

Lesson 4: Ionic Compounds

- Electrically neutral (no charge)
- A cation (+ charge) joins with an anion (- charge)
- A metal ion and a non-metal ion
- Total number of electrons released equals total number of electrons gained
- All ionic compounds are solids at room temperature
- Has to be in the lowest ratio

Steps for Writing Ionic Compounds:

1. Identify the ions and their charges. (periodic table)
2. Determine the total charges needed to balance.
3. Note the ratio of cations to anions.
4. Use subscripts to write the formula, if needed.

Examples

1. Write the correct name and chemical formula for the following.

		<u>-ide</u>	
a)	1+ 1- silver and iodine	metal non metal silver iodide	AgI(s) solid
b)	2+ 2- magnesium and oxygen	magnesium oxide	MgO(s)
c)	2+ 3- calcium and nitrogen	calcium nitride	Ca ₃ N ₂ (s)
d)	2+ 2- zinc and selenium	zinc selenide	ZnSe(s)
e)	3+ 1- aluminium and fluorine	aluminium fluoride	AlF ₃ (s)
f)	1+ 1- potassium and chlorine	potassium chloride	KCl(s)
g)	1+ 2- silver and oxygen	silver oxide	Ag ₂ O(s)

2. Write the correct names for each of the following compounds.

- a) MgCl₂ magnesium chloride
- b) CsF cesium fluoride
- c) CdO cadmium oxide
- d) MgBr₂ magnesium bromide
- e) K₂S potassium sulfide
- f) Li₃P lithium phosphide

Homework: Worksheet