

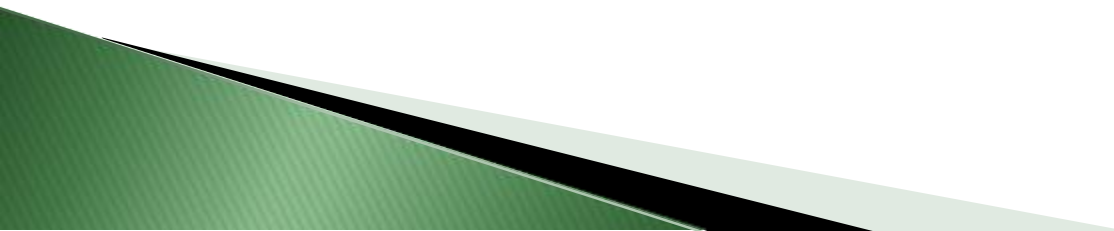
Chemistry in aqueous and non-aqueous solutions

For
B.Sc Chemistry(Part-II)
Inorganic chemistry
Paper-III
Lecture-07

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Chemistry in aqueous and non-aqueous solutions

Contents

- ▶ **Physical properties of Liquid NH_3**
 - ▶ **Application/uses of Liquid NH_3**
 - ▶ **Chemistry in aqueous and non-aqueous solutions**
 - ▶ **Protonic/aprotic solvent.**
 - ▶ **Inorganic reactions in liq. NH_3**
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Chemistry in aqueous and non-aqueous solutions

Contents

- ▶ **Physical properties of Liquid SO_2**
- ▶ **Application/uses of Liquid SO_2**
- ▶ **Inorganic reactions in liq. SO_2**
- ▶ **Inorganic reactions of liq. SO_2 Solutions of metals in liq NH_3**

Chemistry in aqueous and non-aqueous solutions

Physical properties of liq NH₃

- Ammonia is a compound of nitrogen and hydrogen
- Anhydrous ammonia is a liquid or gaseous chemical compound

Formula: NH₃

IUPAC ID: Azane

Molar mass: 17.031 g/mol

Boiling point: -33.34 °C

Density: 0.73 kg/m³

Melting point: -77.73 °C

Chemistry in aqueous and non-aqueous solutions

Liquid ammonia (NH₃)

- It is a heavy liquid
- It has a high vapor pressure at ordinary temperatures that causes freezing when brought into contact with the skin
- It is obtained by compressing anhydrous gaseous ammonia

Applications

- ▶ Used in Cleaning
- ▶ Used in Fertilizer production
- ▶ Used in manufacturing Drug
- ▶ Used in refrigeration and as a solvent (as in the study of ammono compounds)
- ▶ Used as a source of gaseous ammonia.

Chemistry in aqueous and non-aqueous solutions

Liquid ammonia (NH_3) act as a non-aqueous solvent.

- There is no water in liquid ammonia
 - When liquid ammonia is cooled then it can be liquid.
 - It can be used as solvent for many reactions
 - It has properties of dissolving many solute.
 - When water is used as a solvent then it is called aqueous solvent.
 - It is a stable binary hydride
 - Ammonia is a colourless gas with a characteristic pungent smell.
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