Base

- Bases are substances that form hydroxide ions (OH^-) in aqueous solution (formation of alkalis). When neutralised with acids, salts are formed. They are usually formed by the reaction of metal oxides with water. Their chemical formulas begin with a metal atom, followed by one or more hydroxide ions according to the oxidation number of the metal.
- According to **Brönsted** bases are all substances capable of binding protons to themselves. For this, the base must have a free electron pair.

Classification

1. **neutral base** (no charge), e.g., NH_3, H_2O
2. **anionic base** (negatively charged), e.g., Cl^-, HSO^-_4, NO^-_3
3. **cationic base** (positively charged), e.g., $[Fe(OH)_2.\ (H_2O)_4]^+$.

- Some compounds form hydroxide ions only by reacting with water. They are salts of weak acids that act so strongly on the proton of the water molecule that they tear it off. As a consequence, a hydroxide ion is formed, which is responsible for the alkaline reaction. Such salts are, for example, carbonates and phosphates.
- **Organic bases** contain certain atoms in the hydrocarbon skeleton. For example, nitrogen atoms can bind a proton with their free electron pair and thus form salt-like compounds; e.g., amines or heterocyclic compounds.

Links

Related articles

- calcium hydroxide

Source

- GÄRTNER, Harald. *Kompendium chemie.* 1. edition. Euromedia Group - Knižní klub, 2007. 542 pp. ISBN 978-80-242-2012-3.