

# Mineral Industry Surveys

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## COBALT IN OCTOBER 2012

Preliminary data indicate that U.S. cobalt consumption during January through October 2012 was 10% less than consumption during the same period in 2011. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals from January through October 2012 was 7% more than that imported during the same period in 2011. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals from January through October 2012 was 11% more than that exported during the same period in 2011.

## Prices

Prices for cobalt metal, in dollars per pound, in October 2012 are listed below.

Type	Price range	Average price
U.S. spot <sup>1</sup>	12.70–14.40	13.54
LME cash mean <sup>2</sup>	XX	12.15

XX Not applicable.

<sup>1</sup>Sources: Platts Metals Week and Platts Metals Daily, 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>p, 1</sup>

(Metric tons, contained cobalt)

Period	Metal <sup>2</sup>	Oxide and other chemical compounds <sup>3</sup>	Scrap	Total
2011:				
October	304	185	160	649
November	193	175	250	618
December	271	179	164	614
January–October	3,500	1,810 <sup>r</sup>	1,790 <sup>r</sup>	7,100 <sup>r</sup>
January–December <sup>4</sup>	3,960	2,170	2,200	8,340
2012:				
January	281	179	168	629
February	286	179	175	639
March	257	180	193	630
April	295	179	176	650
May	261	181	195	637
June	264	183	187	633
July	295	178	183	656
August	278	188	166	632
September	288	185	166	639
October	300	183	166	648
January–October	2,800	1,810	1,770	6,390

<sup>p</sup>Preliminary. <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>p, 1</sup>

(Metric tons, contained cobalt)

End use	2011		2012	
	January–October	January–December <sup>2, 3</sup>	October	January–October <sup>3</sup>
Steel	447 <sup>r</sup>	536	45	447
Superalloys	3,690 <sup>r</sup>	4,250	304	2,970
Magnetic alloys	210	252	21	209
Other alloys <sup>4</sup>	W	W	W	W
Cemented carbides <sup>5</sup>	645 <sup>r</sup>	773	67	662
Chemical and ceramic uses <sup>6</sup>	1,890 <sup>r</sup>	2,260	189	1,880
Miscellaneous and unspecified	225	271	23	225
Total	7,100 <sup>r</sup>	8,340	648	6,390

<sup>p</sup>Preliminary. <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 previously published data.

<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>p, 2</sup>			U.S. Government, metal <sup>6</sup>	LME, <sup>3</sup> metal		Total
	Metal and scrap <sup>4</sup>	Oxide and other chemical compounds <sup>5</sup>	Total		U.S. warehouse	Non-U.S. warehouse	
2011:							
October	525	165	690	301	30	293	323
November	521	172	692	301	40	279	319
December	519	193	712	301	43	261	304
2012:							
January	521	185	706	301	26	285	311
February	498	180	678	301	20	273	293
March	536	181	717	301	27	318	345
April	542	182	724	301	22	328	350
May	524	178	702	301	22	330	352
June	519	173	692	301	21	334	355
July	504	181	685	301	21	335	356
August	504	167	671	301	21	340	361
September	496	167	663	301	31	350	381
October	493	170	663	301	31	367	398

<sup>p</sup>Preliminary.

<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; uncommitted material only.

**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)		
2011:								
October	773	\$27,900	288	\$6,100	161	\$1,370	1,030	8,930
November	577	18,700	235	4,750	124	1,330	784	9,710
December	632	19,900	294	5,610	105	1,220	878	10,600
January–October	6,810	258,000	2,060	50,800	1,960	22,700	8,930	XX
January–December	8,020	296,000	2,590	61,200	2,190	25,300	10,600	XX
2012:								
January	636	20,100	175	3,260	90	662	785	785
February	812	25,500	201	4,470	186	2,670	1,040	1,820
March	740	24,600	325	7,240	149	1,750	1,020	2,840
April	1,010	31,200	353	7,610	187	2,040	1,320	4,160
May	839	25,700	118	2,490	172	2,130	987	5,150
June	579	18,500	269	5,420	180	2,450	843	5,990
July	624	18,300	93	2,420	164	1,910	749	6,740
August	840	24,000	194	4,730	235	2,690	1,070	7,810
September	671	18,900	112	2,420	124	1,470	796	8,600
October								
Australia	48	1,140	--	--	--	--	48	584
Austria	1	55	--	--	--	--	1	12
Belgium	--	--	55	1,460	--	--	40	430
Brazil	40	1,090	--	--	--	--	40	514
Canada	5	267	--	--	--	--	5	787
China	167	4,800	29	522	2	12	188	1,810
Congo (Kinshasa)	--	--	--	--	--	--	--	72
Finland	18	733	37	849	35	387	56	1,020
France	1	32	--	--	--	--	1	23
Germany	(7)	13	--	--	--	--	(7)	6
India	--	--	--	--	--	--	--	126
Japan	96	2,600	(7)	9	--	--	96	530
Korea, Republic of	--	--	1	19	1	5	1	48
Morocco	10	285	--	--	--	--	10	140
Netherlands	--	--	--	--	--	--	--	9
Norway	156	4,360	--	--	--	--	156	818
Peru	--	--	--	--	8	190	4	11
Philippines	--	--	--	--	--	--	--	13
Russia	--	--	--	--	--	--	--	824
South Africa	16	658	13	404	--	--	25	347
Sweden	3	155	--	--	--	--	3	10
Taiwan	--	--	--	--	32	204	9	22
Uganda	--	--	--	--	--	--	--	18
United Kingdom	(7)	15	74	1,680	--	--	53	365
Zambia	213	5,960	--	--	--	--	213	1,010
Other	(7)	3	--	--	--	--	(7)	2
Total	774	22,200	208	4,940	78	798	948	9,550
January–October	7,520	229,000	2,050	45,000	1,560	18,600	9,550	XX

