180	270	22	180	
Total	4,610 <sup>r</sup>	6,930	572	4,770	

<sup>&</sup>lt;sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes metal powder.

<sup>&</sup>lt;sup>3</sup>Data may include other cobalt materials.

<sup>&</sup>lt;sup>4</sup>Data based on monthly reports.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Data based on monthly reports.

<sup>&</sup>lt;sup>3</sup>May include revisions to prior months.

<sup>&</sup>lt;sup>4</sup>Includes nonferrous alloys, welding materials, and wear-resistant alloys.

<sup>&</sup>lt;sup>5</sup>Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

<sup>&</sup>lt;sup>6</sup>Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, ground coat frit, pigments and other uses.

 ${\bf TABLE~3}$  U.S. REPORTED STOCKS OF COBALT MATERIALS  $^1$ 

(Metric tons, contained cobalt)

		U.S. Indust	ry <sup>2</sup>					
	Oxide and				U.S.	LME <sup>3</sup> , metal		
		other chemical			Government,	U.S.	Non-U.S.	
Period	Metal <sup>4</sup>	compounds <sup>5</sup>	Scrap	Total	metal <sup>6</sup>	warehouse	warehouse	Total
2009:								
August	298	155	103	556	310	XX	XX	XX
September	279	152	91	522	304	XX	XX	XX
October	266	156	84	506	304	XX	XX	XX
November	262	159	68	489	295	XX	XX	XX
December <sup>7</sup>	255	161	66	482	293	XX	XX	XX
2010:								
January	261	176	57	494	293	XX	XX	XX
February	270	172	66	507	293			_
March	313	167	65	545	301			_
April	313	173	62	548	301		38	38
May	306	166	60	532	301		113	113
June	296	161	60	516	301	20	132	152
July	282	159	60	501	301	25	163	188
August	284	176	60	519	301	50	162	212

XX Not applicable. -- Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Stocks reported by cobalt processors and consumers.

<sup>&</sup>lt;sup>3</sup>London Metal Exchange.

<sup>&</sup>lt;sup>4</sup>Includes metal powder.

<sup>&</sup>lt;sup>5</sup>Data may include other cobalt materials.

<sup>&</sup>lt;sup>6</sup>Data from Defense Logistics Agency, DLA Strategic Materials (formerly Defense National Stockpile Center); uncommitted material only

<sup>&</sup>lt;sup>7</sup>Data based on monthly reports.

 ${\bf TABLE~4}$  U.S. IMPORTS FOR CONSUMPTION OF COBALT BY COUNTRY  $^1$ 

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

	M	etals <sup>2</sup>	Oxides and	l hydroxides	Salts and a	compounds <sup>3</sup>	Total cobalt	Cobalt content,
Period and country		Value <sup>4</sup>		Value <sup>4</sup>	Barts and C	Value <sup>4</sup>	content for	year to
of origin	Quantity	(thousands)	Ouantity	(thousands)	Quantity	(thousands)	the period <sup>5</sup>	date <sup>5, 6</sup>
2009:	Quantity	(mousumus)	Quantity	(urousurus)	Quantity	(unousunus)	the period	date
July	473	\$15,100	153	\$3,840	120	\$1,370	622	4,230
August	491	17,900	135	3,600	191	2,160	648	4,880
September	544	20,800	92	2,460	174	2,160	671	5,550
October	592	18,200	139	3,030	237	3,590	782	6,330
November	371	13,800	167	4,660	215	2,640	563	6,890
December	610	23,000	118	3,860	269	3,280	785	7,680
January-July	3,270	104,000	811	19,900	1,040	13,500	4,230	XX
January-December	5,870	198,000	1,460	37,500	2,130	27,300	7,680	XX
2010:		170,000	1,.00	27,200	2,150	27,500	7,000	
January	661	26,100	174	5,050	332	3,220	882	882
February	1,050	39,500	97	2,610	394	3,610	1,240	2,130
March	606	27,500	168	4,640	513	5,640	902	3,030
April	836	32,300	159	4,650	304	2,250	1,040	4,070
May	726	31,800	260	7,790	273	3,490	1,000	5,070
June	504	23,100	155	4,900	172	2,130	668	5,740
July:		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		,
Australia	65	2,470					65	430
Belgium	15	455	25	942			33	317
Brazil	16	615					16	113
Canada	8	437	35	575			33	323
China	286	12,100	37	991	1	23	313	1,660
Congo (Kinshasa)	100	3,620					100	321
Finland			13	415	54	850	28	578
France	4	246					4	27
India					18	165	5	124
Japan	17	741					17	187
Morocco	30	1,160					30	125
Norway	140	5,790					140	656
Russia	125	4,620					125	1,080
South Africa	9	455					9	193
Uganda								133
United Kingdom			18	511	14	172	16	218
Zambia	80	3,020					80	216
Other	. 1	72			20	195	7	55
Total	896	35,900	128	3,430	107	1,410	1,020	6,760
January-July	5,280	216,000	1,140	33,100	2,090	21,700	6,760	XX

XX Not applicable. -- Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

 $<sup>^3 \</sup>mbox{Includes}$  cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

<sup>&</sup>lt;sup>4</sup>Customs value.

