

Physical Constants of Inorganic Compounds

4-59

No.	Name	Formula	CAS Reg. No.	Mol. wt.	Phys. form	mp/°C	bp/°C	$\rho/\text{g cm}^{-3}$	Sol. in g/100 g H ₂ O	Qualitative solubility
884	Cobalt(II) phosphate octahydrate	Co ₃ (PO ₄) ₂ ·8H ₂ O	10294-50-5	510.865	pink amorp powder			2.77		i H ₂ O; s acid
838	Cobalt phosphide	Co ₂ P	12134-02-0	148.84	gray needles	1386		6.4		i H ₂ O; s HNO ₃
911	Cobalt(III) potassium nitrite sesquihydrate	CoK ₃ (NO ₂) ₆ ·1.5H ₂ O	13782-01-9	479.284	yel cub cry			2.6		sl H ₂ O; reac acid; i EtOH
885	Cobalt(II) potassium sulfate hexahydrate	CoK ₂ (SO ₄) ₂ ·6H ₂ O	10026-20-7	437.347	red monocl cry	75 dec		2.22		vs H ₂ O
886	Cobalt(II) selenate pentahydrate	CoSeO ₄ ·5H ₂ O	14590-19-3	291.97	red tricr cry	dec		2.51	55 ¹⁸	
887	Cobalt(II) selenide	CoSe	1307-99-9	137.89	yel hex cry	1055		7.65		i H ₂ O, alk; s aqua regia
888	Cobalt(II) selenite dihydrate	CoSeO ₃ ·2H ₂ O	19034-13-0	221.92	blue-red powder					i H ₂ O
839	Cobalt silicide	CoSi ₂	12017-12-8	115.104	gray cub cry	1326		4.9		s hot HCl
889	Cobalt(II) stannate	Co ₂ SnO ₄	12139-93-4	300.574	grn-blue cub cry			6.30		i H ₂ O; s alk
890	Cobalt(II) stearate	Co(C ₁₈ H ₃₅ O ₂) ₂	1002-88-6	625.872	purp solid	74		1.13		
891	Cobalt(II) sulfate	CoSO ₄	10124-43-3	154.996	red orth cry	>700		3.71	38.3 ²⁵	
893	Cobalt(II) sulfate heptahydrate	CoSO ₄ ·7H ₂ O	10026-24-1	281.102	pink monocl cry	41 dec		2.03	38.3 ²⁵	sl EtOH, MeOH
892	Cobalt(II) sulfate monohydrate	CoSO ₄ ·H ₂ O	13455-34-0	173.011	red monocl cry			3.08	38.3 ²⁵	
894	Cobalt(II) sulfide	CoS	1317-42-6	90.998	blk amorp powder	1117		5.45		i H ₂ O; s acid
912	Cobalt(III) sulfide	Co ₂ S ₃	1332-71-4	214.061	blk cub cry			4.8		reac acid
895	Cobalt(II) telluride	CoTe	12017-13-9	186.53	hex cry			≈8.8		
896	Cobalt(II) thiocyanate	Co(SCN) ₂	3017-60-5	175.097	yel-brn powder				103 ²⁵	s EtOH, MeOH, ace, eth
897	Cobalt(II) thiocyanate trihydrate	Co(SCN) ₂ ·3H ₂ O	97126-35-7	229.143	viol rhomb cry				103 ²⁵	s EtOH, eth, ace
898	Cobalt(III) titanate	CoTiO ₃	12017-01-5	154.798	grn rhomb cry			5.0		
913	Cobalt(III) titanate	Co ₂ TiO ₄	12017-38-8	229.731	grn-blk cub cry			5.1		s conc HCl
899	Cobalt(II) tungstate	CoWO ₄	12640-47-0	306.77	blue monocl cry			≈7.8		i H ₂ O; s hot conc acid
914	Copper	Cu	7440-50-8	63.546	red metal; cub	1084.62	2560	8.96		sl dil acid
919	Copper(I) acetate	Cu ₂ C ₄ H ₇ O ₂	598-54-9	122.59	col cry	dec				reac H ₂ O
937	Copper(II) acetate	Cu(C ₂ H ₃ O ₂) ₂	142-71-2	181.635	blue-grn hyg powder					
939	Copper(II) acetate metaarsenite	Cu(C ₂ H ₃ O ₂) ₂ ·3Cu(AsO ₂) ₂	12002-03-8	1013.8	grn cry powder					i H ₂ O; reac acid
938	Copper(II) acetate monohydrate	Cu(C ₂ H ₃ O ₂) ₂ ·H ₂ O	6046-93-1	199.65	grn monocl cry	115	240 dec	1.88		s H ₂ O, EtOH; sl eth
920	Copper(I) acetylide	Cu ₂ C ₂	1117-94-8	151.113	red amorp powder; exp					
941	Copper(II) acetylide	CuC ₂	12540-13-5	87.567	brn-blk solid; exp	100 exp				
