

Material Safety Data Sheet (MSDS)

Product Name: Calcium Hydrogen Phosphate Dihydrate BP/USP Grade

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

Rawpharma Biz Pvt Ltd

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1. Identification of the Substance/Preparation and Company

- **Product Name:** Calcium Hydrogen Phosphate Dihydrate BP/USP Grade
- **Chemical Name:** Calcium Hydrogen Phosphate Dihydrate
- **Synonyms:** Dicalcium Phosphate Dihydrate, DCP Dihydrate
- **Chemical Formula:** $\text{CaHPO}_4 \cdot 2\text{H}_2\text{O}$
- **Molecular Weight:** 172.09 g/mol
- **CAS No.:** 7789-77-7
- **Recommended Use:** Pharmaceutical excipient, tablet binder, food additive, mineral supplement

2. Hazard Identification

- **GHS Classification:** Not classified as hazardous under GHS.
- **Hazard Nature:**

- Low toxicity material
 - Dust may cause mechanical irritation
 - **Potential Health Effects:**
 - **Inhalation:** May cause mild respiratory irritation.
 - **Skin Contact:** May cause mild irritation with prolonged exposure.
 - **Eye Contact:** Dust may cause irritation.
 - **Ingestion:** Generally regarded as safe in prescribed limits.
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3. Composition / Information on Ingredients

- **Chemical Name:** Calcium Hydrogen Phosphate Dihydrate
 - **CAS No.:** 7789-77-7
 - **Purity (IP/BP/USP Grade):** ≥ 98%
 - No hazardous impurities present above reportable limits.
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4. First Aid Measures

- **Inhalation:** Move to fresh air. Seek medical attention if symptoms persist.
 - **Skin Contact:** Wash with soap and water.
 - **Eye Contact:** Rinse immediately with plenty of water for at least 15 minutes.
 - **Ingestion:** Rinse mouth with water. Seek medical advice if large quantity ingested.
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5. Fire Fighting Measures

- **Suitable Extinguishing Media:** Water spray, dry chemical, foam, CO₂.
- **Specific Hazards:** Non-combustible. May release calcium oxide and phosphorus oxides upon thermal decomposition.
- **Protective Equipment:** Wear self-contained breathing apparatus (SCBA).

6. Accidental Release Measures

- **Personal Precautions:** Avoid dust formation and inhalation.
- **Environmental Precautions:** Prevent entry into drains in large quantities.
- **Cleanup Procedure:** Sweep or vacuum and collect in suitable container for disposal.

7. Handling and Storage

- **Handling:**
 - Avoid dust generation.
 - Use appropriate ventilation.
 - Wear protective equipment.
- **Storage:**
 - Store in a cool, dry, well-ventilated place.
 - Keep container tightly closed.
 - Protect from moisture and direct sunlight.

8. Exposure Controls / Personal Protection

- **Exposure Limits:** Not specifically regulated.
- **Engineering Controls:** Local exhaust ventilation recommended.
- **Personal Protective Equipment (PPE):**
 - Respiratory Protection: Dust mask if airborne particles generated.
 - Eye Protection: Safety goggles.
 - Skin Protection: Protective gloves.

9. Physical and Chemical Properties

- **Appearance:** White crystalline powder
 - **Odor:** Odorless
 - **Solubility:** Slightly soluble in water; insoluble in alcohol
 - **pH (1% solution):** 6.0 – 8.0
 - **Bulk Density:** 0.7 – 1.1 g/cm³
 - **Melting Point:** Decomposes on heating
 - **Loss on Drying:** As per IP/BP/USP specification
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10. Stability and Reactivity

- **Stability:** Stable under recommended storage conditions.
 - **Conditions to Avoid:** Excess heat and moisture.
 - **Incompatible Materials:** Strong acids.
 - **Hazardous Decomposition Products:** Calcium oxide, phosphorus oxides.
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11. Toxicological Information

- **Acute Toxicity:** Low toxicity.
 - **Skin Irritation:** Mild mechanical irritation possible.
 - **Eye Irritation:** May cause temporary irritation.
 - **Chronic Effects:** No known significant effects when used as directed.
 - **Carcinogenicity:** Not classified as carcinogenic.
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12. Ecological Information

- **Ecotoxicity:** Low environmental hazard.
- **Persistence & Degradability:** Inorganic compound; persists in environment.
- **Bioaccumulation:** Not expected to bioaccumulate significantly.

13. Disposal Considerations

- Dispose of in accordance with local, regional, and national regulations.
Small quantities may be disposed of as non-hazardous waste.

14. Transport Information (Detailed)

- **UN Number:** Not regulated
- **UN Proper Shipping Name:** Not applicable
- **Transport Hazard Class:** Not classified as dangerous goods
- **Road Transport (ADR/RID)**
 - Not classified as hazardous material
 - No special labeling required
 - Transport in sealed moisture-proof packaging
- **Sea Transport (IMDG)**
 - Not classified as dangerous goods
 - No marine pollutant classification
 - Store away from moisture during transit
- **Air Transport (IATA)**
 - Not classified as hazardous cargo
 - No special handling requirements
- **Packaging Recommendations:**
 - Multi-layer paper bags with inner polyethylene liner
 - HDPE bags
 - Fiber drums
 - Jumbo bags (as required)
- **Special Precautions:**

- Protect from moisture and physical damage
 - Avoid dust generation during loading/unloading
 - Ensure containers are properly sealed
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15. Regulatory Information

- Complies with:
 - British Pharmacopoeia (BP)
 - United States Pharmacopeia (USP)
 - Not classified as hazardous under GHS regulations.
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16. Other Information

- The information provided in this MSDS is based on current knowledge and is intended to describe the product for safety purposes only. It does not constitute a guarantee of any specific property. Users are responsible for ensuring compliance with applicable laws and regulations.
- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.