

# Mineral Industry Surveys

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## COBALT IN FEBRUARY 2013

U.S. cobalt consumption during January through February 2013 was slightly higher than consumption during the same period in 2012. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals during January through February 2013 was 5% less than that imported during the same period in 2012. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals during January through February 2013 was 10% more than that exported during the same period in 2012.

**Prices**

Prices for cobalt metal, in dollars per pound, in February 2013 are listed below.

Type	Price range	Average price
U.S. spot <sup>1</sup>	11.50–12.80	12.04
LME cash mean <sup>2</sup>	XX	11.49

XX Not applicable.

<sup>1</sup>Source: 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>1</sup>

(Metric tons, contained cobalt)

Period	Metal <sup>2</sup>	Oxide and other chemical compounds <sup>3</sup>	Scrap	Total
2012: <sup>p</sup>				
February	285	179	175	638
March	256	180	193	629
April	294	179	176	649 <sup>r</sup>
May	260	181	195	636
June	263	183	187	632
July	294	178	183	655 <sup>r</sup>
August	277	188	166	631 <sup>r</sup>
September	262 <sup>r</sup>	185	191	638
October	296	183	181	660 <sup>r</sup>
November	276	180	181	637
December	268	177	181	627 <sup>r</sup>
January–February <sup>r</sup>	565	358	343	1,270
January–December	3,310	2,170	2,180	7,660
2013:				
January	271 <sup>r</sup>	180	182	634 <sup>r</sup>
February	265	179	182	626
January–February	536	359	364	1,260

<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.

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

(Metric tons, contained cobalt)

End use	2012 <sup>p</sup>		2013	
	January–February	January–December <sup>2,3</sup>	February	January–February
Steel	89	536	45	89
Superalloys	589 <sup>r</sup>	3,570	291	588
Magnetic alloys	42	252	21	43
Other alloys <sup>4</sup>	W	W	W	W
Cemented carbides <sup>5</sup>	130 <sup>r</sup>	779	60	121
Chemical and ceramic uses <sup>6</sup>	371 <sup>r</sup>	2,250	186	374
Miscellaneous and unspecified	45	271	23	45
Total	1,270 <sup>r</sup>	7,660	626	1,260

<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.	Non-U.S.	
					warehouse	warehouse	
2012:							
February	502 <sup>r</sup>	180	683	301	20	273	293
March	541	181	722	301	27	318	345
April	546	182	729	301	22	328	350
May	529	178	706	301	22	330	352
June	524	173	697	301	21	334	355
July	509	181	690	301	21	335	356
August	508	167	676 <sup>r</sup>	301	21	340	361
September	496	167	663	301	31	350	381
October	483	170	653	301	31	367	398
November	501	170 <sup>r</sup>	670	301	51	367	418
December	507	167	674	301	51	378	429
2013:							
January	490 <sup>r</sup>	179	669 <sup>r</sup>	301	48	387	435
February	487	169	655	301	44	386	430

<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>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.

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

<sup>8</sup>U.S. industry data include annual 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>
		Value <sup>4</sup>		Value <sup>4</sup>		Value <sup>4</sup>		
	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)		
2012:								
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	611	16,700	124	2,750	98	881	732	11,100
January–February	1,450	45,600	376	7,730	276	3,340	1,820	XX
January–December	8,750	264,000	2,320	51,200	1,810	20,900	11,100	XX
2013:								
January	684	17,300	149	3,260	85	793	816	816
February:								
Australia	25	498	--	--	--	--	25	45
Austria	(7)	18	--	--	--	--	(7)	2
Belgium	6	151	40	799	--	--	35	61
Brazil	53	1,320	--	--	6	59	55	123
Canada	4	229	--	--	--	--	4	35
China	86	1,880	--	--	8	87	89	279
Finland	105	2,680	13	234	121	1,920	161	212
France	1	55	--	--	6	58	2	7
Germany	(7)	2	--	--	--	--	(7)	(7)
India	--	--	--	--	6	53	1	7
Ireland	(7)	3	--	--	--	--	(7)	(7)
Japan	75	1,750	--	--	--	--	75	100
Korea, Republic of	(7)	3	--	--	--	--	(7)	10
Madagascar	146	3,380	--	--	--	--	146	146
Morocco	10	254	--	--	--	--	10	30
Norway	150	3,750	--	--	--	--	150	306
Russia	77	2,040	--	--	--	--	77	153
South Africa	--	--	--	--	--	--	--	56
United Kingdom	(7)	6	88	1,660	17	140	68	118
Zambia	20	514	--	--	--	--	20	44
Total	758	18,500	141	2,690	163	2,310	917	1,730
January–February	1,440	35,800	290	5,950	248	3,110	1,730	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)
2012:						
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	76	2,140	57	751	13	1,360
January–February	155	5,180	122	2,190	59	4,100
January–December	856	27,600	820	12,800	279	28,400
2013:						
January	87	2,650	43	565	15	1,560
February:						
Belgium	2	73	8	184	--	--
Canada	68	1,790	2	20	2	610
China	--	--	--	--	1	89
France	--	--	8	89	3	178
Germany	(3)	28	--	--	4	640
Ireland	--	--	17	170	--	--
Japan	--	--	--	--	1	67
Korea, Republic of	--	--	2	27	--	--
Singapore	--	--	5	56	--	--
Taiwan	--	--	--	--	(3)	8
United Kingdom	10	411	16	161	5	315
Total	80	2,300	58	709	15	1,910
January–February	167	4,950	101	1,270	30	3,470

-- 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)		
2012:								
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–February	472	15,800	38	263	42	407	510	XX
January–December	3,420	106,000	397	2,540	226	3,580	3,760	XX
2013:								
January	276	8,200	32	108	--	--	299	299
February	252	6,850	6	81	20	164	261	560
January–February	528	15,100	38	188	20	164	560	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>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)
2012:				
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–February	244	15,600	5	72
January–December	1,820	106,000	35	428
2013:				
January	152	8,390	1	30
February	206	9,230	--	--
January–February	358	17,600	1	30

-- 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.