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 previously published data.

<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)
2011:						
October	67	\$2,390	71	\$1,240	26	\$2,510
November	63	2,110	47	817	19	2,420
December	81	2,560	44	669	18	2,070
January–October	611	22,600	639	10,600	210	22,500
January–December	754	27,300	730	12,100	247	27,000
2012:						
January	82	2,680	67	1,080	36	1,900
February	73	2,500	54	1,110	22	2,200
March	59	1,950	124	2,310	21	2,610
April	81	2,770	41	733	22	2,670
May	59	1,870	86	1,060	19	2,610
June	91	3,230	38	433	27	2,820
July	67	2,090	97	1,530	28	3,020
August	67	1,990	59	884	26	2,570
September	55	1,780	55	690	24	2,480
October:						
Austria	--	--	--	--	(3)	9
Belgium	4	118	--	--	--	--
Canada	31	901	--	--	2	660
China	1	12	--	--	6	639
Finland	(3)	34	--	--	--	--
France	--	--	5	139	2	116
Germany	4	292	--	--	1	284
Ireland	(3)	3	27	280	(3)	3
Japan	(3)	28	--	--	(3)	20
Korea, Republic of	--	--	4	50	--	--
Switzerland	--	--	--	--	(3)	21
Taiwan	--	--	(3)	3	(3)	16
United Kingdom	16	603	18	305	8	639
Total	56	1,990	54	777	21	2,410
January–October	690	22,900	675	10,600	246	25,300

-- 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> (thousands)	Quantity	Value <sup>4</sup> (thousands)	Quantity	Value <sup>4</sup> (thousands)		
2011:								
October	225	\$8,300	71	\$229	38	\$413	285	2,860
November	249	6,860	55	246	38	555	298	3,160
December	220	7,460	21	63	2	25	236	3,390
January–October	2,590	81,900	257	2,390	363	4,010	2,860	XX
January–December	3,060	96,300	332	2,700	403	4,590	3,390	XX
2012:								
January	234	7,450	35	183	19	182	264	264
February	238	8,380	3	81	23	225	246	510
March	325	10,800	16	347	1	22	337	847
April	258	8,400	33	159	1	10	281	1,130
May	353	10,700	70	323	20	1,750	408	1,540
June	229	8,210	18	65	3	32	243	1,780
July	215	7,350	73	245	22	198	273	2,050
August	345	10,000	80	490	1	10	403	2,460
September	392	10,600	36	229	19	158	423	2,880
October	279	9,010	(7)	9	40	320	289	3,170
January–October	2,870	90,900	364	2,130	149	2,900	3,170	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 previously published data.

<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)
<b>2011:</b>				
October	117	\$7,370	38	\$42
November	99	5,920	--	--
December	123	7,780	--	--
January–October	1,140	68,200	707	1,570
January–December	1,360	81,800	707	1,570
<b>2012:</b>				
January	118	7,190	(3)	4
February	125	8,450	5	68
March	127	7,850	20	83
April	141	8,330	2	48
May	132	8,800	3	58
June	110	7,250	(3)	16
July	190	10,300	1	42
August	152	8,910	1	39
September	117	7,570	--	--
October	198	10,900	1	36
January–October	1,410	85,500	34	393

-- Zero.

<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.