

# SAFETY DATA SHEET

Creation Date 24-Dec-2009

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Revision Number 8

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

**Product Name** Ferric Nitrate Nonahydrate (Certified ACS)

**Cat No. :** I110-3; I110-100; I110-500

**CAS No** 7782-61-8  
**Synonyms** Iron (III) nitrate nonahydrate (Crystalline/Certified ACS)

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

#### Company

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

#### **Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Oxidizing solids	Category 3
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

### Label Elements

#### **Signal Word**

Warning

#### **Hazard Statements**

May intensify fire; oxidizer

Causes skin irritation  
 Causes serious eye irritation  
 May cause respiratory irritation



**Precautionary Statements**

**Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
 Keep away from clothing and other combustible materials  
 Take any precaution to avoid mixing with combustibles

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 Call a POISON CENTER or doctor if you feel unwell

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
 If skin irritation occurs: Get medical advice/attention  
 Take off contaminated clothing

**Eyes**

IF IN EYES: 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

**Fire**

In case of fire: Use CO2, dry chemical, or foam to extinguish

**Storage**

Store in a well-ventilated place. Keep container tightly closed  
 Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

**3. Composition/information on Ingredients**

Component	CAS No	Weight %
Iron(III) nitrate nonahydrate	7782-61-8	>95
Ferric nitrate	10421-48-4	-

**4. First-aid measures**

<b>General Advice</b>	If symptoms persist, call a physician.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
<b>Most important symptoms and effects</b>	None reasonably foreseeable.
<b>Notes to Physician</b>	Treat symptomatically

**5. Fire-fighting measures**

<b>Suitable Extinguishing Media</b>	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Oxidizing Properties</b>	Oxidizer
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

**Specific Hazards Arising from the Chemical**

Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

**Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>).

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
2	0	2	OX

**6. Accidental release measures**

<b>Personal Precautions</b>	Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.
<b>Environmental Precautions</b>	Should not be released into the environment.
<b>Methods for Containment and Clean Up</b>	Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

**7. Handling and Storage**

<b>Handling</b>	Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from clothing and other combustible materials.
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**Storage.** Store under an inert atmosphere. Air sensitive. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Incompatible Materials. Strong oxidizing agents. Combustible material. Organic materials. Strong reducing agents.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Iron(III) nitrate nonahydrate	TWA: 1 mg/m <sup>3</sup>	(Vacated) TWA: 1 mg/m <sup>3</sup>	REL = 1 mg/m <sup>3</sup> (TWA)	TWA: 1 mg/m <sup>3</sup>
Ferric nitrate	TWA: 1 mg/m <sup>3</sup>	(Vacated) TWA: 1 mg/m <sup>3</sup>	REL = 1 mg/m <sup>3</sup> (TWA)	TWA: 1 mg/m <sup>3</sup>

Legend

ACGIH - American Conference of Governmental Industrial Hygienists  
 OSHA - Occupational Safety and Health Administration  
 NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures** Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment**

- Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.
- Respiratory Protection** No protective equipment is needed under normal use conditions.
- Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

**Appearance**

**Physical State** Solid  
**Color** Purple  
**Odor** Odorless  
**Odor Threshold** No information available  
**Property Values**  
**Melting Point/Range** 47 °C / 116.6 °F  
**Softening Point** No data available  
**Boiling Point/Range** No information available  
**Flash Point** No information available  
**Flammability (liquid)** Not applicable  
**Flammability (solid,gas)** No information available  
**Explosion Limits** No data available

**Remarks**      **Method**  
 Method - No information available  
 Solid

**Autoignition Temperature** No data available  
**Decomposition Temperature** No data available  
**pH** No information available  
**Viscosity** Not applicable      Solid  
**Water Solubility** Soluble  
**Solubility in other solvents** No information available  
**Partition Coefficient (n-octanol/water)**  
**Vapor Pressure** negligible  
**Density / Specific Gravity** 1.680

**Bulk Density** No data available  
**Vapor Density** Not applicable Solid  
**Particle characteristics** No data available

**Other Information**  
**Molecular Formula** FeN3O9.9H2O  
**Molecular Weight** 404  
**Oxidizing Properties** Oxidizer  
**Evaporation Rate** Not applicable - Solid

## 10. Stability and reactivity

**Reactive Hazard** Yes

**Stability** Oxidizer: Contact with combustible/organic material may cause fire. Hygroscopic.

**Conditions to Avoid** Avoid dust formation. Incompatible products. Excess heat. Combustible material. Exposure to moisture. Exposure to moist air or water.

