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Revision Date 19-Oct-2015

Version 3

1. IDENTIFICATION

Product identifier

Product Name Ferric Nitrate Nonahydrate, ACS

Other means of identification

Product Code 2640

UN/ID no. UN1466

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

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals.

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

Harrell Industries, Inc.
2495 Commerce Drive
Rock Hill, SC 29730

www.harrellindustries.com

Emergency telephone number

Company Phone Number 803-327-6335

Fax Number 803-327-7808

24 Hour Emergency Phone Number 800 633-8253 (PERS)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

Danger

Hazard statements

Causes severe skin burns and eye damage

Causes serious eye damage



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.

Appearance Violet crystals	Physical state Solid	Odor Slight nitric acid
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Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection

Causes irritation, redness, and pain. Prolonged contact may cause a brownish discoloration to the eye.
 Causes irritation to skin. Symptoms include redness, itching and pain.
 Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.
 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.

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance**Synonyms**

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

FormulaFe(NO₃)₃·9H₂O

Chemical Name	CAS No.	Weight-%
Ferric Nitrate	7782-61-8	100

4. FIRST AID MEASURES

Description of first aid measures

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

Skin contact Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

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

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

Most important symptoms and effects, both acute and delayed

Symptoms 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.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical. Foam. Carbon dioxide (CO₂). Water spray.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

Contact with oxidizable substances may cause extremely violent combustion. Sealed containers may rupture when heated.

Explosion data

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge None.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal equipment.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling 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. Separate from combustibles, organic or other readily oxidizable 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.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Substance may react violently with some organic compounds or reducing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ferric Nitrate 7782-61-8	TWA: 1 mg/m ³ Fe	(vacated) TWA: 1 mg/m ³ Fe	TWA: 1 mg/m ³ Fe

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations

Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Use chemical safety goggles and/or full face shield. Maintain eye wash fountain and quick-drench facilities in work area.
Skin and body protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	Slight nitric acid
Appearance	Violet crystals	Odor threshold	No information available
Color	violet		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	47.2 °C / 117 °F	
Boiling point / boiling range	<100 °C / <212 °F	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.684	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	404.0
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization Will not occur.

Conditions to avoid

Heat, shock, friction, incompatibles.

Incompatible materials

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

Hazardous Decomposition Products

Emits nitrous oxides when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ferric Nitrate 7782-61-8	= 3250 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Carcinogenicity**

Chemical Name	ACGIH	IARC	NTP	OSHA
Ferric Nitrate 7782-61-8	-	Group 2A	-	X

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability**Bioaccumulation**

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

DOT	Regulated
UN/ID no.	UN1466
Proper shipping name	Ferric nitrate
Hazard Class	5.1
Packing Group	III
Reportable Quantity (RQ)	1000 lbs (454 kg)
TDG	Regulated
UN/ID no.	UN1466
Proper shipping name	Ferric nitrate
Hazard Class	5.1
Packing Group	III
MEX	Regulated
UN/ID no.	UN1466
Proper shipping name	Ferric nitrate
Hazard Class	5.1
Packing Group	III
ICAO (air)	Regulated
UN/ID no.	UN1466
Hazard Class	5.1
Packing Group	III
IATA	Regulated
UN/ID no.	UN1466
Proper shipping name	Ferric nitrate
Hazard Class	5.1
Packing Group	III
IMDG	Regulated
UN/ID no.	UN1466
Proper shipping name	Ferric Nitrate
Hazard Class	5.1
Packing Group	III
Description	100 LB
RID	Regulated
UN/ID no.	UN1466
Proper shipping name	Ferric nitrate
Hazard Class	5.1
Packing Group	III
ADR	Regulated
UN/ID no.	UN1466
Proper shipping name	Ferric nitrate
Hazard Class	5.1
Packing Group	III
ADN	Regulated
UN Number	UN1466
Proper shipping name	Ferric nitrate
Hazard Class	5.1
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Chemical Name	SARA 313 - Threshold Values %
Ferric Nitrate - 7782-61-8	1.0

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)**CERCLA****US State Regulations****California Proposition 65****U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ferric Nitrate 7782-61-8	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 2	Flammability 0	Instability 1	Physical and Chemical Properties -
HMIS	Health hazards 2	Flammability 0	Physical hazards 1	Personal protection X

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Revision Note

No information available

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 Safety Data Sheet