

Cheat Sheet for Balancing Equations
Solubility Table

Compounds	Solubility	Exceptions
compounds of alkali metals and ammonium	Soluble	A few lithium compounds
acetates, nitrates, chlorates, and perchlorates	Soluble	Few exceptions
sulfates	Soluble	Ag, Hg, Pb, Ca, Sr, Ba
chlorides, bromides, and iodides	Soluble	Ag, Hg, Pb
sulfides and hydroxides	Insoluble	Alkali metals, Ca, Sr, Ba
carbonates, phosphates, & sulfites	Insoluble	Alkali metals and ammonium

Activity Series Table

Li\
K \
Ba \
Ca /
Na/
will replace H from water & acids

Mg\
Al \
Zn \
Fe \
Ni /
Sn /
Pb/
will replace H from acids only

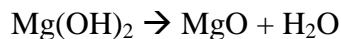
(H)
Cu
Hg
Ag
Au

Decomposition Reactions:

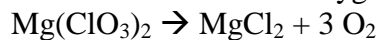
Carbonates (CO₃⁻²) Decompose to form the metal oxide and carbon dioxide.



Hydroxides (OH⁻¹) Decompose to form the metal oxide and water.



Chlorates (ClO₃⁻¹) Decompose to form the metal chloride and oxygen.



Oxides and Halides Decompose to form elements.

Nitrates (NO₃⁻¹)

Group I Nitrates decompose to form the metal nitrite and oxygen.

Other Nitrates: Decompose to form the metal oxide and NO₂ and oxygen.

Sulfates (SO₄⁻²)

Group I & II: no reaction

All other: Metal oxide and SO₃