**Incompatible Materials** Strong oxidizing agents, Combustible material, Organic materials, Strong reducing agents

**Hazardous Decomposition Products** Nitrogen oxides (NOx)

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Information on expected route of exposure**

**Inhalation** Not an expected route of exposure.  
**Ingestion** May be harmful if swallowed.  
**Eyes** Avoid contact with eyes. Irritating to eyes.  
**Skin** Avoid contact with skin. May cause irritation.

**Toxicology data for the components**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Iron(III) nitrate nonahydrate	LD50 = 3250 mg/kg ( Rat )	-	-

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** Category 2

**(c) serious eye damage/irritation;** Category 2

**(d) respiratory or skin sensitization;**  
**Respiratory** Based on available data, the classification criteria are not met  
**Skin** Based on available data, the classification criteria are not met

**(e) germ cell mutagenicity;** Based on available data, the classification criteria are not met

**(f) carcinogenicity;** Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Iron(III) nitrate nonahydrate	7782-61-8	Not listed	Not listed	Not listed	Not listed	Not listed
Ferric nitrate	10421-48-4	Not listed	Not listed	Not listed	Not listed	Not listed

**(g) reproductive toxicity;** Based on available data, the classification criteria are not met

**(h) STOT-single exposure;** Category 3

**Results / Target organs** Respiratory system.

**(i) STOT-repeated exposure;** Based on available data, the classification criteria are not met

**Target Organs** None known.

**(j) aspiration hazard;** Not applicable  
Solid

**Symptoms / effects,both acute and delayed** No information available.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

**Ecotoxicity**

Do not flush into surface water or sanitary sewer system.

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

**UN-No** UN1466  
**Proper Shipping Name** FERRIC NITRATE  
**Hazard Class** 5.1  
**Packing Group** III

**TDG**

**UN-No** UN1466  
**Proper Shipping Name** FERRIC NITRATE  
**Hazard Class** 5.1  
**Packing Group** III

**IATA**

<b>UN-No</b>	UN1466
<b>Proper Shipping Name</b>	Ferric nitrate
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III
<b>IMDG/IMO</b>	
<b>UN-No</b>	UN1466
<b>Proper Shipping Name</b>	Ferric nitrate
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

**15. Regulatory Information**

**United States of America Inventory**

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Iron(III) nitrate nonahydrate	7782-61-8	-	-	-
Ferric nitrate	10421-48-4	X	ACTIVE	-

**Legend:**

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b)** - Notices of Export Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Iron(III) nitrate nonahydrate	7782-61-8	-	-	-	X	X		X	X	-
Ferric nitrate	10421-48-4	X	-	233-899-5	X	X	X	X	X	KE-21136

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting thresholds
Iron(III) nitrate nonahydrate	7782-61-8	>95	1.0 %	-
Ferric nitrate	10421-48-4	-	1.0 %	-

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Ferric nitrate	X	1000 lb	-	-

**Clean Air Act** Not applicable

OSHA - Occupational Safety and Health Administration

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Ferric nitrate	1000 lb	-	1000 lb 454 kg

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Iron(III) nitrate nonahydrate	-	X	X	X	X
Ferric nitrate	X	X	X	X	X

**U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

Other International Regulations

**Mexico - Grade** No information available

**Authorisation/Restrictions according to EU REACH** Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Iron(III) nitrate nonahydrate	7782-61-8	-	-	-
Ferric nitrate	10421-48-4	-	-	-

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Iron(III) nitrate nonahydrate	7782-61-8	Not applicable	Not applicable	Not applicable	Not applicable
Ferric nitrate	10421-48-4	Listed	Not applicable	Not applicable	Not applicable

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**  
 Not applicable

**Other International Regulations**

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Iron(III) nitrate nonahydrate	7782-61-8	Not applicable	Not applicable	Not applicable	Not applicable
Ferric nitrate	10421-48-4	Not applicable	Not applicable	Not applicable	Not applicable

**16. Other Information**

**Prepared By** Product stewardship (Regulatory Affairs)  
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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**