



Material Safety Data Sheet Ferric Nitrate Solution

Section 1 - Chemical Product and Company Identification

MSDS Name:

Ferric Nitrate Solution

Catalog Numbers:

LC14420

Synonyms:

Ferric Nitrate Solution, APHA

Company Identification:

LabChem Inc

200 William Pitt Way

Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
7782-61-8	Ferric nitrate nonahydrate	20
7697-37-2	Nitric acid	2

Section 3 - Hazards Identification

Emergency Overview

Appearance: Clear, yellow-green solution

Danger! May cause severe respiratory and digestive tract irritation with possible burns. May cause severe skin irritation and possible burns.

Target Organs: Blood, kidneys, heart, central nervous system, liver, lungs, eyes, skin, mucous membranes.

Potential Health Effects

Eye:

Causes eye irritation and possible burns.

Skin:

Causes skin irritation and possible burns.

Ingestion:

May cause CNS depression, kidney damage, and liver damage. May cause cardiac disturbances.

May cause nausea, vomiting, and diarrhea. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.



Material Safety Data Sheet Ferric Nitrate Solution

Inhalation:

May cause severe irritation of the respiratory tract. May cause methemoglobinemia, cyanosis, convulsions, tachycardia, dyspnea, and death due to pulmonary edema.

Chronic:

May cause chronic bronchitis, erosion of teeth, methemoglobinemia, rapid heart rate, unconsciousness, and possible death.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Treat symptomatically and supportively.

Antidote:

The use of Deferoxamine as a chelating agent should be determined only by qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire. Move container if possible. Avoid breathing vapors.

Extinguishing Media:

Use water only! Do not use carbon dioxide or dry chemical.

Autoignition Temperature:

Not applicable.

Flash Point:

Not applicable.

NFPA Rating:

CAS# 7732-18-5: Health-0, Flammability-0, Instability-0.

CAS# 7782-61-8: Health-2, Flammability-0, Instability-0.

CAS# 7697-37-2: Health-4, Flammability-0, Instability-0.

Explosion Limits:

Lower: n/a Upper: n/a



Material Safety Data Sheet Ferric Nitrate Solution

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Neutralize spill with sodium bicarbonate.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Avoid breathing vapor, mist, or gas. Do not get in eyes, on skin, or on clothing.

Storage:

Store in a cool, dry area away from incompatible substances. Do not store in direct sunlight. Do not store in metal containers.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations below permissible exposure limits.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	none listed	none listed	none listed
Ferric nitrate nonahydrate	1 mg/m ³ (as Fe) (listed as Fe salts, soluble)	1 mg/m ³ (as Fe) (listed as Fe salts, soluble)	none listed
Nitric acid	2 ppm TWA; 5 mg/m ³ TWA	2 ppm TWA; 5 mg/m ³ TWA; 25 ppm IDLH	2 ppm TWA; 4 ppm STEL

OSHA Vacated PELs:

Nitric acid: 2 ppm TWA; 5 mg/m³ TWA

Personal Protective Equipment**Eyes:**

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:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.



Material Safety Data Sheet Ferric Nitrate Solution

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	Light yellow-green
Odor:	Slight nitric acid odor
pH:	Acidic
Vapor Pressure:	Not available
Vapor Density:	> air
Evaporation Rate:	< ether
Viscosity:	Not available
Boiling Point:	>212°F (>100°C)
Freezing/Melting Point:	<32°F (<0°C)
Decomposition Temperature:	Not available
Solubility in water:	Soluble
Specific Gravity/Density:	1.1
Molecular Formula:	Not applicable
Molecular Weight:	Not applicable

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures. Decomposes when exposed to light or when in contact with air or organic matter.

Conditions to Avoid:

Incompatible materials, temperatures above 50°C.

Incompatibilities with Other Materials:

Combustible materials, strong bases, metals, strong reducing agents, organic matter.

Hazardous Decomposition Products:

Oxides of nitrogen.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.
CAS# 7782-61-8: NO7175000.
CAS# 7697-37-2: QU5775000; QU5900000.

LD50/LC50:

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.
CAS# 7782-61-8:
Oral, rat: LD50 = 3250 mg/kg.
CAS# 7697-37-2:
Inhalation, rat: LC50 = 67 ppm (NO₂)/4H.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.



Material Safety Data Sheet Ferric Nitrate Solution

CAS# 7782-61-8: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7697-37-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

No information found

Reproductive:

No information found

Mutagenicity:

No information found

Neurotoxicity:

No information found

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)

Hazard Class: 8

UN Number: UN3264

Packing Group: PGII

Section 15 - Regulatory Information

US Federal

TSCA:

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 7782-61-8 is not listed on the TSCA Inventory. It is considered to be listed because the anhydrous form is listed.

CAS# 7697-37-2 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):

CAS# 7697-37-2: final RQ = 1000 pounds (454 kg)

CERCLA/SARA Section 313:

This material contains Nitric acid (CAS# 7697-37-2, 2%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Ferric nitrate, nonahydrate (listed as Water Dissociable Nitrate Compounds) (CAS# 7782-61-8, 20%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.



Material Safety Data Sheet Ferric Nitrate Solution

OSHA - Highly Hazardous:

CAS# 7697-37-2 is considered highly hazardous by OSHA.

US State

State Right to Know:

Nitric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Ferric nitrate can be found on the following state Right-to-Know lists: California (listed as Iron salts, soluble), Pennsylvania (listed as Iron salts, soluble), Minnesota (listed as Iron salts, soluble).

California Regulations:

None.

European/International Regulations

Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7782-61-8 is not listed on Canada's DSL List.

CAS# 7697-37-2 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 7782-61-8 is listed on Canada's Ingredient Disclosure List as Iron salts, soluble.

CAS# 7697-37-2 is listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: August 23, 1998

Revision Date: October 8, 2009

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