



SAFETY DATA SHEET

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SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Iron (III) Nitrate Nonahydrate**
PRODUCT NUMBER: 2074
CAS NUMBER: 7782-61-8
SYNONYMS: Ferric nitrate, nonahydrate, Nitric acid, iron(3+) salt, nonahydrate
MANUFACTURER:

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

Warning

Hazard Statements

| | |
|------|-----------------------------------|
| H272 | May intensify fire; oxidizer. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |

Precautionary Phrases

| | |
|----------------|---|
| P210 | Keep away from heat. |
| P220 | Keep/store away from clothing/combustible material. |
| P221 | Take any precaution to avoid mixing with combustibles. |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. |
| P362 | Take off contaminated clothing and wash before reuse. |
| P370+P378 | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed |

SECTION 2 HAZARDS IDENTIFICATION (Cont.)

HMIS CLASSIFICATION:

Health: 1 Fire: 0 Reactivity Hazard: 1

NFPA RATING:

Health: 1 Flammability: 0 Reactivity Hazard: 1 Specific Hazard: OX

EYE CONTACT: May cause moderate to severe irritation of the eyes.

SKIN CONTACT: May cause irritation, redness, and pain to the skin.

INHALATION: Dust causes coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

INGESTION: Soluble iron salts may cause poisoning.

CHRONIC HEALTH EFFECTS: Prolonged ingestions may lead to damage to the liver and pancreas. Prolonged inhalation of dusts may cause pulmonary fibrosis.

ACUTE HEALTH EFFECTS: Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma, and death may follow. Sometimes delayed as long as three days. Antidotes may be administered by expert medical personnel.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: $\text{Fe}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$

Molecular Weight: 404.00

| CHEMICAL NAME | CAS# | % |
|--------------------------------|-----------|-----|
| Iron (III) Nitrate Nonahydrate | 7782-61-8 | 100 |

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with plenty of water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove to fresh air and keep at rest. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: Not available. Contact with combustible material may cause fire.

AUTO IGNITION TEMPERATURE: Not available

EXPLOSION LIMITS: Not available

EXTINGUISHING MEDIUM: Carbon dioxide, extinguishing powder, or water spray. Fight large fires with water spray or alcohol resistant foam.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Iron oxides and nitrogen oxides

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Keep unprotected persons away. Avoid dust formation. Avoid breathing dust. Acts as an oxidizing agent on organic materials such as wood, paper, and fats. Keep away from combustible materials.

ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or allowing to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Spills can be mixed with vermiculite or sodium carbonate and swept up. Place in suitable container for proper disposal.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Avoid contact with skin and eyes. Use with adequate ventilation. Avoid formation of dusts and aerosols. Handle under dry protective gas. This substance can reduce the ignition temperature of flammable substances. This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Hygroscopic. Air sensitive. Store under inert gas. Storage class: Oxidizing hazardous materials.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE CONTROLS:

| Component | Exposure Limits | Basis | Entity |
|-------------------------------|---------------------|-------|--------|
| Iron (II) nitrate nonahydrate | 1 mg/m ³ | TLV | ACGIH |
| | 1 mg/m ³ | PEL | OSHA |
| | 1 mg/m ³ | REL | NIOSH |

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

EYE PROTECTION: Wear chemical safety glasses or goggles and face shield.

SKIN PROTECTION: Wear nitrile or rubber gloves, and a complete suit protecting against chemicals.

VENTILATION: Provide local exhaust, preferably mechanical.

RESPIRATOR: Use an approved respirator.

ADDITIONAL PROTECTION: Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Light purple crystal

ODOR: None

MOLECULAR WEIGHT: 404.00

BOILING POINT: 125° C

MELTING POINT: 47° C

SPECIFIC GRAVITY: 1.684 gm/ml

SOLUBILITY: Soluble

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Contact with strong reducing agents or organic matter. Some nitrates can explode if heated to high temperature.

INCOMPATIBILITY: Organic materials, powdered metals, flammable substances, reducing agents, water, moisture, phosphorous, and sulfur.

DECOMPOSITION PRODUCTS: Nitrogen oxides and iron oxides

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: LD50 Oral – rat – 3250 mg/kg

CARCINOGENIC EFFECTS: No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

MUTAGENIC EFFECTS: Not available

TETRATOGENIC EFFECTS: Not available

RTECS: NO7175000

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

UN1466
Ferric nitrate
CLASS 5.1
PG III

Marine Pollutant: No

SECTION 15 REGULATORY INFORMATION

TSCA: Not listed in the TSCA inventory

SARA 302/304: Not Listed

SARA 311/312: Reactivity Hazard

SARA (TITLE 313): Iron (III) nitrate nonahydrate

CALIFORNIA PROP. 65: Not Listed

MASSACHUSETTS RIGHT TO KNOW COMPONENTS: Iron (III) nitrate nonahydrate

NEW JERSEY RIGHT TO KNOW COMPONENTS: Iron (III) nitrate nonahydrate

PENNSYLVANIA RIGHT TO KNOW COMPONENTS: Iron (III) nitrate nonahydrate

SECTION 16 OTHER INFORMATION

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DATE PREPARED: 01/15

SDS DEPT.