

2.5 C1 Name of Ionic Compound

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Science 9 – Chemistry Topic 2.5 – Concept 1: The chemical name of an ionic compound communicates its composition. (Read p.156-157)

Binary ionic compounds – a compound made up of ions of one metal element and ions of one non metal element joined by ionic bonds.

Analyse: Study the following examples and determine the two rules for naming the compounds of this type.

Chlorine
HCl hydrogen chloride
CaF₂ calcium fluoride
NaBr sodium bromide
CaS calcium sulfide
AlBr₃ aluminum bromide

In your own words:

Rule 1: metal part: Same as elemental

Rule 2: Non-metal part: Suffix - "ide" (end)

Names of Binary Ionic Compounds

- The first part names the positive⁺ ion.
 - The positive ion is always a metal in a binary ionic compound.
 - The positively charged metal ion is always named first.
 - Its name is the Same as the name of its element.
- The second part names the negative ion.
 - The negative ion in a binary ionic compound is always a non-metal.
 - Always ends with the suffix -ide.

Ions of Non-metals:

Element	Ion	Element	Ion
fluorine	<u>fluoride</u>	<u>oxygen</u>	<u>Oxide</u>
chlorine	<u>chloride</u>	<u>sulfur (or sulphur)</u>	<u>sulfide / sulphide</u>
bromine	<u>bromide</u>	selenium	<u>Selenide</u>
iodine	<u>iodide</u>	tellurium	<u>telluride</u>
carbon	<u>carbide</u>	<u>nitrogen</u>	<u>nitride</u>
<u>hydrogen</u>	<u>hydride</u>	<u>phosphorus</u>	<u>phosphide</u>

Write the name of the following compounds

MgBr₂ Magnesium bromide

Na₂S Sodium Sulphide

Li₃P Lithium phosphide

Did you know? Where do the naming rules come from?

- The international system for naming chemicals is maintained by the International Union of Pure and Applied Chemistry (IUPAC).

Practice Problems: Naming Compound

1. MgS

2. KBr

3. Ba₃N₂

4. Al₂O₃

5. NaI

6. SrF₂

7. Li₂S

8. RaCl₂

9. CaO

10. AlP

11. Cs₂O

12. RbI

13. K₂S

14. LiBr

15. BaCl₂

16. Na₂O

17. SrS

18. BeBr₂

19. CaF₂

20. Al₂S₃

21. Srl₂

22. AlN

23. MgO

24. NaBr
