

Compounds Part 2b

Nomenclature of Diatomic Molecules & Binary Covalent Compounds

Diatomic molecule: a compound containing two identical elements

When you read the element names for these seven elements, you want to visualize the diatomic molecular formula. For example, we breathe oxygen as O_2 .

Diatomic molecules		Ions	
H_2	hydrogen	H^-	hydride
N_2	nitrogen	N^{3-}	nitride
O_2	oxygen	O^{2-}	oxide
F_2	fluorine	F^-	fluoride
Cl_2	chlorine	Cl^-	chloride
Br_2	bromine	Br^-	bromide
I_2	iodine	I^-	iodide

Complete the table below.

Formula	Name
Cl^-	
	chlorine
N^{3-}	
	nitrogen

Binary Covalent Compound Naming Rules

1. Name the first element using a prefix to indicate the number of atoms in the formula.
2. Name the second element using a prefix to indicate the number of atoms in the formula and use the 'ide' suffix.
3. Do NOT use the prefix "mono" on the first element.
4. Remove the 'a' at the end of the prefix for oxygen and oxide.

$\begin{array}{c} \text{1}^{\text{st}} \text{ Element} \\ \text{-----} \\ \text{Greek Prefix + Full nonmetal Name} \end{array} + \begin{array}{c} \text{2}^{\text{nd}} \text{ Element} \\ \text{-----} \\ \text{Greek Prefix + Stem of nonmetal w/ 'ide'} \end{array}$

Examples showing how to apply the nomenclature rules.



Remember to distinguish between Diatomic Molecules, Binary Covalent Compounds., and Ionic Compounds.

Complete the table below.

Formula	Name
O_2	
	oxide
NO_2	
	chromium(III) oxide