Topics: Metals and Non-metals

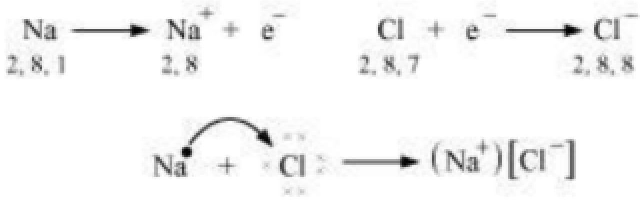
Subtopics:Reaction between Metals and Non-metals

Electrovalent Bonding

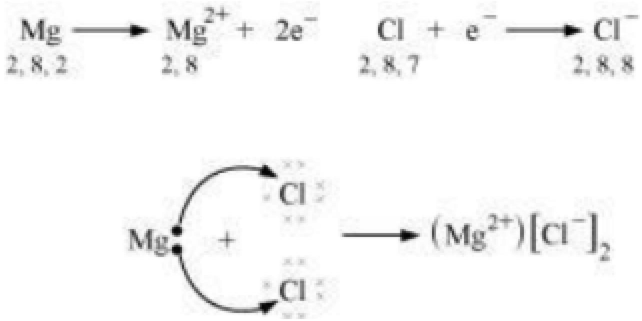
When an atom donates one, two or three electrons from its valence shell to another atom, which has the ability to accept these electrons, it is known as electrovalency. As a result of electrovalency, both these atoms achieve the structure of an inert gas. When the chemical bond occurs by the transfer of electrons from the atom of an element to the atom or atoms of another it is called Ionic or Electrovalent bond.

Thus, the electrovalency of sodium is 1+, and that of chlorine is 1- in NaCl. Similarly, calcium, magnesium in their chloride exhibits an electrovalency of 2+. There are many elements, which show different electrovalencies in different compounds. This phenomenon is called 'variable electrovalency' e.g., iron exists as Fe2+ and Fe3+ in ferrous sulphate and ferric sulphate respectively.

- **Metals + Non-metals**
  - **1)**



  - **2)**



Physical Properties of Ionic compounds

1. Solid compounds
2. Hard solids [because of strong attraction force]
3. Brittle
4. High melting and boiling points
5. Soluble in water; insoluble in kerosene, petrol
6. Conduct electricity in aqueous solution