942	Copper(II) arsenate	Cu ₃ (AsO ₄) ₂	7778-41-8	468.476	blue-grn cry					i H ₂ O, EtOH; s dil acid
915	Copper arsenide	Cu ₂ As	12005-75-3	265.56	dark gray solid	827				
943	Copper(II) arsenite	CuHAsO ₃	10290-12-7	187.474	yel-grn powder					i H ₂ O, EtOH; s acid
921	Copper(I) azide	CuN ₃	14336-80-2	105.566	tetr cry; exp					
944	Copper(II) azide	Cu(N ₃) ₂	14215-30-6	147.586	brn orth cry; exp			≈2.6		
940	Copper(II) basic acetate	Cu(C ₂ H ₃ O ₂) ₂ ·CuO·6H ₂ O	52503-64-7	369.271	blue-grn cry or powder					sl H ₂ O, EtOH; s dil acid, NH ₄ OH
955	Copper(II) basic chromate	CuCrO ₄ ·2Cu(OH) ₂	12433-14-6	374.661	brn pow	260 dec				i H ₂ O; s HNO ₃
945	Copper(II) borate	Cu(BO ₂) ₂	39290-85-2	149.166	blue-grn powder			3.859		i H ₂ O; s acid
922	Copper(I) bromide	CuBr	7787-70-4	143.45	wh cub cry; hyg	483	1345	4.98	0.0012 ²⁰	i ace
946	Copper(II) bromide	CuBr ₂	7789-45-9	223.354	blk monocl cry; hyg	498	900	4.710	126 ²⁵	vs H ₂ O; s EtOH, ace; i bz, eth
947	Copper(II) butanoate monohydrate	Cu(C ₄ H ₇ O ₂) ₂ ·H ₂ O	540-16-9	255.756	grn monocl plates					s H ₂ O, diox, bz; sl EtOH
948	Copper(II) carbonate	CuCO ₃	1184-64-1	123.555	cry					i H ₂ O
949	Copper(II) carbonate hydroxide	CuCO ₃ ·Cu(OH) ₂	12069-69-1	221.116	grn monocl cry	200 dec		4.0		i H ₂ O, EtOH; s dil acid
950	Copper(II) chlorate hexahydrate	Cu(ClO ₃) ₂ ·6H ₂ O	14721-21-2	338.54	blue-grn hyg cry	65	100 dec		164 ¹⁸	vs EtOH
923	Copper(I) chloride	CuCl	7758-89-6	98.999	wh cub cry	423	1490	4.14	0.0047 ²⁰	i EtOH, ace
951	Copper(II) chloride	CuCl ₂	7447-39-4	134.452	yel-brn monocl cry; hyg	598	993	3.4	75.7 ²⁵	s EtOH, ace
952	Copper(II) chloride dihydrate	CuCl ₂ ·2H ₂ O	10125-13-0	170.483	grn-blue orth cry; hyg	100 dec		2.51	75.7 ²⁰	vs EtOH, MeOH; s ace; i eth
953	Copper(II) chloride hydroxide	Cu ₂ (OH) ₃ Cl	1332-65-6	213.567	pale grn cry					i H ₂ O; s acid
954	Copper(II) chromate	CuCrO ₄	13548-42-0	179.54	red-brn cry					i H ₂ O; s EtOH
956	Copper(II) chromite	CuCr ₂ O ₄	12018-10-9	231.536	gray-blk tetr cry			5.4		i H ₂ O, dil acid
957	Copper(II) citrate hemipentahydrate	Cu ₂ C ₆ H ₄ O ₇ ·2.5H ₂ O	10402-15-0	360.221	blue-grn cry	100 dec				sl H ₂ O; s dil acid
924	Copper(I) cyanide	CuCN	544-92-3	89.564	wh powder or grn orth cry	474	dec	2.9		i H ₂ O, EtOH; s KCN soln
958	Copper(II) cyanide	Cu(CN) ₂	14763-77-0	115.58	grn powder					i H ₂ O; s acid, alk
959	Copper(II) cyclohexanecarboxylate	Cu(C ₁₀ H ₁₇ O ₂) ₂	2218-80-6	402.028	powder	126 dec				
960	Copper(II) dichromate dihydrate	CuCr ₂ O ₇ ·2H ₂ O	13675-47-3	315.565	red-brn tricr cry			2.286		vs H ₂ O
961	Copper(II) ethanolate	Cu(C ₂ H ₅ O) ₂	2850-65-9	153.667	blue hyg solid	120 dec				i os
962	Copper(II) ethylacetoacetate	Cu(C ₂ H ₅ CO ₂ CHCOCH ₃) ₂	14284-06-1	321.813	grn cry	192				s EtOH, chl
963	Copper(II) 2-ethylhexanoate	Cu(C ₈ H ₁₅ O ₂) ₂	149-11-1	349.953	powder	252 dec				
964	Copper(II) ferrate	CuFe ₂ O ₄	12018-79-0	239.234	blk cry					

Inorganic