

Material Safety Data Sheet (MSDS)

Product Name: Ferric/ Iron Pyrophosphate Food Grade

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

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1. Identification of the Substance/Preparation and Company

Product Name: Ferric Pyrophosphate / Iron Pyrophosphate – Food Grade

Synonyms: Ferric pyrophosphate, Iron(III) pyrophosphate

Chemical Formula: $\text{Fe}_4(\text{P}_2\text{O}_7)_3$

Molecular Weight: 745.21 g/mol

Recommended Use: Nutritional fortification, dietary supplements, food additive

2. Hazards Identification

- **Classification (GHS):** Not classified as hazardous for food grade.
- **Potential Hazards:** Dust may cause mild irritation to eyes, skin, or respiratory tract.
- **Precautionary Statements:** Avoid inhalation of dust. Use in well-ventilated area.

3. Composition / Information on Ingredients

Substance: Ferric / Iron Pyrophosphate

CAS Number: 10058-44-3

Purity: Food Grade $\geq 98\%$

Impurities: None significant for food-grade use.

4. First Aid Measures

- **Inhalation:** Move to fresh air. If symptoms persist, seek medical advice.
 - **Skin Contact:** Wash with soap and water.
 - **Eye Contact:** Rinse cautiously with water for several minutes. Seek medical help if irritation continues.
 - **Ingestion:** Rinse mouth with water. If large amounts are swallowed, seek medical attention.
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5. Fire-Fighting Measures

- **Suitable Extinguishing Media:** Water spray, foam, dry chemical, CO₂.
 - **Hazards from Combustion:** Non-flammable; decomposition may produce iron oxides and phosphorous oxides.
 - **Protective Equipment:** Firefighters should wear protective gear and self-contained breathing apparatus.
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6. Accidental Release Measures

- Avoid creating dust.
 - Sweep up and collect in suitable container for disposal.
 - Ensure adequate ventilation.
 - Wash spill site after material pick-up.
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7. Handling and Storage

- Handle in well-ventilated areas.
 - Avoid breathing dust.
 - Store in tightly closed container in a cool, dry place away from moisture.
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8. Exposure Controls / Personal Protection

- **Engineering Controls:** Local exhaust ventilation recommended.
- **Respiratory Protection:** Dust mask if ventilation inadequate.
- **Eye Protection:** Safety glasses recommended.
- **Skin Protection:** Gloves and protective clothing if handling bulk quantities.

9. Physical and Chemical Properties

- **Appearance:** Yellowish to light brown powder
- **Odor:** Odorless
- **Solubility:** Practically insoluble in water
- **pH (1% suspension):** ~6–8
- **Melting Point:** Decomposes without melting
- **Density:** Approx. 2.9 g/cm³

10. Stability and Reactivity

- **Stability:** Stable under normal conditions.
- **Conditions to Avoid:** Moisture and strong acids.
- **Incompatible Materials:** Strong acids, strong oxidizers.
- **Hazardous Decomposition:** Iron oxides, phosphorus oxides on decomposition.

11. Toxicological Information

- **Acute Toxicity:** Low toxicity.
- **Inhalation:** May cause mild respiratory irritation.
- **Skin Contact:** Non-irritating in normal use.
- **Eye Contact:** Dust may cause temporary irritation.
- **Chronic Effects:** No known chronic health hazards.

12. Ecological Information

- **Ecotoxicity:** Not harmful at low concentrations.
 - **Persistence and Degradability:** Inorganic compound, stable in environment.
 - **Bioaccumulation:** Not expected.
 - **Mobility in Soil:** Limited mobility due to low solubility.
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13. Disposal Considerations

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

- **UN Number:** Not applicable (non-hazardous).
 - **UN Proper Shipping Name:** Ferric Pyrophosphate / Iron Pyrophosphate – Food Grade
 - **Transport Hazard Class(es):** Not classified as hazardous under ADR, IMDG, or IATA.
 - **Packing Group:** Not applicable.
 - **Environmental Hazards:** Not a marine pollutant.
 - **Special Precautions for User:**
 - Ensure containers are sealed and protected from moisture during transport.
 - Avoid generating dust during handling.
 - Transport in clean, dry, covered vehicles to prevent contamination.
 - Keep away from strong acids and reactive chemicals during shipment.
 - **Transport in Bulk (Annex II of MARPOL and IBC Code):** Not applicable.
 - **Regulatory Status:** Considered safe for transport as a non-dangerous good by road (ADR/RID), sea (IMDG), and air (IATA/ICAO).
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15. Regulatory Information

- **Food Additive Status:** Approved as a source of iron fortification.

- **Regulations:** Complies with food grade specifications.
 - **Safety Classification:** Non-hazardous material.
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16. Other Information

- **Disclaimer:** This MSDS is provided for safety information purposes only. The information is believed to be accurate but is not exhaustive. Users are responsible for safe handling according to 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.