

Unit- 2 Compounds of p-Block Elements

Applications

- Reducing agent in organic synthesis
- Hydrogen storage

2. Carbon Group (Group 14)

Calcium Carbide (CaC_2)

Applications

- Manufacture of acetylene gas
- Artificial fruit ripening (industrial)

Silicon Carbide (SiC)

Applications

- Abrasives
- Cutting tools
- Semiconductor devices

Aluminium Carbide (Al_4C_3)

Applications

- Methane production
- Metallurgical reactions

Silicates

Applications

- Cement
- Glass
- Ceramics
- Construction materials

Silanes (SiH_4)

Applications

- Semiconductor industry
- Chemical vapour deposition

Silicones

Unit- 2 Compounds of p-Block Elements

Applications

- Lubricants
- Sealants
- Medical implants
- Waterproof coatings

3. Nitrogen Group (Group 15)

Ammonia (NH₃) – Haber Process

Applications

- Fertilizer industry
- Nitric acid manufacture
- Refrigerant

Oxides of Nitrogen (NO, NO₂, N₂O₅)

Applications

- Nitric acid manufacture
- Explosives
- Propellants

Oxyacids of Nitrogen

- HNO₂, HNO₃

Applications

- Fertilizers
- Dyes
- Explosives

4. Phosphorus Group (Group 15)

Oxides (P₄O₆, P₄O₁₀)

Applications

- Dehydrating agents
- Acid manufacture

Oxyacids of Phosphorus

- H₃PO₄, H₃PO₃, H₃PO₂