Solubility Chart

Ion names & symbols	*Halogens*					*Chalcogens*				*Pnictogens*		*Crystallogens*				
	Fluoride F^-	Chloride Cl^-	Bromide Br^-	Iodide I^-	Perchlorate ClO_4^-	Oxide O^{2-}	Hydroxide OH^-	Sulfide S^{2-}	Sulfate SO_4^{2-}	Nitrate NO_3^-	Phosphate PO_4^{3-}	Carbonate CO_3^{2-}	Cyanide CN^-	Thiocyanate SCN^-	Acetate $C_2H_3O_2^-$	Oxalate $C_2O_4^{2-}$
Hydrogen H^+	S	S	S	S	S	S	S	sS	S	S	S	S	S	S	S	S
Ammonium NH_4^+	S	S	S	S	S	S[a]	S	R	S	S	S	S	S	S	S	S
Lithium Li^+	sS	S	S	S	S	R	S	R	S	S	sS	sS	S	S	S	S
Sodium Na^+	S	S	S	S	S	R	S	R	S	S	S	S	S	S	S	S
Potassium K^+	S	S	S	S	sS	R	S	R	S	S	S	S	S	S	S	S
Rubidium Rb^+	S	S	S	S	sS	R	S	R	S	S	S	S	S	S	S	S
Caesium Cs^+	S	S	S	S	sS	R	S	R	S	S	S	S	S	S	S	S
Beryllium Be^{2+}	S	S	S	R	S	I	I	R	S	S	I	sS	R	S	S	S
Magnesium Mg^{2+}	sS	S	S	S	S	R	I	R	S	S	I	sS	R	S	S	sS
Calcium Ca^{2+}	I	S	S	S	S	R	sS	R	sS	S	I	I	R	S	S	sS
Strontium Sr^{2+}	sS	S	S	S	S	R	sS	R	sS	S	sS	I	S	S	S	I
Barium Ba^{2+}	sS	S	S	S	S	R	S	R	I	S	I	sS	S	S	S	I
Aluminium Al^{3+}	sS	S	S	S[b]	S	I	I	R	S	S	I	R	R	S	S	I
Gallium Ga^{3+}	I	S	S	R	S	I	I	R	sS	S	I	R	R	S	S	?
Manganese(II) Mn^{2+}	sS	S	S	S	S	I	I	I	S	S	I	I	S	S	S	I
Iron(II) Fe^{2+}	sS	S	S	S	S	I	I	I	S	S	I	I	S	S	S	sS
Cobalt(II) Co^{2+}	sS	S	S	S	S	I	I	I	S	S	I	I	I	S	S	I
Nickel(II) Ni^{2+}	S	S	S	S	S	I	I	I	S	S	I	I	I	S	S	I
Copper(II) Cu^{2+}	sS	S	S	?	S	I	I	I	S	S	I	I[c]	I	I	S	I
Zinc Zn^{2+}	sS	S	S	S	S	I	I	I	S	S	I	I	I	S	S	I
Cadmium Cd^{2+}	S	S	S	S	S	I	I	I	S	S	I	I	sS	sS	S	I
Mercury(II) Hg^{2+}	R	S	sS	I	S	I	I	I	R	S	I	I	S	sS	S	sS
Vanadium(III) V^{3+}	I	S	S	S	S	I	I	I	sS	S	I	?	?	S	?	?
Chromium(III) Cr^{3+}	sS	S	S	S	S	I	I	I	S	S	I	I	S	S	S	?
Iron(III) Fe^{3+}	S	S	S	R	S	I	I	I	S	S	sS	R	S	S	S	sS
Gold(III) Au^{3+}	R	S	sS	?	?	I	I	I	?	?	I	I	S	?	sS	?
Tin(II) Sn^{2+}	S	S	S	S	S	I	I	I	S	?	I	I	?	I	R	sS
Lead(II) Pb^{2+}	sS	sS	sS	sS	S	I	sS	I	I	S	I	I	sS	sS	S	I
Silver Ag^+	S	I	I	I	S	I	I	I	sS	S	I	I	I	I	sS	I
Mercury(I) Hg_2^{2+}	R	I	I	I	S	I	?	?	sS	S[f]	?	I	I	?	S[f]	?

S	highly soluble or miscible	≥20 g/L
sS	slightly soluble	0.1~20 g/L
I	relatively insoluble	<0.1 g/L
R	reacts with or in water	
?	unavailable	

[a] "Ammonium oxide" does not exist. However, its theoretical molecular formula $(NH_4^+)_2O^{2-}$ represents that of aqueous ammonia.

[b] Partial electrolysis

[c] The commonly encountered basic copper carbonate ($Cu_2CO_3(OH)_2$) is insoluble in water. True copper(II) carbonate ($CuCO_3$) is rare and reacts with water to form basic copper carbonate.

[d] Anhydrous FeF_3 is slightly soluble in water; $FeF_3{\cdot}3H_2O$ is much more soluble in water.

[e] The commonly encountered basic iron(III) acetate ($[Fe_3O(OAc)_6(H_2O)_3]OAc$) is insoluble in water. True iron(III) acetate ($Fe(OAc)_3$) is rare and is soluble in water.

[f] Slowly decomposes in water.

Wikipedia contributors. (2025, February 26). Solubility chart. In Wikipedia, The Free Encyclopedia. Retrieved 15:09, March 2, 2025, from https://en.wikipedia.org/w/index.php?title=Solubility_chart&oldid=1277760357