

# Mineral Industry Surveys

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## COBALT IN AUGUST 2012

Preliminary data indicate that U.S. cobalt consumption during January through August 2012 was 12% 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 August 2012 was 10% 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 August 2012 was 6% more than that exported during the same period in 2011.

## Prices

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

Type	Price range	Average price
U.S. spot <sup>1</sup>	12.20–13.90	13.02
LME cash mean <sup>2</sup>	XX	13.10

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>p, 1</sup>

(Metric tons, contained cobalt)

Period	Metal <sup>2</sup>	Oxide and other chemical compounds <sup>3</sup>	Scrap	Total
2011:				
August	309 <sup>r</sup>	181	167	657
September	280 <sup>r</sup>	179	180	639 <sup>r</sup>
October	306 <sup>r</sup>	185	160	651
November	195 <sup>r</sup>	175	250	620 <sup>r</sup>
December	273	179	164	616
January–August <sup>r</sup>	2,930	1,450	1,450	5,830
January–December <sup>4</sup>	3,990 <sup>r</sup>	2,170	2,200	8,360 <sup>r</sup>
2012:				
January	281 <sup>r</sup>	179	168	629
February	286 <sup>r</sup>	179	175	640
March	257 <sup>r</sup>	180	193	630 <sup>r</sup>
April	295 <sup>r</sup>	179	176 <sup>r</sup>	650
May	270 <sup>r</sup>	181	195 <sup>r</sup>	646
June	278 <sup>r</sup>	183	187 <sup>r</sup>	647 <sup>r</sup>
July	280 <sup>r</sup>	178	183 <sup>r</sup>	640 <sup>r</sup>
August	292	188	166	645
January–August	2,240	1,450	1,440	5,130

<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–August	January–December <sup>2,3</sup>	August	January–August
Steel	358 <sup>r</sup>	536	45	358
Superalloys	3,090 <sup>r</sup>	4,250 <sup>r</sup>	296	2,390
Magnetic alloys	168	252	21	168
Other alloys <sup>4</sup>	W	W	W	W
Cemented carbides <sup>5</sup>	531 <sup>r</sup>	796 <sup>r</sup>	66	530
Chemical and ceramic uses <sup>6</sup>	1,510 <sup>r</sup>	2,260	194	1,500
Miscellaneous and unspecified	180	271	23	180
Total	5,830 <sup>r</sup>	8,360 <sup>r</sup>	645	5,130

<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>b, 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	
<b>2011:</b>							
August	574 <sup>r</sup>	165	739	301	35	262	297
September	542 <sup>r</sup>	171	712 <sup>r</sup>	301	33	264	297
October	525 <sup>r</sup>	165	690	301	30	293	323
November	521 <sup>r</sup>	172	692 <sup>r</sup>	301	40	279	319
December	519 <sup>r</sup>	193	712 <sup>r</sup>	301	43	261	304
<b>2012:</b>							
January	521 <sup>r</sup>	185	706 <sup>r</sup>	301	26	285	311
February	498 <sup>r</sup>	180	678 <sup>r</sup>	301	20	273	293
March	536 <sup>r</sup>	181	717 <sup>r</sup>	301	27	318	345
April	542 <sup>r</sup>	182	724 <sup>r</sup>	301	22	328	350
May	521 <sup>r</sup>	178	699 <sup>r</sup>	301	22	330	352
June	514 <sup>r</sup>	173 <sup>r</sup>	687 <sup>r</sup>	301	21	334	355
July	520 <sup>r</sup>	181 <sup>r</sup>	700 <sup>r</sup>	301	21	335	356
August	522	167	689	301	21	340	361

<sup>b</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:								
August	804	28,600	118	3,030	143	1,600	932	7,070
September	637	22,000	222	5,980	131	1,270	835	7,900
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–August	5,400	208,000	1,550	38,700	1,670	20,100	7,070	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:								
Australia	23	581	--	--	--	--	23	513
Austria	1	81	--	--	--	--	1	11
Belgium	43	925	80	2,150	--	--	101	354
Brazil	64	1,610	2	31	5	76	67	432
Canada	23	722	--	--	--	--	23	755
China	170	4,930	8	196	9	85	178	1,340
Congo (Kinshasa)	--	--	--	--	--	--	--	62
Finland	80	2,810	17	463	178	2,290	163	916
France	2	91	--	--	17	70	6	18
Germany	(7)	10	--	--	--	--	(7)	3
India	--	--	--	--	23	136	6	125
Japan	60	1,730	(7)	2	--	--	60	362
Korea, Republic of	10	267	--	--	--	--	10	47
Morocco	30	792	--	--	--	--	30	130
Netherlands	--	--	--	--	--	--	--	9
Norway	54	1,620	--	--	--	--	54	584
Peru	--	--	--	--	--	--	--	4
Philippines	--	--	--	--	--	--	--	13
Russia	121	3,310	--	--	--	--	121	773
South Africa	30	1,070	--	--	--	--	30	286
Sweden	--	--	--	--	--	--	--	7
Taiwan	2	60	--	--	--	--	2	14
Uganda	--	--	--	--	--	--	--	18
United Kingdom	1	45	87	1,890	3	28	64	252
Zambia	124	3,330	--	--	--	--	124	777
Other	2	59	--	--	--	--	2	2
Total	840	24,000	194	4,730	235	2,690	1,070	7,810
January–August	6,070	188,000	1,730	37,600	1,360	16,300	7,810	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:						
August	77	2,880	55	996	16	2,400
September	94	3,500	40	519	25	2,530
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–August	450	16,700	528	8,830	159	17,500
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:						
Belgium	4	139	--	--	4	164
Canada	60	1,640	--	--	3	837
China	--	--	--	--	1	258
Finland	(3)	22	--	--	--	--
France	(3)	4	3	35	2	208
Germany	1	98	--	--	3	440
Ireland	--	--	9	135	(3)	12
Japan	(3)	9	14	164	(3)	19
Mexico	--	--	1	20	--	--
Sweden	--	--	--	--	(3)	2
Switzerland	--	--	--	--	4	182
Taiwan	--	--	--	--	(3)	7
United Kingdom	2	75	32	531	8	441
Total	67	1,990	59	884	26	2,570
January–August	580	19,100	566	9,140	201	20,400

-- 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:								
August	194	7,440	(7)	20	33	368	202	2,320
September	246	7,550	6	199	14	160	253	2,570
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–August	2,120	66,100	179	1,960	311	3,440	2,320	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
January–August	2,200	71,300	328	1,890	90	2,430	2,460	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)
2011:				
August	98	6,260	2	4
September	111	6,670	--	--
October	117	7,370	38	42
November	99	5,920	--	--
December	123	7,780	--	--
January–August	911	54,100	668	1,530
January–December	1,360	81,800	707	1,570
2012:				
January	118	7,190	( <sup>3</sup> )	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	( <sup>3</sup> )	16
July	190	10,300	1	42
August	152	8,910	1	39
January–August	1,100	67,100	33	357

-- 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.