<sup>&</sup>lt;sup>5</sup>Estimated from gross weights.

<sup>&</sup>lt;sup>6</sup>May include revisions to prior months.

 ${\it TABLE~5}$  U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS BY COUNTRY  $^1$ 

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

	I I	1-14-11	C-1-1-1	4 <b>4</b>	Wrought o	
	Unwrought cobalt alloys		Cobalt was	te and scrap	cobalt articles	
Period and country		Value <sup>2</sup>		Value <sup>2</sup>		Value <sup>2</sup>
of origin	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)
2009:						
July	(3)	\$41	102	\$1,310	7	\$899
August	29	789	29	360	7	1,050
September	(3)	10	32	506	19	1,040
October	1	41	46	694	7	1,090
November	(3)	16	55	633	5	818
December	1	126	81	1,320	6	873
January-July	356	9,290	406	5,610	110	10,800
January-December	387	10,300	650	9,120	154	15,700
2010:						
January	1	41	96	1,470	5	771
February	23	1,130	85	1,340	10	815
March	2	128	95	1,900	47	2,800
April	20	860	46	642	12	1,180
May	1	79	79	1,080	7	1,040
June	(3)	22	83	1,340	16	1,470
July:						
Belgium					(3)	32
Canada			3	48	1	162
China	1	68			1	169
France	(3)	15			1	160
Germany					3	272
Ireland			23	378		
Italy			1	15		
Japan			22	353	1	184
Mexico			(3)	6		
Taiwan			3	48	(3)	4
United Kingdom	21	842	10	165	9	652
Total	22	925	62	1,010	17	1,640
January-July	69	3,190	545	8,780	115	9,700

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Customs value.

<sup>&</sup>lt;sup>3</sup>Less than ½ unit.

 $\label{eq:table 6} \textbf{U.S. EXPORTS OF COBALT MATERIALS}^1$ 

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

	Unwrought co	obalt, powders,						Cobalt
	matte, wast	e and scrap <sup>2</sup>	Oxides and	d hydroxides	Salts and	compounds <sup>3</sup>	Total cobalt	content,
		Value <sup>4</sup>		Value <sup>4</sup>		Value <sup>4</sup>	content for	year to
Period	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	the period <sup>5</sup>	date <sup>5, 6</sup>
2009:								
July	118	\$4,080	24	\$746	14	\$381	139	1,440
August	195	6,500	19	622	58	1,410	222	1,660
September	135	5,220	6	90	319	2,120	216	1,880
October	182	6,930	6	158	69	2,640	203	2,080
November	171	5,500	26	676	18	170	194	2,280
December	144	5,420	8	373	57	576	163	2,440
January-July	1,290	47,700	161	3,630	138	1,450	1,440	XX
January-December	2,120	77,300	225	5,550	659	8,370	2,440	XX
2010:								
January	183	6,030	75	253	31	1,340	244	244
February	211	6,990	12	444	43	825	230	474
March	210	7,490	58	562	34	380	260	734
April	216	6,340	87	296	39	535	287	1,020
May	173	6,040	11	349	61	609	196	1,220
June	190	6,120	3	113	37	399	202	1,420
July	198	7,440	6	164	30	326	209	1,630
January-July	1,380	46,500	252	2,180	275	4,410	1,630	XX

XX Not applicable.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

<sup>&</sup>lt;sup>3</sup>Cobalt acetates and cobalt chlorides.

<sup>&</sup>lt;sup>4</sup>Free alongside ship (f.a.s.) value.

<sup>&</sup>lt;sup>5</sup>Estimated from gross weights.

<sup>&</sup>lt;sup>6</sup>May include revisions to prior months.

# TABLE 7 $\mbox{U.s. EXPORTS OF WROUGHT COBALT, COBALT ORE, } \\ \mbox{AND CONCENTRATES}^{\, 1}$

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

	C	cobalt and articles	Cobalt ore and concentrates		
		Value <sup>2</sup>		Value <sup>2</sup> (thousands)	
Period	Quantity	(thousands)	Quantity		
2009:					
July	134	\$8,370	1,240	\$1,520	
August	136	6,760	177	623	
September	97	6,280	22	871	
October	116	6,780	48	448	
November	114	6,050	128	724	
December	118	6,540	25	1,080	
January-July	759	46,100	1,490	2,610	
January-December	1,340	78,500	1,900	6,360	
2010:					
January	141	7,440	269	2,050	
February	142	7,080	890	1,900	
March	147	8,090	22	263	
April	162	9,490	(3)	8	
May	135	8,310	20	914	
June	174	9,800	135	378	
July	106	6,510	226	503	
January-July	1,010	56,700	1,560	6,010	

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Free alongside ship (f.a.s.) value.

<sup>&</sup>lt;sup>3</sup>Less than ½ unit.