Calcium Hydrogen Phosphate MSDS

1. Product Name and Identification

- **Product Name:** Calcium Hydrogen Phosphate
- **Synonyms:** Dicalcium Phosphate, Calcium Monohydrogen Phosphate, Dibasic Calcium Phosphate
- **CAS Number:** 7757-93-9
- **Chemical Formula:** $CaHPO_4$
- **Recommended Use:** Food additive, dietary supplement, animal feed supplement, polishing agent in toothpaste.
- **Company Identification:** [Enter Supplier Name and Contact Information Here]

2. Composition/Ingredients

- **Component Name:** Calcium Hydrogen Phosphate
- **CAS Number:** 7757-93-9
- **Concentration:** ≥98%

3. Hazards Identification

Emergency Overview: This product is a white, odorless powder. It is not considered hazardous under normal use conditions. May cause mild mechanical irritation to the eyes and respiratory tract if dust is generated. It has low oral toxicity. This material is not flammable, combustible, or explosive.

Potential Health Effects:

- **Eye Contact:** Dust may cause slight mechanical irritation, leading to redness and tearing. Not expected to cause significant injury.
- **Skin Contact:** Not expected to cause skin irritation. Prolonged or repeated contact may lead to dryness in some individuals.
- **Inhalation:** Inhaling dust may cause mild irritation to the nasal passages and respiratory system. Symptoms can include coughing or sneezing.
- **Ingestion:** Considered to have very low toxicity. Ingesting large quantities may result in mild gastrointestinal discomfort.

4. First Aid Measures

- **Eye Contact:** Flush eyes with a gentle stream of clean water for 5-10 minutes to remove particles. If irritation persists, consult a physician.
- **Skin Contact:** Wash the affected area with soap and water. No specific measures are required, but it is good practice to wash skin after handling.

- **Inhalation:** Relocate the individual to an area with fresh air. If coughing or respiratory discomfort occurs, seek medical advice.
- **Ingestion:** If large amounts are swallowed, rinse the mouth and provide water to drink. Ingestion is not expected to cause problems, but if gastrointestinal symptoms develop, medical advice should be sought. Do not induce vomiting.

5. Handling and Storage

- **Handling:** Minimize dust generation and accumulation. Avoid inhaling dust. Avoid contact with eyes. Employ good industrial hygiene practices, including washing hands after handling and before eating or drinking.
- **Storage:** Store in a cool, dry, and well-ventilated location. Keep containers tightly sealed to protect from moisture. Store away from strong acids.

6. Exposure Controls/Personal Protection

- **Engineering Controls:** General ventilation is typically sufficient. Use local exhaust ventilation if handling procedures generate significant amounts of dust. Eyewash stations should be available in the work area as a precaution.
- **Personal Protective Equipment (PPE):**
    - **Eye/Face Protection:** Wear safety glasses with side-shields to protect against airborne dust.
    - **Skin Protection:** Protective gloves are not generally required but are recommended for prolonged contact or for individuals with sensitive skin.
    - **Respiratory Protection:** If dust levels are high, use a NIOSH-approved particulate respirator (such as an N95 or P95 dust mask).
    - **General Hygiene:** Maintain a clean work environment.

7. Physical and Chemical Properties

- **Appearance:** White powder or granules
- **Odor:** Odorless
- **pH:** 6.5 - 7.5 (in slurry)
- **Melting Point:** Decomposes upon heating
- **Boiling Point:** Not applicable
- **Flash Point:** Not applicable
- **Solubility in Water:** Practically insoluble
- **Density:** Approximately 2.93 g/cm^3
- **Molecular Weight:** 136.06 g/mol

8. Stability and Reactivity

- **Chemical Stability:** Stable under normal conditions of handling and storage.

- **Conditions to Avoid:** Generation of dust, exposure to extreme heat.
- **Incompatible Materials:** Reacts with strong acids.
- **Hazardous Decomposition Products:** Decomposes with heat to form calcium pyrophosphate. No hazardous decomposition products are expected under normal conditions.
- **Hazardous Polymerization:** Will not occur.

9. Toxicological Information

- **Acute Toxicity:**
    - **Oral (LD50, Rat):** > 10,000 mg/kg. Not considered toxic by ingestion.
    - **Dermal (LD50, Rabbit):** > 7,940 mg/kg. Not considered toxic by skin contact.
- **Carcinogenicity:** This substance is not listed as a carcinogen by IARC, NTP, ACGIH, or OSHA.
- **Irritation:** Not classified as a skin or eye irritant, though dust may cause mechanical irritation.
- **Sensitization:** Not known to be a sensitizer.

10. Disposal Considerations

- **Waste Disposal:** Dispose of this material in accordance with all federal, state, and local regulations. This product is not generally considered a hazardous waste. Preferred disposal methods include landfilling in a permitted facility. Do not flush into sanitary sewers or waterways. Empty containers should be disposed of in the same manner as the product.