

Material Safety Data Sheet (MSDS)

Product Name: Tri Calcium Phosphate Micronized Grade

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

Rawpharma Biz Pvt Ltd
1101- City Centre 2,
Science City Road,
Sola Ahmedabad Gujarat,
India - 380060.

Contact No.: +91 97272 88479

Email: info@rawpharmabiz.com

Website: www.rawpharmabiz.com

1. Identification of the Substance/Preparation and Company

- **Product Name:** Tri Calcium Phosphate Micronized Grade
- **Synonyms:** TCP; Tricalcium Orthophosphate; Calcium Phosphate Tribasic
- **Molecular Formula:** $\text{Ca}_3(\text{PO}_4)_2$
- **Molecular Weight:** 310.18 g/mol
- **Recommended Use:** Food additive, pharmaceutical excipient, nutritional supplement, and industrial applications.

2. Hazard Identification

- **GHS Classification:** Not classified as hazardous.

- **Hazard Statements:** Not considered hazardous under normal handling and use.
 - **Precautionary Statements:**
 - Avoid inhalation of dust.
 - Use with adequate ventilation.
 - Wash hands thoroughly after handling.
 - **Emergency Overview:** White, odorless, fine micronized powder; poses little to no immediate hazard.
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3. Composition / Information on Ingredients

- **Chemical Name:** Tri Calcium Phosphate
 - **CAS No.:** 7758-87-4
 - **EC No.:** 231-840-8
 - **Purity:** ≥ 98% (Micronized Grade)
 - **Impurities:** No hazardous impurities expected.
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4. First Aid Measures

- **Inhalation:** Remove to fresh air. If irritation persists, seek medical attention.
 - **Skin Contact:** Wash with soap and water. No significant irritation expected.
 - **Eye Contact:** Rinse with water for several minutes. If irritation persists, consult a doctor.
 - **Ingestion:** Rinse mouth with water. Material is of low toxicity; if discomfort occurs, seek medical advice.
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5. Fire Fighting Measures

- **Flammability:** Non-flammable.
- **Suitable Extinguishing Media:** Use extinguishing media suitable for surrounding fire.

- **Special Hazards:** Product does not burn but may emit calcium oxide and phosphorus oxides if exposed to very high heat.
 - **Protective Equipment:** Wear self-contained breathing apparatus if involved in fire.
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6. Accidental Release Measures

- Avoid dust formation.
 - Sweep or vacuum material into suitable container for disposal.
 - Ensure adequate ventilation.
 - Prevent release into drains and natural waterways.
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7. Handling and Storage

- **Handling:** Avoid generating dust. Use personal protective equipment.
 - **Storage:** Store in tightly closed containers in a cool, dry, well-ventilated place. Protect from moisture.
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8. Exposure Controls / Personal Protection

- **Occupational Exposure Limits:** Not established; treat as nuisance dust (10 mg/m³ TWA total dust).
 - **Engineering Controls:** Provide adequate ventilation and dust extraction.
 - **Personal Protection:**
 - Respiratory: Use NIOSH-approved dust mask if dust is generated.
 - Eyes: Safety glasses with side shields.
 - Hands: Protective gloves (optional).
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9. Physical and Chemical Properties

- **Appearance:** White, odorless micronized powder

- **Odor:** Odorless
 - **pH (suspension):** 6.5 – 7.5
 - **Melting Point:** Decomposes > 1670°C
 - **Boiling Point:** Not applicable
 - **Density:** ~3.14 g/cm³
 - **Solubility in Water:** Practically insoluble
 - **Partition Coefficient (n-octanol/water):** Not applicable
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10. Stability and Reactivity

- **Stability:** Stable under normal conditions.
 - **Incompatible Materials:** Strong acids may release phosphoric acid.
 - **Hazardous Decomposition Products:** Calcium oxide and phosphorus oxides at high temperatures.
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11. Toxicological Information

- **Acute Toxicity:** Low; LD50 (oral, rat) > 2000 mg/kg.
 - **Skin Irritation:** Not expected.
 - **Eye Irritation:** May cause mild mechanical irritation.
 - **Carcinogenicity:** Not listed as carcinogenic.
 - **Mutagenicity:** Not mutagenic.
 - **Target Organs:** None known.
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12. Ecological Information

- **Ecotoxicity:** Not expected to be harmful to aquatic or terrestrial organisms.
- **Persistence and Degradability:** Inorganic substance; stable.

- **Bioaccumulative Potential:** Not bioaccumulative.
 - **Mobility in Soil:** Low mobility.
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13. Disposal Considerations

- Dispose of material in accordance with local, state, and national regulations.
 - Product can often be disposed of as non-hazardous solid waste.
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14. Transport Information (Detailed)

- **UN Number:** Not regulated (no UN number assigned).
 - **UN Proper Shipping Name:** Not regulated as dangerous goods.
 - **Transport Hazard Class(es):** Not applicable (non-hazardous).
 - **Packing Group:** Not applicable.
 - **Environmental Hazards:** Not environmentally hazardous.
 - **Special Precautions for User:**
 - Ensure packaging prevents dust release.
 - Transport in closed containers to avoid contamination.
 - Protect from moisture and mechanical damage.
 - **ADR/RID (Road/Rail in EU):** Not regulated.
 - **IMDG (Sea Transport):** Not classified as hazardous; transport in standard containers.
 - **IATA/ICAO (Air Transport):** Not restricted; can be shipped normally by air.
 - **Transport in Bulk (per MARPOL & IBC Code):** Not applicable (non-dangerous, non-liquid).
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15. Regulatory Information

- Not classified as hazardous under GHS, EU REACH, or OSHA standards.
- Complies with food, pharma, and cosmetic additive regulations where applicable.

16. Other Information

- **References:** GHS guidelines, ECHA database, OSHA chemical safety resources.
- **Disclaimer:** The information provided in this MSDS is believed to be accurate and reliable. However, no warranty is expressed or implied. Users should ensure suitability for their specific applications.
- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.