Mallinckrodt
Material Safety Data

Emergency Phone Number: 314-982-5000

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Mallinckrodt, Inc., Science Products Division, P.O. Box M, Paris, KY 43061.

FERRIC NITRATE

PRODUCT IDENTIFICATION:

Synonyms: Nitric acid, iron (3+) salt nonahydrate; iron nitrate nonahydrate; iron trinitrate

Formula CAS No.: 7782-61-8

TSCA CAS No.: 10421-48-4

Molecular Weight: 404.00

Chemical Formula: $Fe(NO_3)_3 \cdot 9H_2O$

Hazardous Ingredients: Not applicable.

PRECAUTIONARY MEASURES

WARNING! OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. MAY BE HARMFUL IF SWALLOWED. CAUSES IRRITATION.

Avoid contact with eyes, skin and clothing.
Keep from contact with clothing and other combustible materials.
Wash thoroughly after handling.
Store in a tightly closed container.
Remove and wash contaminated clothing promptly.

EMERGENCY/FIRST AID

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes.
SEE SECTION 5.

DOT Hazard Class: Oxidizer

SECTION 1 Physical Data

Appearance: Violet crystals.

Odor: Slight nitric acid odor.

Solubility: Freely soluble in water.

Boiling Point: Decomposes below 100°C (212°F).

Melting Point: 47.2°C (117°F)

Specific Gravity: 1.684

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

Vapor Pressure (mm Hg): No information found.

Evaporation Rate: No information found.

SECTION 2 Fire and Explosion Information

Fire:
Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Explosion:
Contact with oxidizable substances may cause extremely violent combustion.

Fire Extinguishing Media:
Dry chemical, foam or carbon dioxide.

Special Information:
Wear full protective clothing and breathing equipment for high-intensity fire or potential explosion conditions.

SECTION 3 Reactivity Data

Stability:
Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:
Emits nitrous oxides when heated to decomposition.

Hazardous Polymerization:
This substance does not polymerize.

Incompatibilities:
Substance may react violently with some organic compounds or reducing agents.

SECTION 4 Leak/Spill Disposal Information

Ventilate area of leak or spill. Clean-up personnel require protective clothing and respiratory protection from dust.
Spills: Pick up and place in a suitable container for reclamation or disposal in a method that does not generate dust or fumes. Disposal: Whatever cannot be saved for reclamation may be disposed in an RCRA approved hazardous waste facility.

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

Ensure compliance with local, state and federal regulations.

SECTION 5 Health Hazard Information

A. EXPOSURE / HEALTH EFFECTS

Inhalation:
Dusts and mists of ferric salts may be irritating to the respiratory tract. Coughing, sneezing may occur.

Ingestion:
Large doses can cause gastrointestinal irritation, with abdominal cramps, 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:
Ferric salts may be skin irritants.

Eye Contact:
Irritant. May cause reddening and tearing.

Chronic Exposure:
Under some circumstances methemoglobinemia occurs in individuals when the nitrate is converted by bacteria in the stomach to nitrite.

Aggrevation 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.

B. 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 and sticking finger down throat. Never give anything by mouth to an unconscious person. Call physician immediately.

Skin Exposure:
Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye Exposure:
Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY DATA (RTECS, 1982)

Oral rat LD50: 3250 mg/kg

SECTION 6 Occupational Control Measures

Airborne Exposure Limits:
-ACGIH Threshold Limit Value (TLV): soluble iron salts
1 mg (Fe)/m^3 (TWA)
2 mg (Fe)/m^3 (STEL)

Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into 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 with chemical goggles may be worn, in general, up to ten times the TLV. Consult respirator supplier for limitations. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

Skin Protection:
Wear protective gloves and clean body-covering clothing.

Eye Protection:
Use chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 7 Storage and Special Information

Keep in a tightly closed container.Protect from physical damage. Store in a cool,dry, ventilated area away from sources of heat, moisture and incompatibilities.

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