

## Solubility Rules for Ionic Compounds

Substances	Solubility	Common Exceptions
Alkali metals and Ammonium compounds	Soluble	None
Nitrates, Acetates, Chlorates, and Perchlorates	Soluble	None
Chlorides, Bromides, and Iodides	Soluble	$\text{Ag}^+$ and $\text{Hg}_2^{2+}$ halides and $\text{Hg}^{2+}$ iodides are insoluble. $\text{PbCl}_2$ , $\text{PbBr}_2$ , $\text{PbI}_2$ and $\text{HgBr}_2$ are slightly soluble.
Sulfates	Soluble	$\text{Sr}^{2+}$ , $\text{Ba}^{2+}$ , $\text{Pb}^{2+}$ and $\text{Hg}_2^{2+}$ sulfates are insoluble. $\text{CaSO}_4$ and $\text{Ag}_2\text{SO}_4$ sulfate are slightly soluble.
Hydroxides	Insoluble	Alkali metal and $\text{Ba}^{2+}$ hydroxides are soluble. $\text{Sr}(\text{OH})_2$ and $\text{Ca}(\text{OH})_2$ are slightly soluble.
Sulfides, Carbonates, Phosphates	Insoluble	Alkali metal and $\text{NH}_4^+$ compounds are soluble. $\text{CaS}$ , $\text{SrS}$ and $\text{BaS}$ are soluble.