
MATERIAL SAFETY AND DATA SHEET

Section 1: Identification of the substance and company

Product Name: Ferric Nitrate

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

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

Company Identification:

Acorn Chemicals Ltd. Emergency Tel No:
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Section 2: Composition/Information on ingredients

	CAS No	%(w/w)
Ferric Nitrate	10421-48-4 (Anhydrous)	90 - 100%

Section 3: Hazards Information

Emergency Overview: Danger! Oxidizer. Contact with other material may cause fire. Harmful if swallowed or inhaled. Causes irritation to skin, eyes and respiratory tract. Affects the liver.

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Ingestion: Causes irritation to the gastrointestinal tract. Repeated large doses can cause excess iron

buildup in the body. Symptoms include gastrointestinal irritation, with abdominal cramps, vomiting, diarrhea, black stool and liver damage.

Skin Contact: Causes irritation to skin. Symptoms include redness, itching, and pain.

Eye Contact: Causes irritation, redness, and pain. Prolonged contact may cause a brownish discoloration to the eye.

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

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.

Section 4: First Aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

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

Ingestion: Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Section 5: Fire fighting measures

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

Explosion: Contact with oxidizable substances may cause extremely violent combustion. Sealed containers may rupture when heated. Sensitive to mechanical impact.

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

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

Section 6: Accidental release measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerise for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

Section 7: Handling and Storage

Handling: Keep in a tightly closed container. Protect from physical damage.

Storage: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Separate from combustibles, organic or other readily oxidisable materials. Avoid storage on wood floors. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

Section 8: Exposure Controls/Personal Protection

Airborne Exposure Limits:

-ACGIH Threshold Limit Value (TLV): 1 mg/m³ (TWA) soluble iron salt as Fe

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.

Personal Respirators:

If the exposure limit is exceeded and engineering controls are not feasible, a full face piece particulate respirator may be worn for up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient

atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9: Physical and Chemical properties

Colour: Violet crystals.
Odour: Slight nitric acid odour.
Boiling point: < 100C Decomposes
Solubility: Freely soluble.
Melting point: 47.2°C
Specific gravity: 1.684
pH:
Concentration:
Flash point:
Flammability:

Section 10: Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Conditions to Avoid: Incompatibilities; Substance may react violently with some organic compounds or
reducing agents.
Heat, shock, friction, incompatibles.

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

Section 11: Toxicological Information

Toxicity Data: LD50: 3250 mg/kg (Oral rat)

Section 12: Ecological Information

No ecological problems are expected when the product is handled and used with due care.

Section 13: Disposal Considerations

Disposal Method Product: Whatever cannot be saved for recovery or recycling should be handled as

Processing, use or

management options.

hazardous waste and sent to an approved waste facility.

contamination of this product may change the waste

Disposal Method Packaging: Dispose of container and unused contents in accordance with local

requirements.

Section 14: Transport Information

Hazard Class: 5.1

UN/NA: UN1466

Packing Group: III

Section 15: Regulatory Information

EEC Hazard Classification: Irritating to skin. Risk of serious damage to eyes.

Risk Phases: Irritating to eyes, respiratory system and skin. Contact with combustible

material may cause fire.

Safety Phases: Keep away from combustible material.

Section 16: Other Information

This data sheet was prepared in accordance with Directive 91/155/EEC.

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