

Mineral Industry Surveys

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COBALT IN DECEMBER 2012

Preliminary data indicate that U.S. cobalt consumption during 2012 was 8% less than consumption during 2011. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in 2012 was 4% more than that imported during 2011. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in 2012 was 11% more than that exported during 2011.

Prices

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

Type	Price range	Average price
U.S. spot ¹	10.80–11.80	11.30
LME cash mean ²	XX	10.83

XX Not applicable.

¹Source: Platts Metals Daily, 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 MATERIALS^{p, 1}

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2011:				
December	271	179	164	614
January–December ⁴	3,960	2,170	2,200	8,340
Year ⁵	4,670	2,220	2,210	9,100
2012:				
January	280 ^r	179	168	627 ^r
February	285 ^r	179	175	638 ^r
March	256 ^r	180	193	629 ^r
April	294 ^r	179	176	648 ^r
May	260 ^r	181	195	636 ^r
June	263 ^r	183	187	632 ^r
July	294 ^r	178	183	654 ^r
August	277 ^r	188	166	630 ^r
September	261 ^r	185	191	638 ^r
October	296 ^r	183	181	659 ^r
November	276 ^r	180 ^r	181	637 ^r
December	268	177	181	626
January–December	3,310	2,170	2,180	7,660

^pPreliminary. ^rRevised.

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.

⁵Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE^{p, 1}

(Metric tons, contained cobalt)

End use	2011		2012	
	January– December ²	Year ³	December	January– December ⁴
Steel	536	548	45	536
Superalloys	4,250	4,650	289	3,570
Magnetic alloys	252	313	21	252
Other alloys ⁵	W	438	W	W
Cemented carbides ⁶	773	773	65	779
Chemical and ceramic uses ⁷	2,260	2,310	184	2,250
Miscellaneous and unspecified	271	63	23	271
Total	8,340	9,100	626	7,660

^pPreliminary. 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.

³Includes annual reports.

⁴May include revisions to previously published data.

⁵Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁶Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁷Includes 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 ^{p, 2}			U.S. Government, metal ⁶	LME, ³ metal		Total
	Metal and scrap ⁴	Oxide and other chemical compounds ⁵	Total		U.S. warehouse	Non-U.S. warehouse	
2011:							
December ⁷	519	193	712	301	43	261	304
Yearend ⁸	W	202	784	301	43	261	304
2012:							
January	526 ^r	185	711 ^r	301	26	285	311
February	503 ^r	180	683 ^r	301	20	273	293
March	541 ^r	181	722 ^r	301	27	318	345
April	546 ^r	182	729 ^r	301	22	328	350
May	529 ^r	178	706 ^r	301	22	330	352
June	524 ^r	173	697 ^r	301	21	334	355
July	509 ^r	181	690 ^r	301	21	335	356
August	508 ^r	167	675 ^r	301	21	340	361
September	496 ^r	167	663 ^r	301	31	350	381
October	483 ^r	170	653 ^r	301	31	367	398
November	501 ^r	169	670 ^r	301	51	367	418
December	507	167	674	301	51	378	429

^pPreliminary. ^rRevised. W Withheld to avoid disclosing company proprietary data.

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.

⁸U.S. industry data include annual 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)		
2011:								
December	632	\$19,900	294	\$5,610	105	\$1,220	878	10,600
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	774	22,200	208	4,940	78	798	948	9,550
November	622	18,700	144	3,410	144	1,500	770	10,300
December:								
Australia	65	1,640	--	--	--	--	65	701
Austria	--	--	--	--	--	--	--	12
Belgium	--	--	50	1,200	--	--	36	491
Brazil	--	--	--	--	1	8	(7)	540
Canada	5	241	--	--	--	--	5	815
China	153	4,250	--	--	25	344	165	2,160
Congo (Kinshasa)	10	229	--	--	--	--	10	82
Finland	13	563	22	444	52	340	43	1,150
France	(7)	20	--	--	--	--	(7)	28
Germany	(7)	9	--	--	--	--	(7)	7
India	--	--	--	--	10	43	3	140
Ireland	--	--	--	--	--	--	--	(7)
Italy	--	--	--	--	--	--	--	1
Japan	120	3,080	--	--	--	--	120	689
Korea, Republic of	5	130	4	120	--	--	8	56
Madagascar	--	--	--	--	--	--	--	1
Morocco	20	464	--	--	--	--	20	170
Netherlands	--	--	--	--	--	--	--	9
Norway	156	4,370	--	--	--	--	156	1,140
Peru	--	--	--	--	4	85	2	14
Philippines	--	--	--	--	--	--	--	13
Russia	19	520	--	--	(7)	3	19	903
South Africa	--	--	--	--	--	--	--	378
Sweden	3	131	--	--	--	--	3	14
Taiwan	--	--	--	--	--	--	--	25
Uganda	--	--	--	--	--	--	--	18
United Kingdom	1	36	48	983	7	57	37	438
Zambia	41	973	--	--	--	--	41	1,070
Total	611	16,700	124	2,750	98	881	732	11,100
January–December	8,750	264,000	2,320	51,200	1,810	20,900	11,100	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)
2011:						
December	81	\$2,560	44	\$669	18	\$2,070
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	56	1,990	54	777	21	2,410
November	89	2,620	88	1,470	20	1,750
December:						
Belgium	6	213	--	--	--	--
Canada	69	1,860	5	51	2	550
China	--	--	--	--	1	143
France	(3)	6	--	--	2	114
Germany	1	66	--	--	1	163
India	--	--	2	30	--	--
Indonesia	--	--	4	62	--	--
Ireland	--	--	17	185	--	--
Japan	--	--	--	--	(3)	11
Mexico	--	--	(3)	2	--	--
Singapore	--	--	1	11	--	--
Sweden	--	--	--	--	(3)	6
Taiwan	--	--	--	--	(3)	6
United Kingdom	--	--	28	409	7	371
Total	76	2,140	57	751	13	1,360
January–December	856	27,600	820	12,800	279	28,400

-- 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)		
2011:								
December	220	\$7,460	21	\$63	2	\$25	236	3,390
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
November	265	7,410	(7)	12	58	526	279	3,450
December	287	8,090	33	397	20	154	316	3,760
January–December	3,420	106,000	397	2,540	226	3,580	3,760	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)
2011:				
December	123	\$7,780	--	--
January–December	1,360	81,800	707	\$1,570
2012:				
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
November	180	9,400	1	35
December	231	11,300	--	--
January–December	1,820	106,000	35	428

-- Zero.

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

²Free alongside ship (f.a.s.) value.

³Less than ½ unit.

Source: U.S. Census Bureau.