Naming Compounds

**Types of compounds**

**Compounds** contain **a metal and a non-metal**, e.g. sodium chloride (NaCℓ). **Compound**s contain **only non-metals**, e.g. carbon dioxide (CO2).

**Naming Compounds**

If the compound contains a metal atom and a non-metal atom,

* Write the name of the **metal** first
* Write the name of the **non-metal** second and change the ending to **–ide**

For example, table salt contains one sodium atom and one chlorine atom, NaCℓ. The name of this compound is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Try writing the names for these compounds.

KCℓ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Fe2O3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

NaI \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Na2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ZnO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ AgI \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MgS \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NiCℓ2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Naming Compounds**

If the compound contains only non-metal atoms, you need to use **prefixes** to describe how many atoms of each element are in the compound.

**mono** – one **di** – two **tri** – three **tetra** – four

* The elements are **named in the order they appear** in the formula.
* The **prefix** is put in front of each element name to show **how many** are in the compound.
* The **ending** of the last element is changed to ­**–ide**.
* If there is only **one** atom of the first element, **no prefix** is needed.

For example, the formula for water is H2O. It contains two hydrogen atoms and one oxygen atom. Its scientific name is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Try writing the names for these compounds.

CO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NF3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ H2O2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

NH3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ H2S \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

N2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ N2O4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PH3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

N2O3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CH4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Complete the table below.**

|  |  |  |  |
| --- | --- | --- | --- |
| Formula of substance | Number of atoms of each element | Scientific name of substance | Element or Compound |
| CaCℓ2 | Calcium x 1  Chlorine x 2 | Calcium chloride | Compound |
| CO2 |  |  |  |
|  | Sodium x 1  Chlorine x 1 |  |  |
| H2 |  |  |  |
|  | Hydrogen x 2  Oxygen x 1 |  |  |
| SO2 |  |  |  |
|  | Nitrogen x 2 |  |  |
|  | Magnesium x 1  Oxygen x 1 |  |  |
|  | Oxygen x 2 |  |  |