

**SECTION 1: Identification****1.1. Identification**

Product form	: Substance
Substance name	: Ferric Nitrate, Nonahydrate
Chemical name	: Iron (III) nitrate nonahydrate
CAS-No.	: 7782-61-8
Product code	: LC14410
Formula	: Fe(NO <sub>3</sub> ) <sub>3</sub> ·9H <sub>2</sub> O

**1.2. Recommended use and restrictions on use**

Use of the substance/mixture	: For laboratory and manufacturing use only.
Recommended use	: Laboratory chemicals
Restrictions on use	: Not for food, drug or household use

**1.3. Supplier**

United Nuclear Scientific  
125 N. 8th Street  
Kilamath Falls, OR 97601 - USA  
T 541-205-6855  
sales@unitednuclear.com - www.unitednuclear.com

**1.4. Emergency telephone number**

Emergency number VelocityEHS 800-255-3924

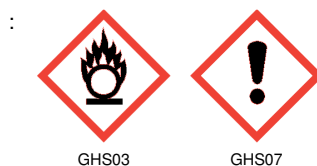
**SECTION 2: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS-US classification**

Oxidizing solids Category 3	H272	May intensify fire; oxidizer
Skin corrosion/irritation	H315	Causes skin irritation
Category 2		
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Specific target organ toxicity (single exposure) Category 3	H335	May cause respiratory irritation

Full text of H statements : see section 16

**2.2. GHS Label elements, including precautionary statements****GHS-US labeling**

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Warning

Hazard statements (GHS-US)

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

Precautionary statements (GHS-US)

: P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking  
P220 - Keep/Store away from clothing, combustible materials  
P221 - Take any precaution to avoid mixing with combustibles  
P261 - Avoid breathing dust  
P264 - Wash exposed skin thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves, eye protection  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

# Ferric Nitrate, Nonahydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P312 - Call a POISON CENTER or doctor/physician if you feel unwell  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash it before reuse  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/container to comply with local, state and federal regulations  
If inhaled: Remove person to fresh air and keep comfortable for breathing

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None under normal conditions.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Ferric Nitrate, Nonahydrate (Main constituent)	(CAS-No.) 7782-61-8	100	Ox. Sol. 3, H272 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).  
First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause respiratory irritation.  
Symptoms/effects after skin contact : Causes skin irritation.  
Symptoms/effects after eye contact : Causes serious eye irritation.

### 4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard : May intensify fire; oxidizer.  
Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Fight fire remotely due to the risk of explosion.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

# Ferric Nitrate, Nonahydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : No naked lights. No smoking.

##### 6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Gloves. Dust mask.

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Take any precaution to avoid mixing with Combustibles. Avoid breathing dust. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash exposed skin thoroughly after handling.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong reducing agents. Combustible materials.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. Combustible material.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Ferric Nitrate, Nonahydrate (7782-61-8)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> as Fe
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> as Fe

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.

#### 8.3. Individual protection measures/Personal protective equipment

##### Personal protective equipment:

Gas mask. Gloves. Safety glasses.



##### Hand protection:

Wear protective gloves

# Ferric Nitrate, Nonahydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Eye protection:

Chemical goggles or safety glasses

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

Gas mask

### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid.
Color	: Purple
Odor	: None.
Odor threshold	: No data available
pH	: No data available
Melting point	: 47 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.68
Molecular mass	: 404 g/mol
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: May intensify fire; oxidizer.

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

May intensify fire; oxidizer.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Overheating. Open flame.

### 10.5. Incompatible materials

Combustible materials. Strong reducing agents.

# Ferric Nitrate, Nonahydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 10.6. Hazardous decomposition products

Nitrogen oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Not classified

#### Ferric Nitrate, Nonahydrate (7782-61-8)

LD50 oral rat	3250 mg/kg
---------------	------------

ATE US (oral)	3250 mg/kg body weight
---------------	------------------------

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : May cause respiratory irritation.

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

#### Ferric Nitrate, Nonahydrate (7782-61-8)

Persistence and degradability	Not established.
-------------------------------	------------------

### 12.3. Bioaccumulative potential

#### Ferric Nitrate, Nonahydrate (7782-61-8)

Bioaccumulative potential	Not established.
---------------------------	------------------

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment.

# Ferric Nitrate, Nonahydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1466 Ferric nitrate, 5.1, III

UN-No.(DOT) : UN1466

Proper Shipping Name (DOT) : Ferric nitrate

Transport hazard class(es) (DOT) : 5.1 - Class 5.1 - Oxidizer 49 CFR 173.128

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 5.1 - Oxidizer



DOT Packaging Non Bulk (49 CFR 173.xxx) : 213

DOT Packaging Bulk (49 CFR 173.xxx) : 240

DOT Special Provisions (49 CFR 172.102) : A1 - Single packaging are not permitted on passenger aircraft.  
A29 - Combination packaging consisting of outer expanded plastic boxes with inner plastic bags are not authorized for transportation by aircraft.  
IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).  
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.  
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)  
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) : 152

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 100 kg

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Other information : No supplementary information available.

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Ferric Nitrate, Nonahydrate (7782-61-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes : Reactive hazard

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Ferric Nitrate, Nonahydrate	CAS-No. 7782-61-8	100%
-----------------------------	-------------------	------

# Ferric Nitrate, Nonahydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 15.2. International regulations

#### CANADA

##### Ferric Nitrate, Nonahydrate (7782-61-8)

Not listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

##### Ferric Nitrate, Nonahydrate (7782-61-8)

Listed on the Canadian IDL (Ingredient Disclosure List)

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16: Other information

Revision date : 06/27/2017

Other information : None.

Full text of H-phrases: see section 16:

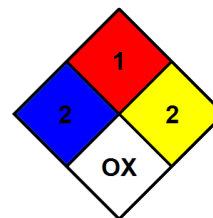
H272	May intensify fire; oxidizer
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 2 - Materials that readily undergo violent chemical change at elevated temperatures and pressures.

NFPA specific hazard : OX - Materials that possess oxidizing properties.



#### Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 2 Moderate Hazard - Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.

#### Personal protection

: E

E - Safety glasses, Gloves, Dust respirator

SDS United Nuclear Scientific

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and United Nuclear Scientific assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.