

# Mineral Industry Surveys

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## COBALT IN FEBRUARY 2011

Preliminary data indicate that U.S. cobalt consumption during January through February 2011 was slightly higher than consumption during the first 2 months of 2010, according to the U.S. Geological Survey. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 33% higher in January 2011 than that in December 2010. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in January 2011 was more than two times that in December 2010.

London Metal Exchange stocks are included in table 3.

**Prices**

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

<u>Type</u>	<u>Price range</u>	<u>Average price</u>
U.S. spot <sup>1</sup>	21.00-23.00	22.00
LME cash mean <sup>2</sup>	XX	18.03

XX Not applicable.

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

<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).

TABLE 1  
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS<sup>1</sup>

(Metric tons, contained cobalt)

Period	Metal <sup>2</sup>	Oxide and other chemical compounds <sup>3</sup>	Scrap	Total
2010:				
February	301	170	148	620
March	302	171	159	633
April	295	170	156	621
May	259	176	160	595
June	279	179	159	617
July	241	168	179	588
August	250	172	162	583
September	256	181	159	596
October	261	174	154	588
November	293	176	164	632 <sup>r</sup>
December	217 <sup>r</sup>	185	203	605 <sup>r</sup>
January–February	583	341	305	1,230
January–December <sup>4</sup>	3,240	2,090	1,960	7,290
2011:				
January	234 <sup>r</sup>	173	207 <sup>r</sup>	614 <sup>r</sup>
February	242	177	216	635
January–February	476	350	423	1,250

<sup>r</sup>Revised.

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

<sup>2</sup>Includes metal powder.

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

<sup>4</sup>Data based on monthly reports.

TABLE 2  
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE<sup>1</sup>

(Metric tons, contained cobalt)

End use	2010		2011	
	January- February	January- December <sup>2</sup>	February	January- February <sup>3</sup>
Steel	96	576	48	96
Superalloys	584	3,370	307	597
Magnetic alloys	43	254 <sup>r</sup>	20	41
Other alloys <sup>4</sup>	W	W	W	W
Cemented carbides <sup>5</sup>	110	660	55	110
Chemical and ceramic uses <sup>6</sup>	351	2,150	182	361
Miscellaneous and unspecified	45	270	22	45
Total	1,230	7,290	635	1,250

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

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

<sup>2</sup>Data based on monthly reports.

<sup>3</sup>May include revisions to prior month(s).

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

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

<sup>6</sup>Includes 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 MATERIALS<sup>1</sup>

(Metric tons, contained cobalt)

Period	U.S. Industry <sup>2</sup>				U.S. Government, metal <sup>6</sup>	LME <sup>3</sup> , metal		
	Metal <sup>4</sup>	Oxide and other chemical compounds <sup>5</sup>	Scrap	Total		U.S.	Non-U.S.	Total
						warehouse	warehouse	
2010:								
February	278	172	66	515	293	--	--	--
March	321	167	65	553	301	--	--	--
April	320	173	62	554	301	--	38	38
May	313	166	65	545	301	--	113	113
June	303	161	69	533	301	20	132	152
July	289	159	83	530	301	25	163	188
August	291	176	91	558	301	50	162	212
September	292	172	91	554	301	42	132	174
October	267	173	97	538	301	32	174	206
November	273	168	101	542	301	31	183	214
December <sup>7</sup>	323	153	98	574	301	23	255	278
2011:								
January	310	149	68	526 <sup>r</sup>	301	19	287	306
February	279	160	58	497	301	13	219	232

<sup>r</sup>Revised. -- Zero.

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

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

<sup>3</sup>London Metal Exchange.

<sup>4</sup>Includes metal powder.

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

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

<sup>7</sup>Data based on monthly reports.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF COBALT BY COUNTRY<sup>1</sup>

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

Period and country of origin	Metals <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the period <sup>5</sup>	Cobalt content, year to date <sup>5,6</sup>
	Quantity	Value <sup>4</sup> (thousands)	Quantity	Value <sup>4</sup> (thousands)	Quantity	Value <sup>4</sup> (thousands)		
2010:								
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	896	35,900	128	3,430	107	1,410	1,020	6,760
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–December	8,750	350,000	2,010	60,700	2,740	28,900	11,100	XX
2011, January:								
Australia	119	4,060	--	--	--	--	119	119
Belgium	1	26	29	979	--	--	22	22
Brazil	--	--	--	--	5	20	1	1
Canada	6	353	41	1,610	--	--	35	35
China	311	11,300	45	1,160	38	392	353	353
Congo (Kinshasa)	70	2,310	--	--	--	--	70	70
Finland	29	1,390	49	1,420	78	1,090	93	93
France	1	60	--	--	--	--	1	1
Germany	(7)	6	--	--	3	10	1	1
India	30	1,100	--	--	116	939	61	61
Japan	19	773	--	--	--	--	19	19
Norway	92	3,420	--	--	--	--	92	92
Russia	75	2,760	--	--	--	--	75	75
South Africa	4	159	--	--	--	--	4	4
United Kingdom	2	117	39	1,140	2	23	31	31
Zambia	50	1,690	--	--	--	--	50	50
Other	5	216	--	--	--	--	5	5
Total	812	29,700	202	6,300	242	2,480	1,030	1,030

XX Not applicable. -- Zero.

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

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

<sup>3</sup>Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

<sup>4</sup>Customs value.

<sup>5</sup>Estimated from gross weights.

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

<sup>7</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS BY COUNTRY<sup>1</sup>

(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 <sup>2</sup> (thousands)	Quantity	Value <sup>2</sup> (thousands)	Quantity	Value <sup>2</sup> (thousands)
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	1,460
July	22	925	62	1,010	17	1,640
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–December	202	8,890	819	12,900	202	19,100
2011, January:						
Bahamas, The	--	--	4	15	--	--
Canada	40	1,490	2	19	2	596
China	--	--	--	--	1	236
Finland	(3)	42	--	--	--	--
France	(3)	4	--	--	4	255
Germany	--	--	--	--	1	378
Guadeloupe	--	--	--	--	1	51
Ireland	--	--	7	140	--	--
Japan	--	--	6	80	(3)	8
Korea, Republic of	--	--	4	70	--	--
Malaysia	--	--	(3)	9	--	--
Mexico	--	--	(3)	2	--	--
Netherlands	--	--	5	105	--	--
Switzerland	--	--	--	--	2	7
Thailand	--	--	4	81	--	--
United Kingdom	--	--	29	164	4	310
Total	40	1,540	61	686	14	1,840

-- Zero.

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

<sup>2</sup>Customs value.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. EXPORTS OF COBALT MATERIALS<sup>1</sup>

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

Period	Unwrought cobalt, powders, matte, waste and scrap <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the period <sup>5</sup>	Cobalt content, year to date <sup>5, 6</sup>
	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>		
		(thousands)		(thousands)		(thousands)		
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
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–December	2,350	75,000	258	2,380	436	6,510	2,640	XX
2011, January	238	7,810	19	422	53	549	264	XX

XX Not applicable.

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

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

<sup>3</sup>Cobalt acetates and cobalt chlorides.

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

<sup>5</sup>Estimated from gross weights.

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

<sup>7</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,  
AND CONCENTRATES<sup>1</sup>

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

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value <sup>2</sup> (thousands)	Quantity	Value <sup>2</sup> (thousands)
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
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–December	1,680	96,200	2,610	13,000
2011, January	103	6,360	20	50

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

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

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.