

Material Safety Data Sheet (MSDS)

Product Name: Tri Calcium Phosphate BP/USP Grade

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Manufacturer / Supplier:

SBF Pharma

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1. Identification of the Substance/Preparation and Company

Product Name: Tri Calcium Phosphate

Synonyms: TCP, Calcium phosphate tribasic

Chemical Formula: $\text{Ca}_3(\text{PO}_4)_2$

Intended Use: Pharmaceutical excipient, food additive, nutritional supplement, dental applications.

2. Hazard Identification

- **GHS Classification:** Not classified as hazardous under GHS criteria.
- **Hazard Statements:** Not considered hazardous under normal handling.
- **Precautionary Statements:** Avoid inhalation of dust. Use adequate ventilation.
- **Routes of Exposure:** Inhalation, ingestion, eye contact.
- **Potential Health Effects:**

- Inhalation: Dust may cause mild respiratory irritation.
- Eye Contact: Dust may cause mechanical irritation.
- Skin Contact: Not expected to cause irritation.
- Ingestion: Non-toxic at normal exposure; excessive ingestion may cause gastrointestinal discomfort.

3. Composition / Information on Ingredients

- **Chemical Name:** Tri Calcium Phosphate
- **Synonyms:** Calcium Phosphate Tribasic, TCP
- **CAS Number:** 7758-87-4
- **EC Number:** 231-840-8
- **Purity/Grade:** ≥ 98% (BP/USP Grade)
- **Molecular Formula:** $\text{Ca}_3(\text{PO}_4)_2$
- **Nature of Substance:** Inorganic salt

4. First Aid Measures

- **Inhalation:** Move to fresh air. Seek medical attention if irritation persists.
- **Skin Contact:** Wash with soap and water. No special treatment required.
- **Eye Contact:** Rinse thoroughly with water. Remove contact lenses if present. Seek medical attention if irritation continues.
- **Ingestion:** Rinse mouth with water. If large amounts are ingested, seek medical attention.

5. Firefighting Measures

- **Suitable Extinguishing Media:** Water spray, dry chemical, foam, CO_2 .
- **Specific Hazards:** Non-flammable. Product does not support combustion.
- **Protective Equipment for Firefighters:** Wear self-contained breathing apparatus if large quantities are involved.

6. Accidental Release Measures

- Avoid creating dust.
- Sweep or vacuum without raising dust.

- Place material in suitable container for disposal.
 - Ensure adequate ventilation during cleanup.
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7. Handling and Storage

- **Handling:** Avoid dust formation. Use PPE when handling bulk material.
 - **Storage:** Store in tightly closed containers, in a cool, dry, and well-ventilated area. Protect from moisture and incompatible materials (strong acids).
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8. Exposure Controls/Personal Protection

- **Exposure Limits:** Not established.
 - **Engineering Controls:** Provide adequate ventilation.
 - **Personal Protective Equipment (PPE):**
 - Respiratory: Dust mask (N95) if dust is generated.
 - Eye: Safety goggles.
 - Skin: Protective gloves if prolonged contact expected.
 - Hygiene: Wash hands after handling.
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9. Physical and Chemical Properties

- Appearance: White, odorless powder
 - Odor: None
 - Molecular Weight: 310.18 g/mol
 - Solubility: Practically insoluble in water
 - Melting Point: > 1670 °C
 - Density: ~3.14 g/cm³
 - pH (suspension in water): ~6–8
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10. Stability and Reactivity

- **Stability:** Stable under normal conditions.
- **Incompatible Materials:** Strong acids (liberates phosphoric acid and calcium salts).

- **Hazardous Decomposition Products:** None under normal conditions.
 - **Conditions to Avoid:** Excessive heat, moisture.
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11. Toxicological Information

- **Acute Toxicity:** LD50 (oral, rat) > 2000 mg/kg (low toxicity).
 - **Irritation:** Non-irritating to skin. Dust may irritate eyes/respiratory tract.
 - **Chronic Effects:** No known significant effects.
 - **Carcinogenicity/Mutagenicity:** Not classified as carcinogenic or mutagenic.
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12. Ecological Information

- **Ecotoxicity:** Not expected to be harmful to aquatic organisms.
 - **Persistence/Degradability:** Inorganic compound, persists as mineral form.
 - **Bioaccumulation Potential:** Low.
 - **Mobility in Soil:** Low solubility; immobilized in soil.
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13. Disposal Considerations

- Dispose of in accordance with local, regional, and national regulations.
 - Can be landfilled as non-hazardous waste.
 - Avoid release into sewers and waterways.
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14. Transport Information (Detailed)

Tri Calcium Phosphate is **not classified as a dangerous good** under international transport regulations (ADR/RID, IMDG, ICAO/IATA, DOT).

- **UN Number:** Not applicable
- **UN Proper Shipping Name:** Not applicable
- **Transport Hazard Class(es):** Not regulated
- **Packing Group:** Not applicable
- **Environmental Hazards:** Not considered hazardous to the environment
- **Special Precautions for User:**

- Transport in sealed containers to prevent spillage and dust formation.
 - Avoid transporting with strong acids.
 - Ensure material is dry during transport to maintain quality.
 - **Transport in Bulk According to Annex II of MARPOL and IBC Code:** Not applicable
 - **Labeling Requirements:** None required under GHS/UN standards.
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15. Regulatory Information

- **USA (OSHA/TSCA):** Listed, not hazardous.
 - **EU (ECHA/REACH):** Registered substance, not classified as hazardous.
 - **India:** Permitted for pharmaceutical and food applications.
 - **Other Regulations:** Not subject to chemical-specific restrictions.
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16. Other Information

- Intended for use by trained personnel handling laboratory or industrial chemicals.
 - **MSDS Generate Date:** 20-05-2017
 - **Revision Date:** 30-12-2024
 - **Website:** www.sbfpharma.com
 - MSDS are based on the manufacturer's provided information.