

Mallinckrodt

FERRIC SULFATE

Material Safety Data Sheet

Mallinckrodt Inc.
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Emergency Telephone Number
314-982-5000

Effective Date: 09-04-85

PRODUCT IDENTIFICATION:

Synonyms: Iron (III) sulfate; iron persulfate; sulfuric acid, iron (3+) salt (3:2) hydrate

Formula CAS No.: 15244-10-7 (Hydrated)
TSCA CAS No.: 10028-22-5 (Anhydrous)

Molecular Weight: 399.87 (Anhydrous)

Hazardous Ingredients:
None.

Chemical Formula: $\text{Fe}_2(\text{SO}_4)_3 \cdot x\text{H}_2\text{O}$

PRECAUTIONARY MEASURES

WARNING! MAY BE HARMFUL IF SWALLOWED. MAY CAUSE IRRITATION.

Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.

EMERGENCY/FIRST AID

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. In all cases call a physician.

SEE SECTION 5.

DOT Hazard Class: ORM-E

Physical Data

Appearance: Tan to light greenish-yellow powder.

Odor: Odorless.

Solubility: Very soluble in water.

Boiling Point: Not applicable.

Vapor Density (Air=1): No information found.

Melting Point: 480°C (896°F) decomposes

Vapor Pressure (mm Hg): No information found.

Density: 3.097 (Anhydrous)

Evaporation Rate: No information found.

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SECTION 2

Fire and Explosion Information

Fire: Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Reactivity Data

SECTION 3

Stability:

Stable under ordinary conditions of use and storage.
Very hygroscopic.

Hazardous Decomposition Products:

Oxides of sulfur and the contained metal.

Hazardous Polymerization:

This substance does not polymerize.

Incompatibilities:

No incompatibility data found.

Leak/Spill Disposal Information

SECTION 4

Ventilate area of leak or spill. Clean-up personnel may require respiratory protection from dust.

Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

Disposal: Whatever cannot be saved for reclamation may be delivered to a RCRA approved waste disposal facility.

Reportable Quantity (RQ) (CWA/CERCLA) : 1000 lbs.

Ensure compliance with local, state and federal regulations.

Ferric Sulfate

Health Hazard Information

SECTION 1

1. Exposure/Health Effects

Inhalation:

Irritant due to weak acidic nature. May cause coughing or sneezing.

Ingestion:

Low toxicity in small quantities but larger dosages may cause nausea, vomiting, diarrhea, and black stool. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma, and death from iron poisoning has been recorded.

Skin Contact:

Mild irritant due to the weakly acidic nature of ferric sulfate. May cause redness and soreness and also temporary discoloration of the skin (ferric oxide).

Eye Contact:

Mild irritant due to its acidic nature. Reddening, tearing, and possibly pain may be experienced. Crystals may be abrasive.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

2. FIRST AID

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:

If swallowed, induce vomiting immediately by giving two glasses of water, or milk if available and sticking finger down throat. Call a physician immediately. Never give anything by mouth to an unconscious person.

Skin Exposure:

Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Exposure:

Wash thoroughly with running water. Get medical advice if irritation develops.

3. TOXICITY DATA

(RTECS, 1982)

No LD50/EC50 information found relating to normal routes of occupational exposure.

Occupational Control Measures

SECTION 5

Airborne Exposure Limits:

-ACGIH Threshold Limit Value (TLV):
1 mg (Fe)/m³ (TWA)
2 mg (Fe)/m³ (STEL)

Ventilation System:

A system of local exhaust is recommended to keep employee exposures below the Airborne Exposure Limit. Local exhaust ventilation is generally preferred because it can control the emissions of the dust or vapor at its source, preventing dispersion of it in the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators (NIOSH Approved)

If the TLV is exceeded, a dust/mist respirator may be worn up to ten times the TLV. Consult respirator supplier for details.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Contact lenses should be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

Storage and Special Information

SECTION 7

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage.

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