

CHAPTER 3: CHEMICAL FORMULAE AND EQUATIONS

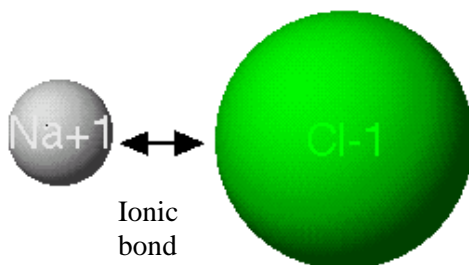
Extra Info

Ionic compound

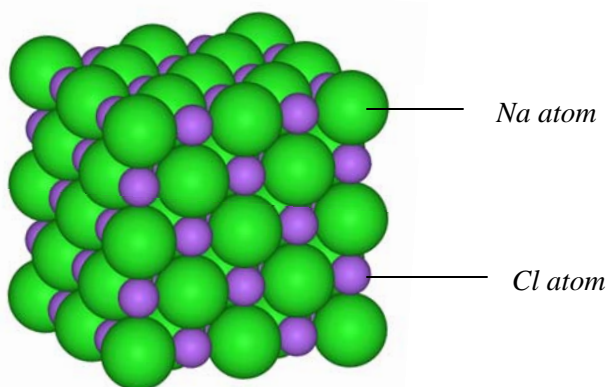
During the formation of an ionic compound, ions are held together in a lattice structure by ionic bonds. Usually, the positively charged portion consists of metal cations and the negatively charged portion is a halogen or non-metal ion. Ions in ionic compounds are held together by the electrostatic force between oppositely charged bodies. Ionic compounds have high melting and boiling points, and they have a high hardness and are very brittle.

Ions can be formed from single atoms, such as the ions in common salt (sodium chloride), or more complex groups of atoms such as the carbonate ions. They must carry positive or negative charges to be considered ions.

According to the IUPAC system of naming compounds, the common name of an ionic compound is written in two words. The name of the cation comes first with the oxidation number written in parenthesis, followed by the name of the anion. For example, $\text{Fe}_2(\text{SO}_4)_3$ is named as iron(III) sulphate.



Na^+ and Cl^- ions are held together by ionic bonds



Sodium chloride molecule, NaCl